

Attachment 8

Public Comments

Outdoor Lighting Ordinance

Astronomers of Humboldt

P.O. Box 351

Eureka, CA 95502

May 6, 2025

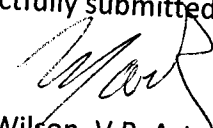
Dear Ms. Meighan

This letter is a follow-up of our telephone conversation a week or so ago about the draft outdoor lighting ordinance. Again thank you for removing the section exempting the county and other government entities from the proposed requirements. As I mentioned, it would be advantageous for the goal of dark skies preservation for the county to retrofit existing lighting that does not conform to the new standards, especially shielding. We would suggest a retrofit compliance period of five (5) years. Perhaps some type of priority schedule could be developed. I mentioned the lights on the side of the Freshwater maintenance facility which blind drivers as they come down the hill from Kneeland and make the sharp turn at the bottom near the facility.

The other retrofit compliance issue involves commercial and residential lighting. As I mentioned in my statement to the commissioners last April, most businesses in McKinleyville have the appropriate shielding fixtures. Maybe some type of incentive program for commercial and residential lighting to come into compliance with the new rules can be developed. I realize that these things cost money that seems to be always in tight supply.

I shall be out of the area until May 28. If you have any questions or notices of meetings, you may contact our Astronomers of Humboldt President, Brent Howatt, at the information below. Thank you for your work on this significant ordinance and considering these suggestions.

Respectfully submitted,


Mark Wilson, V.P. Astronomers of Humboldt

Brent Howatt: president@astrohum.org

Ken Yanosko: secretary@astrohum.org

Mark Wilson: vicepresident@astrohum.org 707 839-4244

From: [Acevedo, Megan](#)
To: [Meighan, Reanne](#)
Subject: FW: Night sky lighting;
Date: Tuesday, May 20, 2025 10:08:42 AM
Attachments: [image001.png](#)

From: Ford, John <JFord@co.humboldt.ca.us>
Sent: Tuesday, May 20, 2025 10:06 AM
To: Acevedo, Megan <macevedo@co.humboldt.ca.us>
Cc: Yandell, Rodney <RYandell@co.humboldt.ca.us>
Subject: FW: Night sky lighting;

Attach to BOS Report.

John

John H. Ford
Director of Planning and Building
(707) 268-3738



Effective July 1, 2024, the Humboldt County Planning and Building Department will reduce the in-person counter service hours. The new hours of operation will be from 8:30 a.m. to 2:00 p.m., Monday through Thursday, with the counter closed on Fridays.

From: Kent Sawatzky <kentsawatzky@hotmail.com>
Sent: Saturday, May 17, 2025 7:50 AM
To: Ford, John <JFord@co.humboldt.ca.us>
Subject: Night sky lighting;

Caution: This email was sent from an EXTERNAL source. Please take care when clicking links or opening attachments.

John,

If I were to vote, I would vote no. What is good for the citizens should be good for the County. COUNTY FACILITIES SHOULD NOT BE EXEMPT. If someone has a trailer park, why should the park not be able to light their streets the same as a County or City road. It sounded like streetlights were exempt. When flying that is the major Light pollution everywhere. Does Los Angeles have the same regulations as proposed? How many hundreds of complaints does P&B get a year. The regulations were basically ignored for the largest polluters, the Weed business. I find it hard to enforce any regulations that are more restrictive than the light from streetlights. More than stationary lighting, the light from vehicles causes more interior shadows than anything.

Any rebuttal to this logic?

question... Can the strings of lights using less than 60 watts (850 lumens) per bulb be used?

These commonly used strings are unshielded. Are they exempt?

Kent 1-707-668-5288

From: [Planning Clerk](#)
To: [Meighan, Reanne](#)
Cc: [Yandell, Rodney](#); [Ford, John](#)
Subject: FW: Light Pollution Ordinance - Public Comment
Date: Thursday, May 22, 2025 7:59:44 AM
Attachments: [Streetlight Recommendations.pdf](#)
[Physics of LED Light.pdf](#)
[Health Impacts of LED Light.pdf](#)
[Light Pollution Code Recommendations.pdf](#)

Please find the public comment below and attached.

Laura McClenagan

From: Mark Baker <mbaker@softlights.org>
Sent: Wednesday, May 21, 2025 10:58 PM
To: Planning Clerk <planningclerk@co.humboldt.ca.us>
Subject: Light Pollution Ordinance - Public Comment

Caution: This email was sent from an EXTERNAL source. Please take care when clicking links or opening attachments.

Dear Clerk, Humboldt County,

Please find attached information from the Soft Lights Foundation regarding the proposed light pollution ordinances.

Sincerely,

Mark Baker
President
Soft Lights Foundation
www.softlights.org
mbaker@softlights.org
X: @softlights_org
Bluesky: @softlights-org.bsky.social

Municipal Lighting Code Recommendations By Soft Lights Foundation

The Soft Lights Foundation supports the following criteria for municipal lighting codes:

1. Direct outdoor light must not be visible beyond property lines.
2. Outdoor light must not exceed 2700K Correlated Color Temperature.
3. Outdoor light must be turned off when not in immediate use.
4. Residents may submit a photograph and location for follow up by Code Enforcement.

May 21, 2025

Streetlight Recommendations

By Soft Lights Foundation

The Soft Lights Foundation supports the following criteria for street lighting:

1. Streetlighting must not interfere with path-of-travel for individuals with disabilities. LED streetlights are known to trigger seizures, migraines, and suicidal ideations, and therefore LED streetlights may not comply with the Americans with Disabilities Act.
2. Streetlighting must not interfere with circadian rhythms or harm public health. Blue-rich streetlighting is known to greatly increase the risk of diseases such as cancer, diabetes, heart disease, and mood disorders, and thus streetlights should not exceed a CCT of 2200K.
3. Streetlighting does not reduce crime, and, in fact, is often associated with an increase in crime. Crime-reduction is not a valid reason to use streetlighting.
4. The highest luminous efficacy for any streetlighting technology is Low Pressure Sodium, at approximately 200 lumens per Watt. For meeting climate change goals, public health goals, and cost savings, LPS is the preferred technology.
5. All streetlights must be shielded and properly diffused to avoid hazardous and dangerous glare.
6. Most streetlighting is excessively bright. Most streetlighting after 10pm is unused and is unnecessary light pollution. Streetlights should use the lowest possible luminous flux and should be turned off after 10pm.
7. Because LED streetlights are known to be hazardous to human health and may violate individual civil rights, the use of point source technologies is preferred. These technologies include Low Pressure Sodium, High Pressure Sodium, and Magnetic Induction.

March 14, 2025

January 11, 2025

BY EMAIL

[Name], [City Manager/City Attorney]
City, State
email address

Re: Health, Environmental, and Disability Rights Impacts of LED Products

Dear [Name],

The adverse health impacts related to exposure to the light emitted by Light Emitting Diodes (“LEDs”) are significant and severe. Acute reactions include non-epileptic and epileptic seizures, migraines, nausea, vomiting, panic attacks, thoughts of suicide, and eye pain. Long term impacts include macular degeneration and an increased risk of developing diseases from light pollution such as cancer, diabetes, heart disease, mood disorders, allergies, autism, premature birth, and early mortality.

The US Department of Energy states that LEDs are a “radically new technology” that emit a “directional” light with “unique characteristics”.¹ These unique characteristics include extreme radiance, non-uniform spatial distribution, sharp spectral peaks, square wave flicker, and digital pulsing. Products such as LED streetlights, LED digital displays, and LED flashing lights on vehicles are known to cause seizures, seizure-type reactions, migraines, and other acute adverse reactions for certain individuals with disabilities, and thus their use in public spaces creates an unlawful discriminatory barrier.

This document establishes a portion of the administrative record for any project by the city that includes the use of LED light. This document shall be considered during any administrative action by the city involving LED products and shall be provided as part of any Public Record Request or litigation.

Sincerely,

[Contract Information]

¹ https://www1.eere.energy.gov/buildings/publications/pdfs/ssl/ssl_lessons-learned_2014.pdf

APPENDIX A – Administrative Record – LED Lights and LED displays

Introduction

Any agency that is considering a project involving a Light Emitting Diode (“LED”) must recognize that the use of LED products can create discriminatory barriers which interfere with path-of-travel for certain individuals. Therefore, an agency which is considering a project involving LEDs is required to perform an analysis to establish an Administrative Record that the agency has dutifully considered the impacts of LED lights and LED displays on the civil rights of all individuals, including those with disabilities.

14th Amendment Equal Protection Clause

The 14th Amendment Equal Protection Clause of the US Constitution requires state and local governments to ensure that all individuals are provided equal protection. The introduction of LED lights and LED displays has created two classes of individuals: those who can neurologically tolerate LED light, and those who cannot neurologically tolerate LED light. Both classes must be treated equally. Therefore, if an agency wishes to use LED lighting or an LED display in a public space, the agency must publish a policy that explains how the class of individuals who cannot tolerate LED light will be afforded equal protection.

Individuals with Disabilities

The use of LED light discriminates against certain individuals with disabilities such as individuals with epilepsy, autism, migraines, PTSD, photophobia, and other neurological conditions because the LED light triggers non-epileptic and epileptic seizures, migraines, nausea, vomiting, anxiety, panic, and thoughts of suicide. The use of LED light may subject these individuals to discrimination and will violate their civil rights, and thus an agency considering the use of LED light must publish an analysis of the impacts of the LED lights or LED displays on individuals with disabilities.

Rehabilitation Act Section 504

Section 504 of the Rehabilitation Act prohibits discrimination against individuals with disabilities for projects that receive federal funding. An agency that is considering using LED light for a project that receives federal funding must publish an analysis showing that the LED lights or LED displays will not create an unlawful discriminatory barrier.

Americans with Disabilities Act

The Americans with Disabilities Act (“ADA”) prohibits discrimination and protects the right to path-of-travel without discriminatory barriers. For architectural changes such as the alteration of installing LED lights, 28 C.F.R. 35.151(b)(1) states:

Each facility or part of a facility altered by, on behalf of, or for the use of a public entity in a manner that affects or could affect the usability of the facility or part of the facility shall, to the maximum extent feasible, be altered in such manner that the altered portion of the facility is readily accessible to and usable by individuals with disabilities, if the alteration was commenced after January 26, 1992.

28 C.F.R. 35.151(b)(1) thus requires that the alteration of installing or operating LED lights or LED displays must ensure that the altered area be readily accessible and usable by individuals with disabilities. Since LED light interferes with path-of-travel for certain individuals with disabilities, an agency that is considering installing or operating LED lights or LED displays must publish an analysis of the path-of-travel impacts of LED lights and LED displays on individuals with disabilities.

US Food and Drug Administration

21 U.S.C. 360ii(a) states, “The Secretary shall establish and carry out an electronic product radiation control program designed to protect the public health and safety from electronic product radiation.” Thus, The US Food and Drug Administration (“FDA”) is required under 21 U.S.C. 360ii to establish a Radiation Control Program for LED products to minimize exposure to, and emissions of, LED Visible Light electromagnetic radiation from electronic products. However, the FDA has failed to comply with this statute, and the FDA has not published any performance standards for LED products to ensure the health, safety, and civil rights of the public.

Thousands of reports of harm from exposure to LED products have been submitted to the FDA, but the FDA has not acted on these reports.

Environmental Impact Report

LED light has the capability to impact large areas far from the source. Therefore, an Environmental Impact Report (“EIR”) must be prepared for any project that proposes LED light sources such as LED streetlights or LED digital displays. LED products such as LED streetlights and LED digital displays cannot be treated as point sources that emit spatially uniform light; therefore, the lighting analysis portion of the EIR must address the special characteristics of LED light.

Summary

Any agency that is considering the installation or operation of LED lights or LED displays must follow administrative law and establish an Administrative Record of analysis showing that the proposed LED project will not violate the 14th Amendment Equal Protection Clause, Rehabilitation Act Section 504, or Americans with Disabilities Act or cause harm to the environment.

APPENDIX B – LED Physics

LEDs emit light that has drastically different spatial, spectral, and temporal properties as compared to light emitted by traditional light sources such as tungsten filament and gas discharge.

Spatial Properties

A traditional light source, such as shown in the column on the left in Figure 1, emits light essentially uniformly in all directions in space. An LED, on the other hand, due to the flat surface geometry, emits light in a direction, and the light within the directional beam is not spatially uniform, as shown in the column on the right.

A lux meter can be used to measure the intensity of the light from a traditional light source by measuring the illuminance and then calculating the luminous intensity. However, a lux meter cannot be used for an LED light source because the LED chip emits high intensity light from such a tiny flat surface and because the light is not uniform in energy. Only computer modeling can be used to accurately calculate the intensity pattern of light from an LED source.

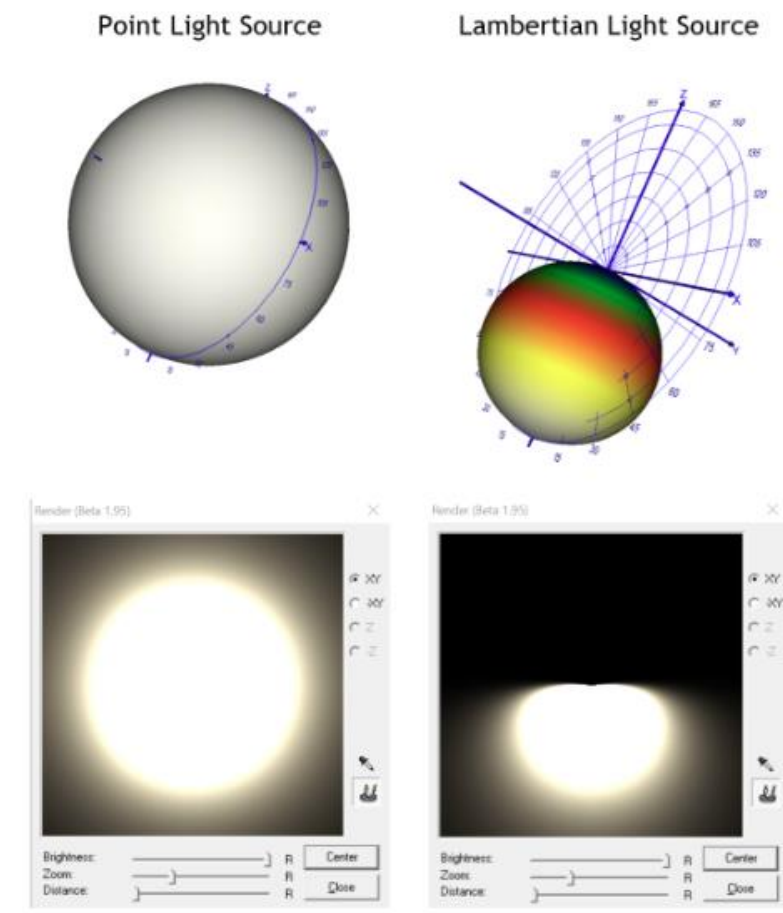


Figure 1 - Spatial Properties²

² <https://luminusdevices.zendesk.com/hc/en-us/articles/4411289188109-Optical-What-do-the-Radiation-Plots-in-LED-datasheets-mean-and-how-do-I-calculate-Lux>

Spectral Properties

An incandescent light bulb has a smooth curve of spectral power distribution, ranging from low blue to high red and infrared, as shown in Figure 2.

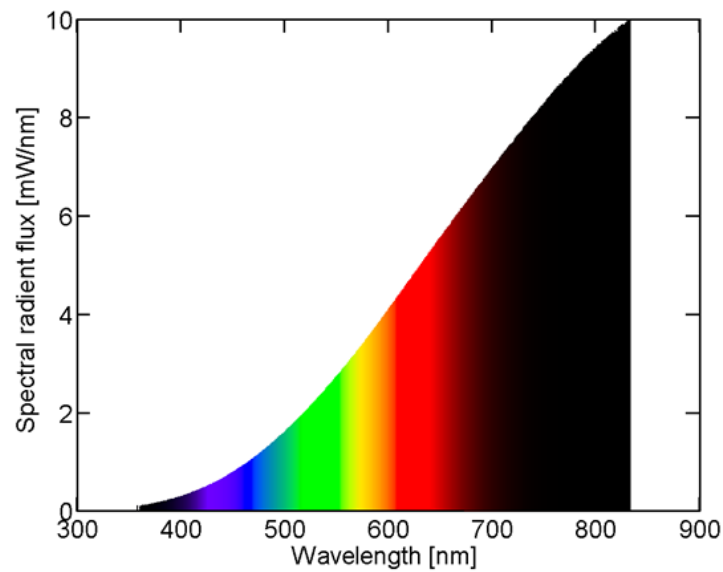


Figure 2 - Spectral Power Distribution of Incandescent

A 4000K LED has a spectral power distribution consisting of a sharp peak of blue wavelength light, very little red, and no infrared, as shown in Figure 3

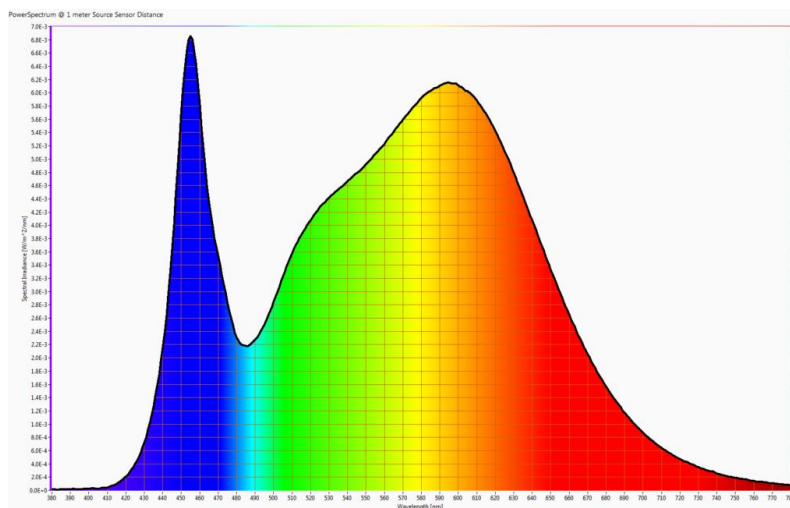


Figure 3 - Spectral Power Distribution LED

Temporal Properties

An incandescent light bulb has sine wave flicker with about 6.6% percent flicker, as shown in Figure 4.

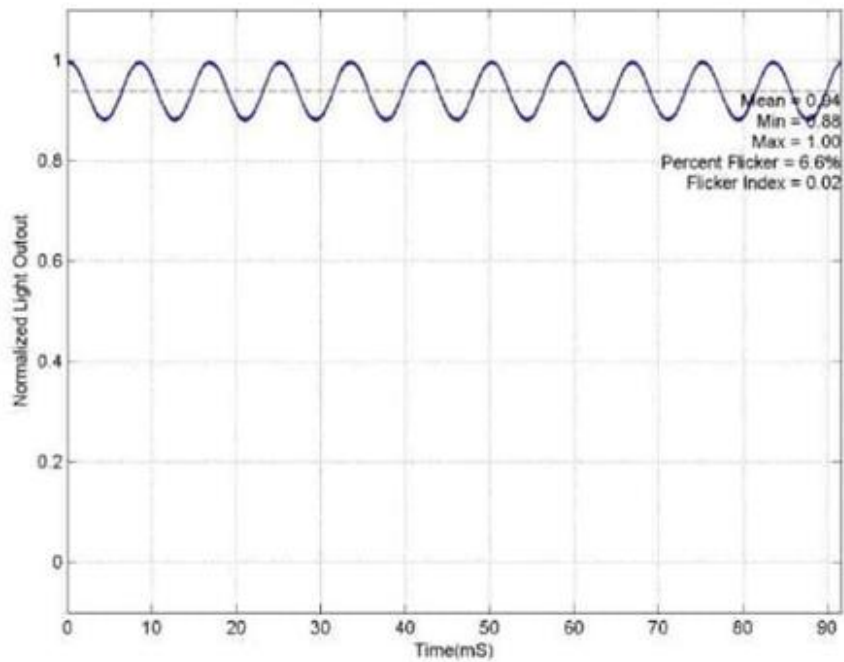


Figure 4 - Sine Wave Flicker

An LED light bulb has square wave flicker with 100% percent flicker, as shown in Figure 5.

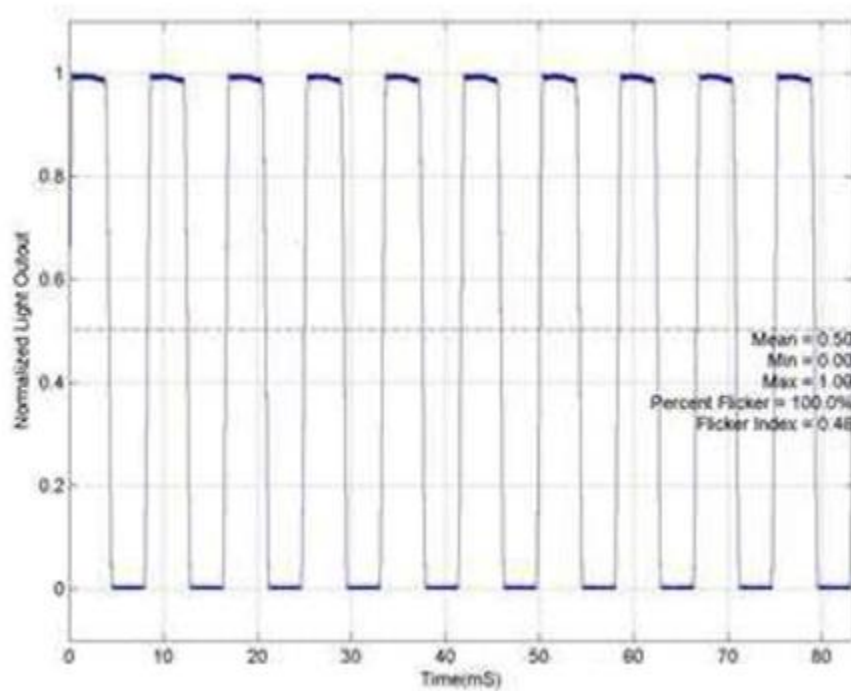


Figure 5 - Square Wave Flicker

September, 2024 – [Impact and visualization of scotomatic glare in central visual field perception](#) – “We conclude that even off-axis light exposure may affect central visual field perception. Our results extend previous research on directed light interaction and contribute in explaining its incapacitating impact on human performance.”

2024 – [LED Lighting Devices and Colorimetry](#) – Detailed explanations of the physics of light and LEDs. LEDs are Lambertian radiators, whereas point sources are isotropic.

July 3, 2023 – [LED Bulb Truth](#) – This video shows the physics characteristics of incandescent, CFL, and LED. The narrator mentions the directed energy beam of LED and shows the spectral power distribution and flicker characteristics of LED light.

May 4, 2023 – [Light field analysis for modeling and transmission characteristics of partially coherent light-emitting diodes](#) – A discussion of the Lambertian spatial distribution of LED light and its semi-coherent properties.

January 22, 2023 – [A Quest for New Metrics to Curb the Increase In Glare from LED Lighting](#) – Lead author Dr. Peter Veto details the primary problems with LED light sources: unregulated peak luminance and inappropriate measurement techniques.

November 14, 2022 – [Curved vs. Flat](#) – A comparison of curved vs. flat surface radiation emitters.

August, 2022 – [Radio Wave Packet](#) – What you need to know about wireless technology.

December, 2021 – [Is Street Lighting Damaging Our Health?](#) – The first documented admission by an LED lighting company, Cree Lighting, that the industry has been using the wrong metrics to measure LEDs.

June 7, 2021 – [What is Peak Brightness](#) – Confirmation by a writer in the LED display industry that LED brightness is measured with luminance in nits, not luminous intensity in candela.

June, 2021 – [The Science of Goniophotometry](#) – This article notes that care must be taken with lamps with narrow beams or an array of emitters.

October, 2019 – [Derivation and Experimental Verification of the Near-field 2D and 3D Optical Intensities From a Finite-size Light Emitting Diode \(LED\)](#) – Calculating peak intensities for the Lambertian shape generated by LEDs.

August, 2018 – [Determination of a laser eye dazzle safety framework](#) – Describes how a laser beam can cover part or all of an eye.

April 24, 2017 – [Understand Luminous and Radiant Intensity, and Uniformity Characterization](#) – Describes an averaged LED intensity.

July 1, 2016 – [The Influence of LED Emission Characteristics on the Efficiency of Lighting Systems](#) – Describes the difference between volume and surface LED emitters and describes the spatial emissions as a Lambertian or near-Lambertian.

February, 2016 – [Analysis of uniformity of illumination of a freeform lens when combined with different optical sources](#) – Discussion of how to use lenses to achieve uniform illumination. Identifies that there are isotropic sources and Lambertian sources.

February 7, 2014 – [Can Light Bend Around Corners?](#) – Light interferes with itself, causing beam spread.

2013 – [Radiance of the sun, a 1 mW laser pointer and a phosphor emitter](#) – Discussion of homogenous and non-homogenous emitters and the importance of field of view. Includes discussion of safety limits.

2013 – [Angular Distribution of Average Luminous Intensity of Low-power LEDs](#) – LEDs emit non-uniform energy in a Lambertian shape, sometimes off-center.

2011 – [Measuring Luminance with a Digital Camera](#) – Explains how to use a digital camera to measure luminance from LED light sources.

January, 2009 – [Electromagnetic Radiation from Organic Light-emitting Diodes](#) – Shows a Light Intensity Diagram for an OLED with Lambertian shape.

2009 – [Light-Emitting Diode Technology for Solid State Lighting](#) – States that there are no known studies in the impacts of spiky spectral distribution on human perception and accurately predicts that LEDs will change the world.

2008 – [Digital Billboard Recommendations and Comparisons to Conventional Billboards](#) – Dr. Ian Lewin examines LED billboards. 300 nits is comfortable.

2008 – [Modeling the Radiation Pattern of LEDs](#) – LEDs emit non-uniform radiation.

2007 – [Spherical Wave Propagation](#) – Antennas emit radiation in a spherical wave that disperses following an inverse square law, so long as the antenna emits isotropic radiation. A flat surface antenna will instead emit a directed energy beam.

2007 – [Luminance and Light Intensity Conversion](#)

December 12, 2006 – [Light Recycling Contributes to Brightness in Filament Lamps](#) – Discussion of how light in a coiled tungsten filament reflects internally on the coils to create a non-uniform distribution of the light.

April, 2002 – [Lecture 15 – LED Measurement Issues](#) – Dr. A. A. Gaertner discusses measurement of LED light. Dr. Gaertner refers to traditional lighting as “point sources” and LED lighting as “Lambertian sources”.

Illuminance vs Luminance – Luminance is the light that hits the eye. Luminance plus contrast is brightness. In the case of LEDs, the luminance is coming straight from the source without being reflected first.

Yujileads – Industry information about LEDs contains color many color temperature charts and other useful information.

Light Emitting Diodes Chapter 16 – Differentiates between “point sources” and “surface sources” for brightness.

Inverse Square Law, General – Quote: *“Any point source which spreads its influence equally in all directions without a limit to its range will obey the inverse square law.”* – LEDs are Lambertian Sources, not Point Sources, and the influence is not spread equally in all directions. Thus, LED radiation does not obey an inverse square law.

November 19, 2024 – [The connections between human health and blue light pollution](#) – Audio interview with Dr. Mario Motta, the father of the discoveries of blue light melatonin suppression and the connection to disease.

November 9, 2024 – [Effects of near-infrared radiation in ambient lighting on cognitive performance, emotion, and heart rate variability](#) – NIR is beneficial to human health.

October 20, 2024 – [Indoor and outdoor artificial light-at-night \(ALAN\) and cancer risk: A systematic review and meta-analysis of multiple cancer sites and with a critical appraisal of exposure assessment](#) – Artificial light at night increases cancer risk.

October 1, 2024 – [Solid State Lighting: Review of Health Effects](#) – A detailed literature of the health impacts of LED lighting by the International Energy Agency.

September 15, 2024 – [Light pollution: time to consider testicular effects](#) – Given the strong interrelationships between energy metabolism and fertility ([Hansen et al., 2013](#); [Della Torre et al., 2014](#); [Roa and Tena-Sempere, 2014](#); [Service et al., 2023](#)), it is plausible that light pollution could impact fertility – impacts that include adverse effects on puberty from smart phone use at bedtime during adolescence.

September 5, 2024 – [Outdoor nighttime light exposure \(light pollution\) is associated with Alzheimer's disease](#) – Higher outdoor nighttime light was associated with higher prevalence of Alzheimer's Disease.

April 8, 2024 – [Why Are Cancer Rates in Young People Climbing?](#) – Blue-rich lighting may be a culprit in the rise of cancers in the young.

April 5, 2024 – [Melanopsin: Light response, circadian rhythm, and blue light exposure](#) – An article on the light-detecting protein melanopsin and how it is found in the eye, fat, skin, blood vessels, and brain.

March 25, 2024 – [Outdoor Light at Night, Air Pollution, and Risk of Cerebrovascular Disease: A Cohort Study in China](#) – ALAN increases risk of disease.

February 20, 2024 – [Light stimulation of mitochondria reduces blood glucose levels](#) – Red light can reduce blood glucose spikes. Red light is generally beneficial, as compared to blue light which is the controller of our circadian rhythms, but also hazardous.

February 14, 2024 – [Influence of Light at Night on Allergic Diseases: A Systematic Review and Meta-Analysis](#) – Study finds that artificial light increases the risk of allergic diseases.

January 26, 2024 – [Breast Cancer Incidence Among US Women Aged 20 to 49 Years by Race, Stage, and Hormone Receptor Status](#) – Breast cancer rates started rising at 4% per year in correlation with the adoption of blue-rich LED lights.

October 9, 2023 – [Day and night light exposure are associated with psychiatric disorders: an objective light study in >85,000 people](#) – Increased exposure to light at night increases a person's risk for psychiatric disorders such as anxiety, bipolar and PTSD severity as well as self-harm.

October 4, 2023 – [Lights should support circadian rhythms: evidence-based scientific consensus](#) – 2,697 peer-reviewed publications show the blue light is harmful.

August 21, 2023 – [Induction of Skin Cancer by Long-Term Blue Light Irradiation](#) – The results of this study showed that daily exposure to blue light for 1 year induced skin cancer.

June 23, 2023 – [Outdoor artificial light at night and risk of early-onset dementia: A case-control study in the Modena population, Northern Italy](#) – Study showing a connection between artificial light at night and dementia.

June, 2023 – [Non-image-forming functional roles of OPN3, OPN4 and OPN5 photopigments](#) – Proteins that can detect light.

May, 2023 – [Understanding Light Pollution: Recent Advances on Its Health Threats and Regulations](#) – Discussion of health impacts of light pollution.

March 17, 2023 – [Light as a Modulator of Non-Image-Forming Brain Functions—Positive and Negative Impacts of Increasing Light Availability](#) – Melanopsin-expressing ipRGCs mediate the influence of light on several circadian, neuroendocrine, and neurobehavioral functions collectively defined as NIF, i.e., functions not directly related to image formation.

March 16, 2023 – [Light at night and cause-specific mortality risk in Mainland China: a nationwide observational study](#) – The first study showing a direct correlation between artificial light at night and death. – Cellular risks of blue light exposure.

March 13, 2023 – [The #1 EMF You've Forgotten About](#) – Detailed blog discussion of the impacts of blue wavelength light on human health.

January 4, 2023 – [Network-driven intracellular cAMP coordinates circadian rhythm in the suprachiasmatic nucleus](#) – Circadian rhythms are controlled by blue wavelength light.

December, 2022 – [Associations Between Indoor Light Pollution and Unhealthy Outcomes in 2,947 Adults: Cross-sectional Analysis in HEIJO-KYO Cohort](#) – LAN levels are significantly associated with parameters of obesity, dyslipidemia, systemic inflammation, sleep disturbances, and depressive symptoms.

October 24, 2022 – [Light Pollution Linked with Cognitive Decline](#) – Outdoor light pollution study.

September 28, 2022 – [Functional connectivity of brain networks with three monochromatic wavelengths: a pilot study using resting-state functional magnetic resonance imaging](#) – Each wavelength has different impacts on human brain activity.

September 26, 2022 – [Associations between indoor light pollution and unhealthy outcomes in 2,947 adults: Cross-sectional analysis in the HEIJO-KYO cohort](#) – LAN levels are significantly associated with parameters of obesity, dyslipidemia, systemic inflammation, sleep disturbances, and depressive symptoms.

August 10, 2022 – [Artificial light at night and risk of mental disorders: A systematic review](#) – “the epidemiological evidence produced so far seems to support an association between LAN and risk of depressive disorders.”

August 10, 2022 – [Disruption of the Circadian Clock Drives Apc Loss of Heterozygosity to Accelerate Colorectal Cancer](#) – Interruption of the circadian clock increases cancer risk.

July 15, 2022 – [Outdoor light at night, overweight and obesity in school-aged children and adolescents](#) – Outdoor light at night increases obesity in children.

June 22, 2022 – [Light at Night in Older Age Associated with Obesity, Diabetes, and Hypertension](#) – ALAN causes sickness.

June 14, 2022 – [Linking Individual Differences Between in Human Primary Visual to Contrast Sensitivity Around the Visual Field](#) – Research on how vision works.

June 6, 2022 – [Risk of COPD Exacerbation is Increased by Poor Sleep Quality and Modified by Social Adversity](#) – Poor sleep increases risk of lung disease.

March 14, 2022 – [Light Exposure During Sleep Impairs Cardiometabolic Function](#) – Blue light is bad. Any light is bad. Tiny amounts of light at night is bad.

March 10, 2022 – [Outdoor Light at Night and Autism Spectrum Disorder](#) – Artificial Light at Night significantly increases the risk of developing autism.

March 3, 2022 – [The Mind After Midnight: Nocturnal Wakefulness, Behavioral Dysregulation, and Psychopathology](#) – Maladaptive Behaviors After Midnight.

November, 2021 – [One Third of Us are At Risk](#) – Compiled links to medical research on the effects of LEDs.

June 6, 2021 – [Afraid of the dark: Light acutely suppresses activity in the human amygdala](#) – Fear of the dark is real.

May 13, 2021 – [Should We Re-think Regulations and Standards for Lighting at Workplaces? A Practice Review on Existing Lighting Recommendations](#) – Quote: the quality of light should not be reduced for lower energy consumption.

March, 2021 – [Do no harm: the beginning of the age of healthy hospital lighting](#) – Reduction of blue wavelength light improves sleep.

February 8, 2021 – [Associations between Artificial Light and Risk for Thyroid Cancer](#) – Artificial light increases thyroid cancer risk by 55%.

February, 2021 – [Insights into blue light accelerated tooth whitening](#) – At a radiance of 190 mW/cm², LEDs will bleach teeth.

January 27, 2021 – [Moonstruck sleep: Synchronization of human sleep with the moon cycle under field conditions](#) – Sleep timing is synchronized under the moon cycle. Artificial light disrupts this cycle.

January 7, 2021 – [Light Pollution, Sleep Deprivation, and Infant Health at Birth](#) – This study confirms that light pollution can lead to premature births.

November 5, 2020 – [Evening home lighting adversely impacts the circadian system and sleep](#) – This article makes the case that the economic benefits of energy efficient LED lighting are outweighed by the substantial disease burden they produce.

May 24, 2020 – [20% to 30% Have Heightened Sensitivity](#) – This article articulates how the 20% to 30% of the population who are sensitive receptors have been so far snubbed by the the psychology profession.

February 29, 2020 – [LED Street Lights – Major Health Concerns](#) This presentation by Dr. Wojcik summarizes the research about the dangers of blue wavelength light.

February 27, 2020 – [Blue Light Suppresses Melatonin in Dairy Calves](#) This study shows that melatonin is suppressed by blue wavelength light, thus affecting eating, drinking, etc.\

2020 – [Replace Toxic Fluorescent Light with Natural Light Now!](#) – A discussion of research studies showing the adverse health impacts of fluorescent and LED light on health and student learning.

December 13, 2019 – [Light-Emitting Diodes \(LEDs\): Implications for Safety](#) – Even though this is an article from ICNIRP, it contains a fundamentally false statement on efficiency and is missing discussion of non-uniform luminance.

November 29, 2019 – [Acute Exposure to Low Level Light at Night is Sufficient to Induce Neurological Changes and Depressive-like Behavior](#) – Acute exposure to LAN alters brain physiology and can be detrimental to wellbeing in otherwise healthy individuals.

October 17, 2019 – [Daily blue-light exposure shortens lifespan and causes brain neurodegeneration in Drosophila.](#) – LED blue wavelength light causes serious injury to flies.

May 22, 2019 – [Implication of Melanopsin and Trigeminal Neural Pathways in Blue Light Photosensitivity *in vivo*](#) – Melanopsin is a protein that can detect light. The researchers demonstrate that blue-light exposure provokes important immune and inflammatory responses in the ocular surface, trigeminal pathways and the retina.

April, 2019 – [Ocular hazards of curing light units used in dental practice – A systematic review](#) – The article states, “This review concludes that blue light poses maximum risk to cause retinal degeneration based on the evaluated studies.”

October 2, 2018 – [Melatonin: An Anti-Tumor Agent](#) This study shows that light at night increases risk of breast and prostate cancer.

September 9, 2018 – [Blue light negatively affects the survival of ARPE19 cells through an action on their mitochondria and blunted by red light](#) – Red light blunts the negative effects of blue light.

July 2018 – [Light Pollution, Sleep Deprivation, and Infant Health at Birth](#) – Skyglow results in reduced birth weight and pre-term births.

June 25, 2018 – [Current Understanding of Photophobia, Visual Networks, and Headaches](#) – How light triggers pain.

June 5, 2018 – [SCHEER Final Opinion on Light Emitting Diodes](#) – An overly positive opinion of LEDs, choosing to ignore the downsides and missing studies.

February, 2018 – [Including an index measuring the weighted content of blue light in lamp labelling](#) – A proposal for G-Index in place of Correlated Color Temperature.

August 8, 2017 – [Harvard University – Outdoor Light at Night and Breast Cancer Incidence in the Nurses’ Health Study II](#) This study shows the link between artificial light at night and breast cancer.

February, 2017 – [Blue Light Paradox](#) – Blue wavelength controls circadian rhythms, but also damages the eye.

January 31, 2017 – [National Institutes of Health – Timing of Light Exposure Affects Mood and Brain Circuits](#) – This scientific research article covers how circadian rhythms are being disrupted by artificial light at night.

January 2017 – [Photobiological Safety](#) – Discussion of the impacts of LED light on circadian rhythms and eye cells by Christophe Martinsons.

April, 2016 – [Exposure of Fluid Milk to LED Light](#) – LED light has a strong negative impact on the taste of milk.

January 24, 2016 – [NIH – Effects of Blue Light on the Circadian System and Eye Physiology](#) This scientific research paper concludes that blue light causes photoreceptor damage.

November 17, 2014 – [Melanopsin mediates light-dependent relaxation in blood vessels](#) – Melanopsin proteins are found in blood vessels and can detect light.

January 2013 – [Health Effects of Large LED Screens on Local Residents](#) – Luminance above 10,000 nits is dangerous and this article mentions the need to further study the impacts of LEDs on those with epilepsy.

November 8, 2012 – [Ensuring Safety in LED Lighting](#) – Significant coverage of the dangers of LED radiation. Blue light hazard, excessive luminance, macular degeneration, sleep disruption, and LEDs classified as lasers for use in toys.

June 3, 2011 – [Limiting the impact of light pollution on human health, environment, and stellar visibility](#). – Impacts of light pollution.

December, 2010 – [Light Pollution: Light at Night and Breast Cancer Risk Worldwide](#) This study shows that cancer risk increased by as high as 50% for countries with high Artificial Light at Night.

August 20, 1999 – [Daylighting in Schools Study](#) – Students perform better under natural light.

November 22, 1996 – [Effect of bright light exposure on muscle sympathetic nerve activity in human](#) – 5000 lux light triggers nerve activity, even after the light is shut off.

APPENDIX D – Eye Hazards

April 17, 2024 – [The Position Index of Overhead LED Sources Under Different Spectral Power Distributions and Background Luminances](#) – “LED products can exhibit very high luminance values. Even when used at high angles they can be uncomfortably bright. Some emitters measure at over 1,000,000cd/m², although those luminances are usually reduced with the use of diffusing materials or indirect optical systems.”

March 18, 2024 – [Light Pollution and Oxidative Stress: Effects on Retina and Human Health](#) – The consequences of excessive illumination and/or prolonged exposure to blue light on retinal function and explores its implications for human health.

February 2, 2024 – [The blue light hazard and its use on the evaluation of photochemical risk for domestic lighting. An in vivo study](#) – Light spectrum matters, not just blue light. The risk to cellular death from Visible Light has been drastically underestimated.

January 16, 2024 – [Nighttime Outdoor Artificial Light and Risk of Age-Related Macular Degeneration](#) – A study of 126,418 subjects found a correlation between Artificial Outdoor Light At Night and Exudative Age-related Macular Degeneration.

December 17, 2023 – [Lighting for the Aging Eye](#) – Discussion of the impacts of light on an older person’s eyes.

May, 2023 – [Blueberry Stem Extract Suppresses Blue Light-Emitting Diode Light-Induced Endoplasmic Reticulum Stress on Retinal Photoreceptor Cells](#) – Blue light causes retinal photoreceptor damage via oxidative and endoplasmic reticulum (ER) stress.

April, 2023 – [Blue light exposure collapses the inner blood-retinal barrier by accelerating endothelial CLDN5 degradation through the disturbance of GNAZ and the activation of ADAM17](#) – Blue light causes cellular harm.

March, 2023 – [Blue Light—Ocular and Systemic Damaging Effects: A Narrative Review](#) – The harmful effects of blue wavelength light.

January 4, 2023 – [Network-driven intracellular cAMP coordinates circadian rhythm in the suprachiasmatic nucleus](#) – Circadian rhythms are controlled by blue wavelength light.

January, 2023 – [Blue light pollution causes retinal damage and degeneration by inducing ferroptosis](#) – Blue wavelength light causes cell death.

July 27, 2022 – [Age-dependent effects of blue light exposure on lifespan, neurodegeneration, and mitochondria physiology in *Drosophila melanogaster*](#) – Blue wavelength light is even more toxic as we age.

April, 2021 – [What is Photobiological Safety Standard?](#) – Discussion of IEC 62471 and concern about eye damage from LEDs and the classification groups Risk Group 0, 1, 2 and 3.

July 14, 2020 – [Comparison of ophthalmic toxicity of light-emitting diode and organic light-emitting diode light sources](#) – LEDs are toxic to the eye, OLEDs less so.

February, 2020 – [Light-induced Retinal Ganglion Cell Damage and the Relevant Mechanisms](#) – Retinal Ganglion Cells in the eye are damaged by excessive visible radiation.

August 21, 2019 – [Mitochondria as Potential Targets and Initiators of the Blue Light Hazard to the Retina](#) – Describes the structure of the eye at the cellular level and details the photobiological hazards and serious injury to the eye caused by blue wavelength light.

December 18, 2018 – [Research progress about the effect and prevention of blue light on eyes](#) – Quote: “High energy short wave blue light between 415 and 455 nm is the most harmful. Direct penetration of crystals into the retina causes irreversible photochemical retinal damage.”

December, 2018 – [Exposure to excessive blue LED light damages retinal pigment epithelium and photoreceptors of pigmented mice.](#)

June 29, 2017 – [Effects of white light-emitting diode \(LED\) exposure on retinal pigment epithelium *in vivo*](#)

February 18, 2017 – [Light-emitting-diode induced retinal damage and its wavelength dependency *in vivo*](#)

October, 2016 – [Blue Light: What are the Risks to Our Eyes?](#) – International Review of Ophthalmic Optics – Quote: *We cannot seriously deny the potential ocular risks from overexposure to blue light. It is important not to forget that it is the cumulative effect over time that is dangerous and must be fought.*

April 8, 2015 – [Retinal damage induced by commercial light emitting diodes \(LEDs\).](#)

June, 2014 – [\(PDF\) Damage of photoreceptor-derived cells in culture induced by light emitting diode-derived blue light \(researchgate.net\)](#)

March, 2014 – [White light-emitting diodes \(LEDs\) at domestic lighting levels and retinal injury in a rat model.](#)

January, 2011 – [Retinal light toxicity](#) – Discussion of eye hazards from light and different types of toxicity.

Appendix E – Neurology

June 5, 2024 – [Hyper-focus, sticky attention, and springy attention in young autistic children: Associations with sensory behaviors and cognitive ability](#) – Individuals with autism may not be able to disengage from LED lights.

April 17, 2024 – [High visual salience of alert signals can lead to a counterintuitive increase of reaction times](#) – Attention vs. Distraction.

February 21, 2023 – [Associations Between the Pupil Light Reflex and the Broader Autism Phenotype in Children and Adults](#) – An individual with autism has a slower pupil light reflex.

November 30, 2022 – [A Case Study on the Effect of Light and Colors in the Built Environment on Autistic Children’s Behavior](#) – Quote, “especially since bright lights and loud sounds can be bothersome sensory overloads to autistic children affecting their functioning and behavior.”

February 7, 2022 – [Visually sensitive seizures: An updated review by the Epilepsy Foundation](#) – The abstract states that visually-induced seizures remain significant public health hazards so they warrant ongoing scientific and regulatory efforts and public education and that images with flashes brighter than 20 candelas/m² at 3-60 (particularly 15-20) Hz occupying at least 10 to 25% of the visual field are a risk. This confirms that LED flashing lights will trigger epileptic seizures.

November 19, 2021 – [Sensory Friendly LED Lighting for Healthcare Environments](#) – An important acknowledgement that light affects people with autism and that hospital environments can harm people with autism. However, the report fails to acknowledge non-uniform luminance and generally promotes unsafe LED lighting.

June 8, 2021 – [Visual Sensory Experiences from the Viewpoint of Autistic Adults](#) – Quote: “a dislike for extreme or flashing lights”

January 2013 – [Health Effects of Large LED Screens on Local Residents](#) – Luminance above 10,000 nits is dangerous and this article mentions the need to further study the impacts of LEDs on those with epilepsy.

[Psychological factors in exceptional, extreme and torturous environments](#) – Includes discussion of strobe lights as torture.

[The Hidden Harm](#) – Includes discussion of using bright lights as a torture method.

[Photosensitivity and Seizures](#) – A short article about light causing seizures in those with epilepsy.

[Why Light Worsens Migraine Headaches](#) – Discussion of how light increases the pain of migraine headaches.

[Sensitivity Intolerance in Autism](#) – Discussion of how light impacts those with autism.

[Lighting Ergonomics, Light Flicker](#) – Discussion of sub-sensory flicker.

[Avoiding Flashing on Web Pages](#) – Discussion of avoiding flashing that may trigger seizures.

[Blue Light and Bipolar Disorder](#) – August 4, 2021

Appendix F – Ecology

November 13, 2024 – [Pulsed artificial light at night alters moth flight behaviour](#) – LED vehicle headlights impacting moth behavior.

November 12, 2024 – [Exposure to constant artificial light alters honey bee sleep rhythms and disrupts sleep](#) – Bees are adversely impacted by artificial light at night.

October 10, 2024 – [Blue and white light pollution is disastrous for Cory's shearwater fledglings](#) – Birds are severely impacted by blue-rich light.

October 8, 2024 – [Shedding light with harmonic radar: Unveiling the hidden impacts of streetlights on moth flight behavior](#) – Impacts of streetlights on moths.

July 26, 2024 – [How to reduce the negative impacts of artificial light at night on flying insects](#) – Reduced light levels and homogeneity of coverage reduces adverse insect impacts.

January 20, 2024 – [Research Note: Red light to mitigate light pollution: Is it possible to balance functionality and ecological impact?](#) – Even red light at night can have adverse ecological impacts.

January 19, 2024 – [Artificial light at night reduces earthworm activity but increases growth of invasive ragweed](#) – Light pollution reduced earthworm surface activity by 76% and increased ragweed height growth by 104%.

January 11, 2024 – [How Artificial Light Threatens Nature](#) – Video documentary that details how artificial light is devastating the ecosystem.

January 4, 2024 – [Why flying insects gather at artificial light](#) – Insects turn their dorsum towards the lights which provides orientation. Artificial light causes the insects to steer in a circle until death.

October 30, 2023 – [Light Pollution in Complex Ecological Systems](#) – Light pollution is increasing at 10% per year and adversely impacting entire ecosystems.

September 21, 2023 – [Phenotypic signatures of urbanization? Resident, but not migratory, songbird eye size varies with urban-associated light pollution levels](#) – The eye size of urban birds is shrinking.

September 19, 2023 – [Healing with the Night: Investigations into Experiences of Natural Darkness in Overnight Recollective Practices](#) – The healing properties of natural night.

September 14, 2022 – [Environmental risks from artificial nighttime lighting widespread and increasing across Europe](#) – LEDs have increased light pollution and have increased the emissions of toxic blue wavelength light.

September 9, 2022 – [The Dark Side of LEDs: Suppression of Melatonin by Blue Light](#) – An article about the studies of researcher

May 20, 2022 – [Light pollution can disorient monarch butterflies](#) – Even a single light can interfere with a butterfly's navigation system.

March 29, 2022 – [Broad spectrum artificial light at night increases the conspicuousness of camouflaged prey](#) – LED light leads to predator advantage.

April 27, 2022 – [Oriented Migratory Flight at Night: Consequences of nighttime light pollution for monarch butterflies](#) – ALAN interferes with monarch butterfly migration.

January 27, 2022 – [The growing threat of light pollution to ground-based observatories](#) – Impacts of skyglow on dark skies.

2022 – [Artificial Light at Night: State of the Science 2022](#) – IDA report. Discusses how LED light is increasing light pollution. Falsely claims that LEDs are energy efficient.

August, 2021 – [Street lighting has detrimental impacts on local insect populations](#) – This study shows that LEDs are killing insects even faster than High Pressure Sodium.

August, 2021 – [First Estimation of Global Trends in Nocturnal Power Emissions Reveals Acceleration of Light Pollution](#) – Light pollution continues to grow and LED blue wavelength light is making it worse.

April, 2021 – [Narrow Spectrum Artificial Light Silences Fireflies](#) – Artificial light, especially bright amber, suppresses courtship. "we should focus on minimizing the time that lights are on and how bright they are." – [News Story](#)

March, 2021 – [Light Pollution Drives Increased Risk of West Nile Virus](#) – Even low levels of artificial light at night increase the risk of transmission of the virus.

March, 2021 – [Superoxide is Promoted by Sucrose and Affects Amplitude of Circadian Rhythms in the Evening](#) – Both light and sugars affect the biological clock of plants. – [News Story](#)

March 10, 2020 – [Artificial Lighting Impacts to Salmon in WRIA 8 Briefing Memo](#) – Artificial light is impacting the survival of juvenile salmon.

January, 2020 – [Australian Light Pollution Guidelines for Wildlife](#) This detailed document describes best lighting practices.

2020 – ["use lamps with the lowest CCT, melanopic response, or M/P value possible to achieve the goals of the lighting project."](#) – Illuminating Engineering Society – [On the Use of Summary Metrics of Light Spectral Characteristics to Assess Effects of Artificial Light at Night on Wildlife](#)

2020 – [“ALAN reduces habitat suitability” – El Sevier – Effects of artificial light at night on the foraging behavior of an endangered nocturnal mammal](#)

July 30, 2018 – [Waters under Artificial Lights: Does Light Pollution Matter for Aquatic Primary Producers?](#) – ALAN and LED light negatively impacts periphyton.

July 30, 2018 – [Waters under Artificial Lights: Does Light Pollution Matter for Aquatic Primary Producers?](#) – ALAN negatively impacts periphyton.

2018 – [“Anthropogenic lighting drastically alters nocturnal environments, threatening a wide range of species” – Colorado State University – Anthropogenic light disrupts natural light cycles in critical conservation areas](#)

2018 – [“we advocate warm color temperature white light as nighttime illumination” – Health and Human Services USA – Light at night disrupts nocturnal rest and elevates glucocorticoids at cool color temperatures](#)

2018 – [“bombarded with numerous novel stimuli in their environment that could lead to grave consequences.” – Journal of Ecology – Connecting spectral radiometry of anthropogenic light sources to the visual ecology of organisms](#)

2018 – [“if the tendency to light more when light is cheaper can be overcome” – Luger Research – Hazard or Hope? LEDs and Wildlife](#)

2017 – [“When the installation was illuminated, birds aggregated in high densities, decreased flight speeds, followed circular flight paths, and vocalized frequently” – Proceedings of the National Academy of Sciences – High-intensity urban light installation dramatically alters nocturnal bird migration](#)

2013 – [“alters detection of day and night” – Exeter University – Measuring biological light pollution and uncovering its ecological effects](#)

2013 – [“the significant impact that even low levels of nighttime light pollution can have” – Cambridge University – The ecological impacts of nighttime light pollution: a mechanistic appraisal](#)

November, 2017 – [Artificially lit surface of Earth at night increasing in radiance and extent](#) – This study uses satellite data to show that light pollution has increased due to the use of LED lights.

2017 – [“Managers should avoid lights that have ultraviolet or blue light \(shorter wavelengths\)” – National Park Service – Artificial Night Lighting and Protected Lands](#)

April, 2015 – [Artificial Light at Night and the Predator-Prey Dynamics of Juvenile Atlantic Salmon](#) – Even tiny amounts of artificial light affect salmon.

2015 – “The most immediate threat from anthropogenic noise and light is the loss of species” – Trends in Ecology & Evolution – A framework to assess evolutionary responses to anthropogenic light and sound

May 29, 2014 – Potential Biological and Ecological Effects of Flickering Artificial Light – Explains how the visual system of different creatures have a rate at which they capture images. Electric light interferes with this system, causing perceived flicker.

2014 – “exacerbate existing domestic, e.g., midge swarms and industrial infestations of sanitary and phytosanitary pests” – Ecological Society of America – LED lighting increases the ecological impact of light pollution irrespective of color temperature

2012 – “Technological innovations and changes in lighting strategies should consider benefits for reductions in greenhouse gases and energy consumption in parallel with their potential ecological impacts” – Global Change Biology – Conserving energy at a cost to biodiversity? Impacts of LED lighting on bats

2009 – “Light pollution can have significant conservation consequences for a threatened bat species” – Current Biology – Street Lighting Disturbs Commuting Bats

Appendix G – Flicker

September 16, 2024 – [Visibility and annoyance of the phantom array effect varies with age and history of migraine](#) – Discussion of flicker and Pulse Width Modulation and their impacts.

July 12, 2024 – [A Review of Contemporary Issues with Temporal Light Modulation of Lighting Systems](#) – IEEE review paper of issues with flicker and other temporal issues. There is mention of the lack of support for sensitive persons.

2024 – [Correspondence: Flicker: The sneaky perception that ranges from invisible to debilitating](#) – PNNL researcher Naomi Miller writes that flicker is a psychological health hazard.

August, 2023 – [Illuminating Engineering Society Newsletter](#) – IES states, “*Temporal light modulation (TLM, or flicker) is an increasing phenomenon in indoor, outdoor, and vehicular applications, due to the widespread adoption of LED sources. Most LED lighting systems don’t produce problematic TLM, but for those that do, there has been a delayed recognition that certain TLM waveform characteristics and viewing conditions can result in distraction and disorientation, cognitive effects, and **serious health consequences** in some populations.*”

2021 – [Flicker measurement \(Temporal Light Artefact\) of LED lighting](#) – Discussion of flicker measurement.

July 27, 2017 – [The Scientific Reason You Don’t Like LED Bulbs](#) – Explains that LED bulb can flicker at 400 Hertz, but humans are negatively affected up to 3000 Hertz.

2011 – [Exploring Flicker in Solid State Lighting](#) – Pacific Northwest National Laboratory (Department of Energy). Includes statements that flicker can cause neurological problems.

2010 – [LED Lighting Flicker and Potential Health Concerns](#) – There are various reasons why LEDs can flicker and this flicker can cause seizures and other negative neurological responses.

Appendix H – LED Incident Reports

The following reports were collected via the Soft Lights Foundation website and have been submitted to the US Food and Drug Administration.

December, 2024

December 31, 2024 – Cherry Hill, NJ – Astigmatism

Bright LED Headlights have significantly impacted me, and my freedom to travel when and where I want to. I have an astigmatism, and have recently developed a driving phobia, which is largely connected to me getting overstimulated while driving. Nighttime used to be my preferred time to drive, as the roads were quieter. Now, with the LED lights, it's unbearable. Not only can I not see with the blinding lights in my face, but it greatly increases the chance I'll need to pull over and calm myself. I struggle greatly getting to all the places I used to go, and the bright headlights make the process even worse.

I genuinely feel like it is not a problem that will solve itself. In order for others to feel safe competing with the other blinding headlights (I often feel like I cannot see after passing a car with these and often in the moment wish my lights were brighter) they too need to get these LEDs. Manufacturers won't care, if anything they can advertise being the brightest.

We desperately need some sort of deterrent, because I fear for my life when I get blinded on the road at night, and wonder how many life-altering accidents have been caused by this issue. Or even what the long-term effects of these are. I wish to be free to travel where I want without this unnecessary harm.

December 31, 2024 – Orléans, France – None

It's New Year's Eve, and for the fifth consecutive year, I'm staying home and not participating in any festivities because of the blinding LED lights that are now everywhere and assault my eyes.

When the first street lights and vehicle LED headlights appeared in my area five years ago, I realized that my daily life would be completely turned upside down. I feel like I've been condemned to no longer live normally, like I used to, especially in the evenings. I can't live freely in society anymore, with a clear conscience, without the fear of having my eyes constantly assaulted by these completely excessive lights.

I'm tired of all this. Tired of having to endure these car headlights with insane brightness levels, at night JUST LIKE DURING THE DAY, forcing me to look away and leaving trails in my vision. Tired of noticing that many designs and installations of lighting fixtures are systematically done thoughtlessly, over-illuminating the entire neighborhood. Tired of these street lights that repel me and prevent me from being out at night.

The world has plunged into a light arms race that I don't understand and can no longer tolerate! Why have we come to this? Who decided this on behalf of everyone else?

Science had warned about LEDs, but it wasn't listened to. Many people complain, but they're not heard.

What's happening? What's the plan? How much longer do we have to protest and shout for the LED monster, created by a greedy and careless industry, to stop spreading uncontrollably? I deeply curse everyone who created this monster, and every day I wonder how much longer I can endure this situation before I decide to move far away so I no longer have to suffer from it.

In any case, we need to unite to make the global LED industry bend so that acceptable lighting standards for everyone are established and enforced.

Happy New Year to everyone and stay strong.

December 31, 2024 – Armada, MI – None

My wife just ordered a pair of night driving sunglasses which made me realize these modern LED headlights are just too bright, dangerous, and out of control. My wife (54), my son (20), and I (52) have been complaining about the bright headlights for the last couple of years. Another red flag is that my son also complains, and he's only 20 with perfect vision.

These dazzling lights diminish night vision and distort the field of depth. Both oncoming and rearview traffic dazzle. You can dim the center mirror, but side mirrors are not dimmable.

These headlights are dangerous to all people on the road and need to be regulated so they are either toned down or use a friendlier light frequency.

December 30, 2024 – Holly Springs, NC – Astigmatism

We live in a part of North Carolina that does not have street light coverage. In short it is VERY dark here. Driving at night here is quite a challenge. The blinding on coming headlights make it almost impossible to navigate the roads safely. Combine that with what appears to be distracted driving and you are taking your life in your hands just trying to get to the market. Something must be done to reduce the brightness of these dangerous headlights.

December 30, 2024 – Anytown, MO – Astigmatism

I'm unable to see the lines on the road when someone uses LED lights. Almost everyone I come into contact fills the same way even if they do not have an astigmatism. LED lights are very dangerous for the most basic and single most important reason of all... TWO LANE ROADS!

Many people can drive just fine at night even with varying vision problems or none whatsoever with regular halogen or non-LED bulbs.

When someone uses brights they should see far and wide so they can look for deer and other animals etc.

However when a car is within 500 ft or less not even the brightest halogen should be used for low beams as this endangers not only the person who has the lights shining in their

eyes, but it endangers the person shining the lights and someone else's eyes because it could create a head-on collision.

In fact, I'm willing to bet that many head-on collisions are result of LED lights on two-lane roads over someone looking at their phone.

If more intensive research was done you'd most likely find out I'm right since as a genius I'm right about 99% of the time about my speculations.

December 30, 2024 – Paterson, NJ – Other
The car lights are way too bright that blinds you

December 28, 2024 – Taos, NM – None
Dusk and sun setting, combine that with LED headlights and it's impossible to see the road ahead. The LEDs are so bright that you cannot tell the make of the automobile.

December 27, 2024 – Blanco, TX – None
There's a difference between brightness and color temperature. Brightness is measured in Lumens. Color temperature, in degrees Kelvin. It is not so much the brightness of these new headlights that causes so much irritating and dangerous glare as it is the very high color temperatures of 5,000, 6,000 or higher Kelvin. If the new vehicles simply used low Kelvin LEDs...2700 Kelvin or lower (a golden yellowish light), much of the annoyance would be alleviated.

December 26, 2024 – Seattle, WA – None
I'm 51 and have struggled with bright blue/white head lights for many, many years. Because most new cars come with them and many people are using LED bulbs in older headlight fixtures, the situation seems to be compounding exponentially.

I often get a headache from the eye strain and increasingly plan my life to avoid night time driving when possible. I have even begun using both a dark sun visor and yellow/amber tinted lenses to make night driving tolerable. This is not my preferred way to drive at night as it makes it more difficult to see dark objects or people dressed in dark clothing.

I find my need to do this ridiculous. I also don't know a single person of any age, that seems unbothered by the changes that have brought so much bothersome glare into our eyes as we drive.

Something needs to be done about this sooner than later and it is going to take a lot of work to change out or update all the headlights that are blinding me and everyone else I talk to.

Why are we allowing this unsafe way of illuminating our driving to continue? I want the department of transportation and/or the FDA and/or congress to begin addressing this problem NOW so that we can all drive more safely and with less eye strain and pain.

December 24, 2024 – Wichita, KS – Autism
Multiple brain injuries left me with diagnoses that include migraine, severe photophobia

due to a retinal sensor injury – ipRGC's the Light Meter for the eyes which regulates circadian rhythm. It also manages retinal light adaptation. Exposure to LEDs and any blue spectrum bright light, especially light that flickers or moves, causes me intense pain, violent nausea, vomiting, weakness, chest pain, shortness of breath, a lot of the symptoms of a heart attack or a severe panic attack. It took me many doctor visits to learn the cause of this severe photophobia and flaring systemic symptoms. I also learned that I have a diagnosis of autism spectrum Level one which explains my severe sensory overwhelm experience to light, but that combined with this retinal injury has rendered me unable to drive at night at all in these new lighting conditions. It's so unsafe even wearing blue light blocking glasses with glare blocking appliqués in my windows to block headlights in my side views and the oncoming traffic.

December 24, 2024 – Los Angeles, CA – Photophobia

Post mTBI: chronic migraine, severe neuralgia and dysautonomia all triggered by severe photalgia due to ipRGC retinal sensor injury

– <https://pmc.ncbi.nlm.nih.gov/articles/PMC7682828/>

December 24, 2024 – Anytown, NJ – Astigmatism

I have never hated driving so much as I have hated driving this year.

At night, thanks to the glare, I cannot see road signs without reflective coatings. When it rains at night, the combination of windshield fog, glare, and wet-pavement are brighter than the Lines-on-the-Fucking-Road. High-set SUVs with Bright As The Goddamn-Sun headlights shine directly into my vision which, due to an astigmatism, breaks into a fireworks show in my eyes. Oncoming traffic actually hurts–like getting snipped with nail-scissors in the back of my head.

On one particularly vile strip of road I became paralyzed, unable to see my turning lane, and it was only by a Grace of God that I did not have an accident.

It used to be that this glare was only an occasional inconvenience–some thoughtless driver who forgot to turn off their high beams. Now between the strength of headlights and the height of cars, every minute spent driving at night is a damnation; miserable American roads befitting a miserable American people.

There's something poetic, something uniquely American, about the state of our roads at nights; they've become a dick-waving contest measured in lumens, fueled by selfish idiocy, gagging and slobbering for "MOAR BRIGHT" until nobody can fucking see.

Thank you for providing a space to voice these concerns. I eagerly look forward to seeing our regulatory institutions ignore this problem until it inconveniences someone important.

December 23, 2024 – Portland, OR – Photophobia

Bright LED headlights on vehicles have become a significant challenge in my daily driving. On multiple occasions, cars equipped with excessively bright LED headlights have nearly caused accidents. When these lights shine directly into my eyes, especially from oncoming

traffic, the glare is blinding and disorienting. Even vehicles behind me can create dangerous situations when their LED lights reflect intensely through my rearview or side mirrors.

To cope, I've had to resort to putting my hand up to block the glare while trying to maintain control of the car, which is both impractical and unsafe. This issue has led to numerous close calls where I almost veered off the road or into another vehicle. Additionally, the harsh intensity of these lights causes severe eye strain and headaches, making the driving experience not only stressful but physically painful.

These incidents have made me anxious about driving at night or in poor visibility conditions, as I'm constantly on edge, anticipating these blinding lights. It's clear that while LEDs have their benefits, their use in vehicle headlights needs better regulation to ensure road safety for everyone.

The Impact of Bright LED Lights on My Driving Experience

Bright LED headlights on modern vehicles have become a significant hazard while driving. On numerous occasions, these lights have nearly caused accidents, whether from oncoming cars or vehicles behind me. The glare from these excessively bright LEDs blinds me temporarily, often reflecting off my rearview or side mirrors, leaving me disoriented and forced to put my hand up to block the light. This is an impractical and unsafe solution while trying to maintain control of my car.

A particularly concerning issue is the auto brights feature in many modern cars. These systems frequently fail to detect other vehicles properly, leaving the brights on when they should dim. This not only creates an unsafe driving environment but is also a clear violation of traffic laws, as having your brights on within a certain distance of another vehicle is illegal. Such violations should be actively ticketed to deter this reckless behavior.

The cumulative impact of these bright lights has been severe for me. I've had multiple close calls, almost veering off the road or into other vehicles. Beyond the immediate danger, the glare causes eye strain, headaches, and general discomfort, making nighttime driving a source of anxiety and physical pain. While LED headlights offer benefits like increased visibility for drivers using them, they need stricter regulations and better technology to ensure they don't endanger others on the road.

December 22, 2024 – Sebastopol, CA – None

My eyesight is pretty good except for needing reading glasses for seeing things up close. But ever since the new super bright headlights have come out, I really don't want to drive at night. They are blinding and very dangerous, since I can't see anything else when they're coming at me. I adjust my rear-view and side mirrors so that the lights don't shine in my eyes. That reduces my ability to see behind me, but it's safer than being blinded by those lights.

I thought maybe it was just my eyes getting worse, but I notice that if a car is coming toward me with the old fashioned headlights, I can see totally fine. No problem. With the new headlights, I sometimes have to hold my hand up to block them so that I can see where

the road is. Otherwise, I would be totally blinded. Very dangerous! I can't believe these are legal. They also hurt my eyes, and I'm sure they are damaging to vision.

December 22, 2024 – Vancouver, BC – Electromagnetic Sensitivity

Since so many vehicles are now using these bright, white LED car headlights it is practically impossible for me to drive. I have to hold my left hand up as they are so blinding, even in the daytime. Even sunglasses do not cut the bright light. I even drive at night with sunglasses on. This is very dangerous! When a car comes up from behind I have to hold my hand up by the side mirror as it also blinds me from the side and from the rear view mirror. It has become so dangerous for me to drive and has affected the quality of my life in so many ways. I don't know who gave these car companies permission to use these very bright LED white lights? It's like the whole city driving around with their high beams on or even worse! This must be rectified by the federal government! This must be stopped immediately!

December 21, 2024 – Port Colborne, ON – None

I crashed my car, totalled it because someone with LED headlights decided to enter and exit a roundabout with their high beams on. They were coming towards me and I was completely blinded by them for about 15 seconds before they passed me. I will take some fault as I was speeding a little but at that point it was too late and I crashed directly into another vehicle all because of LED light. They are too damn bright!!

December 21, 2024 – Olympia, WA – Other

Upon returning to my booth at an outdoor/covered Farmers Market, the Governor allowed "non-essentials" Crafters/Artisians could return. My soft lights didn't get moved to my new booth space. The first day my eyes ached (which I'd never experienced in 60 yrs). I recalled an by article Dr. Mercola who interviewed an Ophthalmologist who explained LED lights and eye damage. My instinct was to stand in the sun...no eye ache: BINGO! I knew it was the damn lights. I researched and purchased blue blockers and a wrap around my head visor because lighting came in from all directions.(And horribly had to wear a mask too = hell on earth!). I went to an micro-current intuitive healer who said it's your optic nerve especially in the left eye. I had had several treatments over the years and got better, thank Buddah, Allah, Godddess, Jesus and everyone! However I always carry blue blocker glasses in the car and a sun visor...because I never know how the lights in whatever store will affect me. It's been a huge challenge, life-style shift for me... even visiting friends homes I must be prepared. I'm much better. Although I went back to the OFMkt and had had my gear, went to the car to drop off stuff didn't think I'd need my visor, nor that I'd stay long. I sat on a table, waiting for a buddy and instantly my eyes started tweaking, and ached for hours afterwards. I've learned to try and not drive at night the headlights are horrific, especially first responders= blinding! I've learned to drive w/my left hand up to shield my eyes from the oncoming headlights. Years ago I titled all my mirrors waaaay out or up, I can lean to see when necessary.

My question is whom decided LED's were the new way? Politically — Someone must be the king-pin-of-LEDlight\$?

I actually lucked out and purchased an entire box of 60watt bulbs at a used store, just as a volunteer walked in with a huge box of new bulbs for \$10 (i know)! Before that I was purchasing used ones from Habitat for Humanity resale stores for \$1 a bulb, and felt

grateful for that!!!

Thank you for your research, time and effort in this important area. I had no idea the ranges of challenges people continue to face. Big love to you and yours in this journey to educate. WE ARE NOT ALONE! Cheers.

December 20, 2024 – New Orleans, LA – None

I cannot drive at night now because the superbright LED lights make me see halos about 20 feet high and wide around oncoming vehicles or vehicles behind me. I cannot see the road, the signs, the lines, pedestrians. It is sudden and violent to the eyes and the brain and nervous system. Now I am being advertised to by Amazon and Google to buy LED bulbs to replace the halogens in my own car headlights. I will not fight fire with fire and blind other people so I can compete with these atrocious tools.

December 20, 2024 – Drexel Hill, PA – Autism

I drive because it's difficult to participate in society if one doesn't, but my autism makes it very hard for me on multiple levels. For one, I am very sensitive to light, and overly bright headlights not only hurt my eyes but also obstruct the shapes of vehicles and the flow of traffic, making me afraid that I will collide with someone because I can't properly sense how their car takes up space. There is no valid reason for headlights to be that bright. Even those with weaker vision, such as my grandfather when he had cataracts, used to drive just fine with a softer beam. I have seen and heard others complain about these lights as well, such as my father and various social media users. Please don't make life harder for people with disabilities than it already is.

December 19, 2024 – Austin, TX – None

I am now too terrified to drive at night due to the blinding impact of LED lights, which cause me to not be able to see at all, have a panic attack, and swerve, endangering my life and the lives of others. They are much, much too bright. I had to drive from Texas to Louisiana at night last night for a funeral and I had to pull over four times because of the dizziness, fear and nausea of being struck by those lights which is almost like a heat lamp or a blow to the head. I cannot believe that something so dangerous as lights so bright they blind other drivers temporarily are allowed and unregulated. I can no longer drive at night in this environment.

December 19, 2024 – Colorado Springs, CO – None

I was blinded by oncoming LED Headlights and turned the wrong way on a one way street. I have run into two curbs due to being blinded. They are DANGEROUS

December 19, 2024 – Canton, OH – None

I have almost driven off the side of the road and more time than not, I stopped in the middle of the road because all I saw was a bright light that blinded me and I could see nothing else. I cannot see anything after those lights pass me. If they are behind me, I have to make sure I am in the middle of my mirrors so it doesn't affect me. I have been wanting to go after the manufacturer for years now.

December 19, 2024 – Heath, OH – Other

People with mild cataracts, like me, have problems with LED car headlights causing very bright sparkly halos around the headlights at night. This makes oncoming vehicles at night a big problem. The sparkly halos are blinding people and very unsafe. I avoid driving at night now.

This has been a well documented problem for several years. Note: I am a retired QA Manager from a large lighting company. I have a lot of experience with LED lighting.

December 18, 2024 – San Francisco, CA – Migraine

I have lived in the same building on Telegraph Hill for 30 years and the last series of led lights on the bay bridge increased my migraine headaches substantially. After they were removed my migraine decreased and my way of life improved.

December 18, 2024 – Springfield, MA – Other

Blinding headlights! It was very disorienting to drive. Eye doctor tested for cataracts by shining light in my eyes and then declared surgery for cataracts should help with the glare. What about windshield manufacturers helping, if FDA won't regulate the LEDs?

December 18, 2024 – Vallejo, CA – Other

My wife has conditions that include Hereditary Alpha Trypsinemia which is causing seizures. Bright lights can trigger them, too, so these LED lights are extremely harsh for her, meaning she cannot leave the house in the evenings anymore, or go into stores, doctor's offices, look at Christmas lights, etc., as they are all equipped with the new LED lights. We've resorted to not using the lights in our home as they are the new LED bulbs and we cannot purchase incandescent bulbs. Luckily we have two lamps with old bulbs that we can use. I do not have this issue, but when driving I notice how bright and blinding headlights appear to be these days. My first reaction is to think the drivers have their high beams on. The worst is large trucks with lights shining straight through the back window into the rear-view mirror. It's truly awful.

December 17, 2024 – King County, WA – None.

I became extremely nauseated and experienced a headache immediately upon entering Target and Safeway after they had just switched from fluorescent bulbs to led bulbs. I experience eye pain from led headlights and streetlights and have to shield my eyes wherever I go. I feel agitated around led lights at night.

December 13, 2024 – Boca Raton, FL – Other

Cant go out at night i suffer from seizures and i have head trauma makes is hard to go out at night with family there is no need for those lights we are not in the forest n some idiots drive with them on high beam blinds my wife at night n me she suffers from migraine this has effected our night life .i still don't understand how this passed with all health hazards

December 12, 2024 – Vermillion, OH – Migraine

in addition to migraine I have a condition called Mal de Debarquement syndrome. LED lights really trigger my symptoms. It's very hard for me to go shopping or out to dinner and have a pleasurable experience. I always feel seasick.

December 9, 2024 – Portland, OR – Other

Almost got hit by another car (with LED lights) because their lights were so bright I couldn't see their turn signal blinking. I've come so close to hitting medians in the past too because LED lights are so blinding.

December 9, 2024 – Lake Forest, CA – Astigmatism

When I was driving back from Las Vegas from Thanksgiving weekend I almost got into several car accidents because of being blinded by LEDs on curving two lane roads. It is impossible to see the lane markers when your night vision is destroyed by these new headlights. My girlfriend is almost completely unable to drive at night because of her astigmatism and how the headlight affect her vision.

December 8, 2024 – Harrison, OH – Other

I have noticed that these LED headlights are effecting my depth perception. When I look down the road at night to pull out of my street or any number of streets or changing lanes on the highway, and all I see are bright lights, there is nothing to ‘ground’ my vision to judge how far away a vehicle is before I do these maneuvers, or even the size of the vehicle. I see nothing but bright lights. I had a truck coming at me when I pulled out of a driveway and I couldn’t see anything but headlights. I couldn’t see the road and I couldn’t see the outline of the vehicle until it whizzed by. I had to GUESS where the road was and hope that I was on my side and I didn’t run off the road. It was absolutely blinding and I drive an SUV! It was traumatizing to say the least. And that was two years ago! I could have been killed or seriously injured. Ever since then, with no standards as to what headlights are supposed to look like, how many headlights are allowed to be lit up at one time, style, etc. I’m scared when I get on the road at night and it’s only out of necessity when I do go out, never for pleasure anymore. These lights have destroyed the ability to do the things I enjoyed after work. Shopping, water aerobics, dining out, etc. And then we’re being advised to focus on the side of the road or the white line, if you can see it, so we can drive at night? We shouldn’t look to see what’s ahead of us or coming at us while we’re driving because this is the only way to save our eyesight and life? We now have to drive dangerously to accommodate headlights. That kind of advice right there is a valid indication that these lights are wrong for vehicles. We shouldn’t be looking down, or to the side while driving. That’s like driving with your eyes half closed, which is really what one is doing following that advice. It only takes a second to hit a human being or an animal looking anywhere but in front of you. The ridiculousness of LED headlights is insane.

December 8, 2024 – Colorado Springs, CO – Other

My sensitivity to LED became worse after a TBI. I wear sunglasses indoors because I work in a Fluorescent and LED hell in the evening and I wear sunglasses to drive home. It is the only way for me to stop myself from horrendous kaleidoscope vision as a person with synesthesia and tetrachromatic vision with post concussion photophobia. Light pollution is killing us and it is worse at night and contributing to severe migraines. Light pollution is literally making some people dopamine addicts but what about those with dopamine autoantibodies? We cannot have a strong nation of healthy people if we have been made stupid and intentionally addicted or severely ill by light. Street lights and lights used at night near businesses are at times bright enough to lead a bird to its death.

Have you seen the Tesla bulbs that are similar to incandescent-the reformulation? We need to bring back incandescent light bulbs.

I have tetrachromatic vision and this intense monochromatic light is causing me to have sensory overload. My tetrachromia causes me to see colors within colors- it is not a disability but a different ability. To me one strand of a persons hair is a rainbow. Ink from a pen is not just black. It only began to impact me after a TBI when my vision and senses began to go into overload and

I was in a lot of pain and a neurologist, and neuroophthalmologist could not understand me. Instead they began to take notes because I was finding out on my own what was working.

Some people who know this about me will shine LED lights in my eyes on purpose and laugh. These people are bullies.

As a tetrachromat I am even impacted by Migraine lenses called Avulux. These Migraine lenses make me very sick and cause me to have a migraine because they over focus the lense on one color of light spectrum when I am not designed that way. This is why I do not purchase monochromatic lenses either. Sunglasses with UV protection that are light enough color to use indoors work better than monochrome tinted lenses with UV protection. Incandescent bulbs do not have this, they are a variety of spectrum at once and do not have flicker most of the time.

These people that banned Incandescent lights are discriminating against my differences as a Neurodivergent, and my disability with a TBI and they need to bring them back. We need to have a choice of what kind of headlight we use on a vehicle, the intensity of the light in our home, and what kind of light works for us.

A person with synesthesia has more than one sense connected together. If I start to get this pain and this type of vision my sense of smell and hearing increase. This increase can cause hyper smelling and hyper hearing. If I have no protection from the light I will have burning eyes where the whites of my eyes turn red, my nose begins to run and my sinuses swell because the exposure causes hyperesthesia of my nose. Hours of exposure to Fluorescents and LED do this to me. My immune system thinks it needs to release histamine. TILT is known as Toxicant Induced Loss of Tolerance. Its definition only applies to chemicals, food and drugs. For me the definition applies but I have another category to add and it is Light Pollution.

We as US citizens are being bombarded by exposures and as we age our tolerance declines and some are more at risk for this than others. These risk categories are yet to be established; however, it is likely that for women Xist and Lyonization are at play. This Lyonization could tilt a person with a Redox disorder towards less tolerance over time. Other mechanisms are molecular mimicry and prior assaults to the immune system. TILT is related to Mast Cell activity but is not the only aspect of the the problem.

For those of us experiencing this we have to wear hats and sunglasses. The eye doctors I have seen do not deny what I have been experiencing. The equipment that they use cannot find the problem. They have several patients similar to me wearing Theraspec lenses. These lenses are not approved by the FDA but have been helping the patients. I have called my Vision Insurance plan to discuss this phenomenon and why NeuroOphthalmology, Ophthalmologists and other eye doctors are not diagnosing or investigating this. They do not answer my questions and change the subject. As humans who work in the evening, driving home in this light pollution is an absolute nightmare. The oncoming beams and beams behind you are reflecting in your face. More and more people are confessing to wearing sunglasses who are not as severe as me. Why is this being ignored? TBI can impact the retinal ganglion cells and excessively bright headlights and bright lighting in the workplace is very painful. I have to deal with disrespect, being made fun of because I am trying to protect myself.

Now it is December and I am getting more exposure from peoples Holiday light pollution on their homes that is way too damn bright at night and extremely painful. It is the nature of humans and businesses to lie to the public for gain while conditioning people to think that it is better for them through omissions of critical information.

<https://www.frontiersin.org/journals/neuroscience/articles/10.3389/fnins.2024.1378498/full>
<https://www.ahajournals.org/doi/10.1161/STROKEAHA.123.044904>
<https://autism.org/webinars/toxicant-induced-loss-of-tolerance-tilt/>
<https://www.hsph.harvard.edu/hoffman-program/resources/chemicals-in-your-life/what-is-mcstilt/>
<https://tiltresearch.org/>

December 8, 2024 – Wakefield, MI – Other
Early onset, rapid decline cataracts, photosensitivity

December 8, 2024 – Wakefield, MI – Migraine
Vision assaulted by LED light bar mounted on front of a pickup truck. Temporary blindness, vision spots for hours, migraine. Ban these fu*ckers!

December 7, 2024 – Murfreesboro, TN – Migraine
I get migraine headaches very easily. I avoid driving at night as much as I can because of these horrible, bright LED lights! They are absurd and horrible. However, sometimes I have to. I have issues with being super light sensitive and they flat out blind me, followed often with a migraine! I've grown to HATE driving at night and even more so, hatred for all of these vehicles with these lights. It's extremely RUDE to own one of these vehicles! Once again, as I drive a sedan, a truck tailed me, BLINDING me safely driving on the interstate home from seeing my family for Thanksgiving! How can these lights be legal? They're dangerous!! I refuse to own a vehicle with these horrific lights! Please stop this dangerous condition to not be able to drive safe!

December 6, 2024 – Unspecified, FL – None
I was almost forced off the road due to the blinding lights of an upcoming car. I could NOT see a single thing. I was not alone in the car and was with my son. We thought my tires were lost on the right side due to the sudden movement. What a horrible experience, to drive under these conditions. There was no reason to change from the soft yellow lights.

December 5, 2024 – Willows, CA – Astigmatism
Can't drive at night anymore. Bought special driving glasses to reduce glare and they help a little, but after a few minutes driving against the oncoming superbright led headlights, I'm not seeing anything very well. Driving at night was never an issue before someone decided that putting these dangerous lights on vehicles was somehow a good idea.

December 4, 2024 – Morganville, NJ – None
WHEN DRIVING ON SINGLE-LANE ROADS IS ALMOST IMPOSSIBLE AS THE AUTO HEADLIGHTS ARE SO BRIGHT IT MAKES IT IMPOSSIBLE TO SEE THE ROAD. DIVIDED HIGHWAYS ARE NOT AS BAD. I USED TO ENJOY DRIVING BUT NOW IT IS IMPOSSIBLE UNFORTUNATELY, I STILL HAVE TO DRIVE. I TRIED SPECIAL GLASSES TO REDUCE GLARE BUT THEY DO NOT WORK. PLEASE DO SOMETHING

ABOUT THIS BAD SITUATION AS I KNOW I'M NOT THE ONLY ONE HAVING THIS PROBLEM.

December 4, 2024 – Monroe, WA – Migraine

LED lights have only negatively impacted my life. I can no longer see when driving, especially the last few years. I have to close my eyes when driving for long periods of time, multiple times, because I cannot see with people's LED lights. I can't tell if people are using their brights or just have LED lights. I can't see if there is a pedestrian. I can't see turns. I almost crashed tonight because I didn't see a turn due to someone's LED lights in my eyes. I see spots in my eyes for my entire drive after seeing any and trying to keep my eyes open. I get migraines. I might have undiagnosed autism as well, either way, I am extremely sensitive to light. I am scared I might die driving because of LED lights one day.

December 4, 2024 – Houston, TX – Astigmatism

It worries me when I am temporarily blinded by the unnecessary bright lights when I am driving. I instantly flinch to try to shield me from the harmful lights.

December 3, 2024 – Salem, OR – Migraine

I get ocular migraines, and the most reliable way to trigger them is to get blasted in the eyes with some kind of bright light. It usually sets in within 10-15 minutes, and then my vision is just ruined for the next hour. I can't drive at night because I'm at risk of being temporarily blinded. I don't want to have to pull over and sit at the side of the road for an hour, waiting for the aura to pass. When I'm in cars at night, I try not to look out the window. These blinding LED lights are a nightmare, and they don't even illuminate the road as thoroughly as the softer incandescent bulbs of my childhood. I've spent a lot of time in cars. I remember what things looked like. LED headlights are just plain inferior and dangerous, and they need to be banned.

December 3, 2024 – North Olmstead, OH – Astigmatism

They are blinding and they cause me anxiety while driving. I have to stop or turn down side roads to escape them.

December 3, 2024 – Chattanooga, TN – None

I do not have any health or vision problems. I am a perfectly healthy mid 20 year old, and have always had a passion for night driving.

I never really noticed major issues with night driving up until recently... the past few years. I've always noticed people with super bright blue-white headlights... typically just squinted and moved on.

Unfortunately, the majority of the cars on the road have these headlights. I was returning from Thanksgiving with my family and had a 7 hour drive home. There are no north/south interstates in this area, so a lot of my driving is on 2 lane and 4 lane state roads and US highways. I was on a very narrow and typically low traffic 2 lane in southwest GA heading back north. For the first time I had to slow down to about 20 miles per hour because I was completely blinded. I could not see the center line. I could not see the edge of the road. For about 20 seconds all I could see what white light.

This is not an eye problem. I had my eyes examined a few months ago. This is not a specific to me issue either, as I have no ailments and am in good health. This happened to your normal young American driving home from the holidays, and hoping to get home safely without being flash banged off the road.

I know SUV's and trucks are the most popular vehicles now, but I have always driven coupes, and lots of people drive those and sedans as well. We are not the minority. Please look into regulating these headlights. These are not "improperly aligned" these are straight from the factory and they seem to get worse every year.

December 1, 2024 – Greenbrae, CA – Other

The County I live in took away the shrubs in the median and now all I see are incoming bright headlights. I get a headache when I drive at night and makes me feel stuck at home at night. I get an immediate headache and feel like I'm going to crash my car.

They also installed rows and rows of LED overhead lights and they flood into my backyard and shine brightly into my bedroom and living room. Marin County did this and someone needs someone to do something about correcting this for the sake of our health. Thank you.

December 1, 2024 – Greenbrae, CA – Migraine

The County of Marin installed massive LED lights along a road directly behind our house. There was no community input, decisions made by Supervisors claiming they were needed for "safety". There has been zero incidents warranting any need for LED lights. Overhead LED lights now shine into our home disturbing our sleep and giving us migraines at night. On the road, the lights are so bright it might as well be a racetrack now. The County took out the center median that had various shrubs (now no longer) – so now on incoming cars, both east and west bound (along Sir Francis Drake Blvd) shine directly in our face as we drive home every night. The issue is overhead LED and car headlight LEDs. No thought was given by Marin County when installing said lights, and now created a real safety issue! Shame on Marin County, CA.

December 1, 2024 – Cranston, RI – Other

I am 39 with no known vision issues but I keep being blinded by LED headlights in front and behind me. It makes it really hard to see and drive safely at night. LEDs commonly used in new cars are way too bright. I had to pull in my left side mirror and this makes me scared to drive at night.

December 1, 2024 – Bowie, MD – Astigmatism

I have astigmatism. LEDs in cars have made it difficult for me to drive at night. I almost can never go anywhere during the week from how early it becomes dark. I have been fearful of accidents ever since a close call. It's just impossible to see for a time if they are coming towards me.

November, 2024

November 30, 2024 – Fontana, CA – Electromagnetic Sensitivity

The new LED headlights are so bright and blinding that I have to look at the fog line to watch the road and keep straight so I can't even see straight forward or the whole road, I have to constantly keep my eyes focused on the right side of the road not to have the light directly in my face/eyes. The LED lights are pointing towards the oncoming traffic and it seems like it's almost on

purpose. The light off the cars are not even on both sides, they are tilted more towards the left and directly on to the oncoming traffic lanes. You can see the lines that come off the car on the road and it's obvious they don't have their lights facing straight. I get migraines from the bright glare at night it has just made driving at night tremendously uncomfortable and dangerous. At least regulate or enforce the direction of the light or something cause on the highway or freeway it's even worse as I have hundreds of cars with a bright blinding light facing my driving direction and it seems blinding other drivers to me should be illegal because it feels like it isn't and no one does anything about it.

November 30, 2024 – Orlando, FL – Migraine

I can no longer drive outside at night due to ongoing issues with bright headlights. This is especially problematic during the fall and winter as the sun sets much earlier.

November 30, 2024 – Brighton and Hove, United Kingdom

My life is pretty much destroyed by LED's.

If I look at a bright bulb for even a few seconds it triggers brutal migraines & vomiting for up to 3 days in bed with unbearable pain. The longer I'm exposed the worse it is.

Tried all the fl-41 glasses. Forget driving as all the newer cars have the 'led daylight running lamps' by default. It's an effing nightmare.

November 29, 2024 – Middle Village, NY – None

Every time I get in my car, I am blinded by car/truck LED lights. So dangerous...literally can't see. Why is this allowed? Who is responsible?

November 29, 2024 – Monmouth, OR – None

The presence of LED lights from oncoming traffic vehicles causes temporary blindness which is unsafe for drivers on the opposite lane. If nothing is done, there will be more frequent traffic accidents and potential deaths on the road.

November 28, 2024 – Eatonton, GA – None

Driving on a county 2 lane road I was approached by a late model "tall" pickup truck...that had very bright lights blinding me. I slowed down to 35 mph as I went by this truck. My eyesight definitely got the "halo effect"...a deer was standing dead ahead in my lane just as I got past the truck. Didn't have any chance of avoiding the deer. Front bumper got crunched inward...front grill destroyed...and the AC condensor coil ruined. Damage estimated at \$2,400. I could not afford full insurance coverage as my vehicle is 20 years old. (My car looked and ran very good). Too many people just don't dim headlights for courtesy sake anymore.

November 27, 2024 – Lancaster, ON, Canada – Electromagnetic Sensitivity

Screeching tinnitus, organ pain(liver, pancreas and kidneys), needles in the eye pain, extreme pain in bones, cranium, burning of the skin, migraines, worsening astigmatism, extreme photosensitivity,

November 27, 2024 – Stratford, ON, Canada – Autism

I'm autistic and have migraines, playing hockey requires a lot of night driving home as well as

driving home from my partners place. Due to how bright lights are now, they spike my sensory issues and migraines causing me to lose focus on the road. This was never an issue until the last few years with the spike of LEDs, the yellow tints were so much easier to deal with over the new blue. Even walking at night with my dog, the lights cause no one to be able to see my boy and I even when we are on sidewalks etc. it's awful having to dull down my own life and avoid things after dark just because everyone has sonic beams! It's dangerous as hell for everyone, why is this even a thing!?

November 26, 2024 – Van Alstyne, TX – Other

I get constant floaters in my vision that last up to an hour. These new LED lights are an extreme hazard to safety. There is no benefit to blinding traffic. It isn't safe for any party involved.

November 26, 2024 – Montclair, CA – None

It's blinding me. The cars lights are so bright I have to stop in the middle of the road because I'm blinded by these trucks and teslas with LEDS

November 25, 2024 – Manassas, VA – Photophobia

This incident occurred at night on November 24, 2024. I wanted to go see a friend who is moving out of town, who lives about about 45 minutes away and most of that is on the highway. I usually avoid driving at night, especially on the highway, but felt it was worth the discomfort to see my friend. The whole way there, donning sunglasses and squinting my eyes, was an uncomfortable experience to say the least, I'm in a low-riding sedan. But the worst part was, after driving 40 minutes I missed a turn, and ended up back on the highway. Then, I missed another turn, ending up on another highway. What a nightmare. I did not ever arrive at his house, because my missed turns took me 25 minutes off-route. I pulled over and cried, then drove home. It was the worst experience I've had with night driving to date.

November 25, 2024 – Vacaville, CA – Autism

I was driving East on E. Monte Vista Ave. when I struck by the LED flashing lights on an RRFB. Instead of the RRFB making me stop, I start yelling fuck, fuck, fuck, fuck, fuck, fuck as I tilted my head down and drove straight through to escape the LED assault and save my life.

November 24, 2024 – Esparto, CA – Autism

I turned right at a T-intersection and was immediately struck by amber LED strobe lights on an AT&T utility truck. I yelled out profanity, raised my arms to try and block the strobes, closed my eyes, and felt a sudden urge to drive my car straight into the AT&T truck. Instead, I pulled over to the side of the road until I recovered.

November 24, 2024 – Hickory, NC – None

Can no longer drive at night due to extremely bright LED headlights blinding me. I have no health issues that would cause sensitivity to bright light

November 24, 2024 – Bennington, VT – Epilepsy

I was taken to the ER for a medical emergency unrelated to my epilepsy. I've been to this hospital many times over the years to see specialists get health screenings, visit friends etc. My doctor had called ahead to the hospital, telling them about my LED-reactive seizures and how critically important it is that I not be exposed to LED light even momentarily. She told us the head ER nurse assured her the ER staff understood and would treat me in an LED-free setting.

My doctor told my husband to remind whoever first met us at the ER when we arrived, just for reinforcement. We got there, he did, the attendant said yes she'd got the message, I was put in a wheelchair and raced inside – right into the LED-lit emergency room. I had on a hat and glasses but I instantly started to shake all over. My husband grabbed the wheelchair and got me out of there fast, leading to a fraught ordeal, trying to figure out how I could be treated for the medical emergency that had sent me to the hospital, without putting me at risk of potentially fatal epileptic seizures caused by the hospital's new LED lighting! Ultimately they managed to set up a treatment area in a back hallway near the ambulance bay, which had large windows and overhead lights which could be turned off. My husband had to push me in the wheelchair around the outside of the building and up a restricted driveway to reach it. If I hadn't been so sick, I would have been terrified that an ambulance would pull up with its flashers going. Thankfully all went pretty well from then on and I was released just in time to get home before the LED streetlamps came on.

When I recovered, I called the hospital to discuss the need for a section of the ER and other parts of the hospital complex to be LED-free, clearly labeled, so that anyone with an LED-reactive medical condition can be safely, promptly seen and treated. I asked them to think of it as a disability aid, exactly like the need to have ramps and braille, to consider safe lighting a medical necessity, like being vigilant about dietary restrictions for their patients. The staff member said they would pass on my request and get back to me in two weeks. Two months later, this is what I was told: The hospital had recently remodeled with all LED lighting and wasn't going to remove or alter any of it. If I have to go there again, for emergency treatment or anything else, my options are 1) call ahead and tell them I can't tolerate LED light 2) Be admitted under the LEDs and when I start convulsing they will give me lorazepam and put me on a lamotrigine drip for the duration of my stay or – if I'm not happy with either of those options – 3) go somewhere else. (Thoughts on those options: 1) My doctor did call first. Luck and scrambling got us through that ER visit, not planning and proper care, plus calling ahead obviously isn't always possible. 2) Do they know I can even take those drugs? Might being drugged interfere with whatever other procedure I went there to have? Will I be able to communicate with anybody? Give consent? And how do I leave the hospital if I have to pass under the LEDs after the lamotrigine drip is removed? 3) We live in a rural area. The next closest hospital is over twice as far away.) Quite the striking situation, isn't it? We're menaced with increasingly frequent medical emergencies, injury, and illness, caused by forced public encounters with demonstrably dangerous LED lights, and we need medical care, health protection and practical real-life solutions more than ever, but safety vehicles and hospital facilities are becoming yet another source of the threat!

November 23, 2024 – Zimmerman, MN – Astigmatism

I can't see with the headlights. I'm tempted to put mirrors on my car.

November 23, 2024 – San Antonio, TX – Astigmatism

I have to obstruct my own vision to block such ridiculously bright headlights, this is dangerous. I am left with dark spots in my field of vision, much like after staring directly at the sun. How is this legal?

November 23, 2024 – Sacramento, CA – Autism

I was driving in town when I was struck by a debilitating blue LED flashing light in a store window. I have previously notified the owner of this store twice that I cannot neurologically tolerate the intensity and digital pulsing of this light, but they haven't acted to turn it off.

November 23, 2024 – Yolo County, CA – Autism

I was driving on the highway when a firetruck with red and white LED strobe lights approached me. I could see it about half a mile away. I started to panic, knowing that I wouldn't be able to tolerate it as it came closer. I pulled into a parking lot and waited for the firetruck to turn onto another street.

November 23, 2024 – Hermosa Beach, CA – Electromagnetic Sensitivity

It is painful and dangerous to drive at night anymore due to the extreme brightness and glare caused by oncoming and rearview LED headlights. I have to use one of my hands to physically shield my eyes or use the sunvisor to try to decrease the intensity of the light shining into my eyes. If I use or have exposure to LED lightbulbs at night, I experience headaches and cortisol spikes with delayed or interrupted sleep throughout the rest of the night if I can't reduce the intensity myself (if I am out in a restaurant for instance.) It is clear that there is a problem with the intensity and quality of light we are surrounded with in our modern lives. I hope to see a shift back to light that is more aligned with natural levels and frequencies.

November 23, 2024 – Camby, IN – None

They've annoyed me greatly the last couple years but this one has been the absolute worst and not getting better. I was driving home at dusk a few days back and was blinded by an oncoming car. As soon as I could see something again, there was a jogger right in front of me. Had to swerve last minute to avoid hitting him.

People are/will be hurt or killed because of these stupidly blinding lights. I can't believe the stock lights are coming out this way. Had both a police car and School Bus blinding me yesterday. Sad & Ridiculous. I feel the day coming that I have to refuse driving at night.

November 23, 2024 – London, ON, Canada – Migraine

With the increased use of LEDs in many lighting scenarios, it is making it impossible for me to exist in the world. Both fluorescent lights and LEDs cause migraines for me. A mere exposure to these lights for 5 minutes can take me down physically for at least 24 to 36 hours. While it is always a challenge visiting establishments, and lighting my home, those are things I can somewhat moderate. I buy different lights, I just don't go into stores that make me sick. What I cannot avoid, and cannot mitigate, are the increased use of LED in the headlights of vehicles on the road. I can appreciate people wanting to have bright lights for scenarios where the increased brightness will increase safety, but that's why we have high beams on our vehicles. If you're on a country road at night, you turn your high beams on, and then when another vehicle approaches from the opposite direction, you turn your high beams off until you pass each other. You would not constantly leave your high beams on while driving in a city, that is lit with street lights. These excruciatingly bright LED headlights are making it impossible for me to have any independence after the sun goes down, as it is not safe for me physically when driving. Surely the selfish "right" to have the brightest headlights out there just in case you're in a very dark area is a lesser right than what is owed to the general population, let alone those with health issues, to have the right to be safe while driving. Please, please, before someone gets seriously hurt, regulate the type of lighting that can be used in vehicle headlights.

November 22, 2024 – Springfield, MO – Migraine

After a TBI years ago, I am now a migraine sufferer. I cannot look at the flashing or strobe lights without instant pain. It has been so hard to safely pass by emergency vehicles as flashing and

LEDs both blind and cause instant splitting pain. Trying to get by a wreck or incident is really really tough while you are trying go around and not hit people or cars in the road. I have literally stopped my car in the middle of the road at night, even on a curve, multiple times because I was so blind I could not see the road, the other vehicle – nothing! It's as if someone suddenly blindfolded me while driving. How are people navigating this terrible issue? Tonight was a little darker than usual, without a moon, and I was struggling to repeatedly get blinded/see on a long 2-lane rural road. Going over a curvy set of river bridges with rails was terrifying, leaving me blinded for a moment trying to navigate curves. Halfway through the 7-mile trip, the repeated brightness moved to migraine, nausea, and fear I was going to wreck. I was literally wondering what my future holds if I can't drive to see my kids, or even get home from work safely after dark because of these lights. It feels like no one cares – even insurance companies. They HAVE to know; they drive too! Even LED Christmas lights are too much when flashing. We also been blinded by directly placed LED garage lights on houses recently. It's like a direct police spotlight at a T-intersection. I can't see if anyone is coming to the left, due to one homeowners LED beacon staying trained right in my eyes. Tonight, I also made a right turn at a 4-way stop. Because of being blinded mid-turn, I couldn't tell how close the car waiting to turn was in front of me as I rounded to the next road. Not only did I fear hitting the other car right in the door I heard a sickening crunch as my back tire fell off the road edge and hit much further than the wheel rim.

November 22, 2024 – Oakdale, MN – None

Spun out on a snowy day because I could not see lane dividers due to an incoming car's lights. This car was in a highway lane separated from the other lane of traffic by ~100ft and was really not even close to me. I could not see how far the car in front of me was due to the lights of the incoming car and the blinding headlights of the truck tailgating me, so I braked and overcorrected because I could not even see the lane dividers. Spun out into a ditch. If I were a worse driver or driving distracted I could have easily hit another car and injured someone.

November 22, 2024 – Washington, PA – None

LED headlights are absolutely destroying the ability for average people in average cars (SOME with major health issues that are now jeopardizing the safety of the person/s) to drive...no matter day or night because the light travels just as strongly when the sun is out. It's forcing people to take action on their own, some using spotlights against the blinding LED's...others using 3M reflective tape on visors and backseat headrests to shine it back in the eyes of the owner. We should not have to do these things. Furthermore, I've noticed an increase in incidents where they keep THEIR highbeams on with total disregard for others while they scroll on their phones or distract themselves in other ways. There is way too much entitlement and a total misunderstanding that these people have when it comes to blinding others. Something needs to be done before every vehicle on the road is equipped with these blinding lights and then we ALL develop vision issues and perhaps even other yet-unknown issues dealing with these lights. I appreciate you taking the time to read my 'rant' but the words stand true with SO many people.

November 21, 2024 – San Jose, CA – Astigmatism

LED light are always on when it's not appropriate. I drive a small car so there in my direction vision I have to slow down to avoid causing an accident.

November 20, 2024 – Marienville, PA – Migraine

When leaving my office, I often encounter an overwhelming amount of LED lights, both indoors

and outdoors. On one particular day, the reflection of the sharp, laser-like beams of LED lights from a puddle nearly triggered a seizure. Fortunately, I only suffered a four-day migraine as a result.

The parking lot is especially problematic. The LED lights there create an environment that feels almost hostile both from cars and parking lot street lights. Every time a vehicle starts, its LED beams cut sharply through the area, creating an overwhelming and disorienting experience. It feels less like lighting and more like a physical assault.

On this day, as I navigated the parking lot, I inadvertently came too close to a vehicle that had been electronically started. A brief glimpse of its LED fog light—despite it not being directed at me—triggered severe symptoms, even though I was wearing IR5 welding goggles and red glasses designed to block all blue wavelengths. This intense combination of protection stops the seizures. It does not stop the migraines. The impact was immediate and profound. My face went numb, my eyes involuntarily blinked, and I experienced a deep, penetrating cold, a symptom often associated with migraines. The migraine that followed was particularly intense, accompanied by significant cognitive impairment. Even after resting and sleeping, my brain felt noticeably affected the next day.

(This is part of my report)

When will this madness stop? I just want to live my life without the constant assault of LEDs. I'm tired of enduring their relentless impact on my health and well-being. I just want to live my life safely!

November 19, 2024 – Chicago, IL – None

LED headlights are blinding and I almost crashed because I could not see after driving and having LED headlights directly shining in eyes. It directly impeded my visibility. I cannot drive long distances in the dark because of the strain LED headlights cause on my eyes. I will go home after a 2-hour commute and my eyes will continue to hurt and I believe it is the cause of my headaches.

November 19, 2024 – Ketchikan, AK – Other

LEDs lights have literally shrunk my world in my ability to find safe places indoors and outdoors

In FEB of 2021 the city of Ketchikan altered the city street lights to high intensity 4 to 5000 Kelvin LED lights without shielding or recessed that flooded all sides of my home that has led to a severe drop in my health. Before that time, I had light sensitivity and now from the LED lights I have phototoxicity which caused my NEW disability They have damaged my CNS, altered and disrupted my cognitive abilities, disrupted my hormones, and have left me in chronic pain

When the lights came on that month, I could feel them instantly. It was like a electrical shock to my system. Since then I no longer get restorative sleep in my home, these lights have impacted my motor neuron part of the brain as well as pituitary, amygdala, hypothalamus, pineal, Insolent, and parietal and vision. They increase my allergy reactions to foods that I had mild reactions to before LEDs I wake up to increased blood pressure, (I don't have high blood pressure). Before LED light my fibromyalgia was at a level 2 of pain and now fluctuates between an 8 and 10 on pain scale. This is from chronic exposure to my streetlights. All confirmed by 8 doctors. All

these issues within a day to a few weeks are lessened by 80to 90% when I go to a dark area without LEDS. Some are completely gone.

ACUTE symptoms when exposed to high intensity LED lights especially the flickering.

Loss of sight in right eye

Floaters, eye pain

Extreme sharp pain from front of right eye to back of brain that can last up to 72 hrs (imagine a sharp knife going through your eye to back of brain)

Nausea, and throwing up

PANIC ATTACKS!!!

tremors

migraine

Spike in blood pressure

Immediate herpes outbreak (within hours of extreme exposures)

incontinence

drooling

Severe scalp migraines

Blistering of skin and oozing.

What's heart breaking is the fact the lighting industry ignored all the science and medical warnings about LED's especially from 2016 American Medical Assoc warning that they will make people sick. Over 20,000 peer reviewed research on the damming effects of LEDs WHEN WILL YOU LISTEN AND ACT?? Not acting is negligent

LED lights kill and injure and should have never been released to the public

November 18, 2024 – Rochester, NY – Other

“Description of LED Incident or Impacts of LEDs on Your Life” ...YES EVERY DAY IS AN INDECENT! I risking loosing my job and my life. Its dangerous...period!

Vehicle, House indoor/outdoor, commercial, street lights et al. Way over the top! Even behind a vehicle the directional and tail lights hurt. I hated these LEDs when I first saw them 20 years ago. Incandescents are now outlawed...thanks big brother...stellar idea.

When is enough enough? Apparently someone must die before anything is changed. Hope it isn't me. This is getting 110% crazy out of control, compounded by this stupid daylight saving time clock changing BS we were supposed to fix years ago. I don't get out of work until 5. Its dark! Then I have to run the gauntlet of deer and on coming traffic melting my skull off my neck with these insane projector headlights. They gotta go and go now.

Night driving is like looking into the sun, it hurts! I've had to ask HR if I can come in early and leave early. They said I need a note from a doctor....gah! I attach a manila folder to my drivers side visor with a big binder clip so I can hide behind it when oncoming traffic approaches. Tell me, how safe is that!

All its going to take is someone making a left in front of me or a deer coming from left to right and pow I'm done! If LEDs were on the red spectrum verses the blue I believe this problem would be much less severe.

OK so I complained. Now whats the next step to actually making the DOT listen and for someone to take action with the auto industry. What can we all do? I signed the petition and had everyone around me do the same. HELP!

November 18, 2024 – Lompoc, CA – Astigmatism

I have to turn all my mirrors away to just drive home from school in the evenings. I drive home on Highway 1 and sometimes the LED lights behind me are so blindingly bright I have to pull my car over because I cannot see while I'm driving if there is car behind me with LED headlights. This wasn't an issue for me in the 90's when car headlights were halogen. Please go back to halogen headlights are do something to fix the reflective glare and brightness. Bright LED headlights are dangerous and people are getting into car accidents and will lose their lives.

November 17, 2024 – Bennington, VT – Astigmatism

I have a larger than normal optic nerve in both eyes. I can't really drive at night anymore with the brightness of headlights. Also, any type of LED lights are very hard on my eyes sometimes giving me migraine headaches.

November 14, 2024 – Mangonui, New Zealand – Migraine

Swimming in a remote lake, 200m from road access, when a car pulled up flashing the red LED tail lights. I felt immediately nauseated and blacked out with brief loss of consciousness for a few seconds. I came quickly to and swam with difficulty back to the shore having developed blurred vision, pain at the occiput, numb left side of face and left arm (hemiplegic migraine)

November 14, 2024 – Brookville, PA – Migraine

On November 11, I visited an eye clinic for new glasses, only to find that LED lighting posed a significant obstacle. The clinic had no alternative lighting, so I had to bring my own lamp to examine the frames. Briefly removing my protective goggles to look at the glasses on the display triggered a migraine so severe that I ended up vomiting later and lost another four days to recovery.

The vision exam itself was even more problematic, as the clinic relied entirely on an LED screen for testing. Since I couldn't look at the screen without risking a migraine, they couldn't fully evaluate my prescription. We attempted to use a painting in the hallway as a substitute to check my sight, but the process left my eyes strained, and I struggled to discern any improvement between lenses. According to the clinician, the LED screen is their only testing method, leaving me in a position where getting a prescription update would mean knowingly inducing another severe migraine.

November 14, 2024 – Shippenville, PA – Migraine

On Halloween night, despite every precaution I took, I suffered a seizure caused by exposure to blue LED headlights. I've managed to avoid seizures since early spring by being vigilant, especially on Halloween, a night known for overwhelming lights and harsh visuals from costumes and decorations. I kept all the blinds closed, avoided the front of the house, and even have a canopy tent hanging on my front porch to provide added protection against stray lights.

Unfortunately, someone pulled into my driveway to turn around, and their headlights penetrated both the canopy and my opaque front door, reaching me in the back part of the house. The seizure was immediate and intense, with visual disturbances, uncontrollable shaking, severe pain, and confusion. The following day, I could barely function, enduring cognitive impairment and an excruciating migraine that lasted four days. Despite medication, I suffered through pain-filled dreams and could find no relief. This incident cost me two days of time with my family and two days of work, all because of a brief exposure to LED headlights.

November 13, 2024 – Houston, TX – Astigmatism

I am 39. I have been struggling with these high color temp LEDs for several years. This winter seems much much worse. I wear blue light glasses to reduce the effects as much as possible. But these high color temp lights are everywhere now. Headlights. Wallpacks. Street lights. Sports fields. I can barely leave the house at night any more and feel unsafe driving at night. I have never struggled with night driving until these lights. The light exposure creates a piercing experience in my eyes. Then I get agitated wanting to smash every bright light around me. Some days I can get used to the lights in the city if there isn't much contrast between dark and light. But most nights the city is rough as these headlights are now 6000-7000K color temp. Rural driving is painful, especially with the Texas piercing frontage road system where these gas stations and businesses have just hung 7000K color temp wall packs on their exterior walls or canopies. These can be blinding for a half mile. This is no way to live, especially when lower color temp LEDs can provide the same lumens and equal energy efficient results. I know I'm not the only one. And as a taxpayer I would appreciate if Congress would take action on a national simple priority such as this vs devoting their attention to way more complex and controversial affairs. This fix is simple. We used to get pulled over for driving with your high beams on when passing a car.

Please help. We only get one pair of eyes and I hate to permanently damage them or have an accident because we were too foolish to not deploy common sense regarding outdoor lighting color temp and its affect on humans (and plants and animals and light pollution)

November 13, 2024 – Boynton Beach, FL – Epilepsy

My 3 seizures occurs in grocery stores- Publix and Aldi within a 1 year. I notice, that aura is comes as soon as I walk in the store. I never go there without my good sunglasses (Oakley's works the best so far) on. I change all LED light bulbs in my house to old style light bulbs and fill great. Never had an episode at home since. I drive at night with my sunglasses on, because cars light triggers my seizures as well. LED is epileptics enemy! I have few friends with epilepsy, who experience the same reactions from exposure to LED lights.

November 13, 2024 – Charlotte, NC – Astigmatism

I am writing to express a safety concern regarding the LED headlights on newer vehicles in the Charlotte area, particularly at night. I have found that the bright LED lights from oncoming traffic are significantly blinding and make it difficult for me to see the road clearly. This has become especially problematic for me now that I'm driving after dark, as I get off work when it's already dark outside.

On multiple occasions, I have almost been involved in accidents because I am unable to properly see the road or other vehicles due to the intensity of the headlights. The glare from these lights

severely impairs my vision, and I am now feeling anxious and scared to drive at night because of this issue.

I wanted to bring this to your attention, as it is becoming a significant safety concern for me and I believe it may be impacting others in the community as well.

Something seriously has to be done with these vehicles with that style of lights. SOON!

November 11, 2024 – Waterbury, CT – Astigmatism

I am 25 years old and no longer drive after dark. In New England winters, this means 5pm. I drive a compact SUV and am 5'3. Most to all headlights on the road are blinding, and that is from both directions. In suburban and rural areas, the headlights feels exacerbated in strength with often nothing to contrast them. Lift kits aside, SUVs/pick up trucks seem to be eating their veggies and growing in size; their headlights are without a doubt, at my direct head height. There are highways and interstates I have to avoid because the headlights coming from the route opposite direction are too bright. Some headlights even cause reflective mile markers to flare into a ball of light. Too-Bright headlights coming from behind essentially flash bang my rear view and side views. I have driven through construction zones, 3 lanes to 1, at 10mph and been blinded by the work lights, the vehicle lights, even by parked cruisers using rear flashers.

I have never had driving induced anxiety; I have lived across states for college and been a confident driver always. Now a days I am nervously slowed to the right lane when cars are behind me, or hogging the passing lane out of keeping lights out of the driver-side side mirror. I have always had slight astigmatism, and always had corrective contact lens to support that. This year I had to seek out an optometrist because I thought the astigmatism must have worsened. Its actually improved! Both glasses and contacts are still corrected for them. No improvement for driving.

I feel like I really am going crazy over this! I have limited my night driving to short trips/around town. On occasion I have agreed to longer drives, and regretted each time. Its frightening. Its saddening. Its unfair. I hear people say, "people kept high beaming me, I had no idea mine were so bright!". I guess they cancel each other out. I am not faulting the individuals, the newer cars are just, like that. I am not as empathetic for after market installations. But how am I tell the difference?

I am weakened by it all. It seems silly, but its not. My heart pours for older adults who's independence and autonomy are already vulnerable. For pedestrians, who should have the option, ability, and safeguard to walk. For children who ride bikes. I hope to see change, and am happy to know others do too.

November 9, 2024 – Point-a-Pitre, Guadeloupe – None
(this is an automatic translation from a non-American language)

Unfiltered LED lights that emit excessive brightness levels and overly white color temperatures, which are harsh on the eyes, have completely disrupted my daily life and degraded my quality of life.

Their widespread and forced implementation for energy efficiency reasons, without any consultation with the general public despite warnings from scientists and health organizations, resembles a dictatorship: “the LED dictatorship.”

Nighttime and daytime car lights, public and private lighting, stores, offices, business premises, public transportation, electronic devices, vending machines, etc., LEDs are everywhere and in excess. This overabundance now prevents me from living normally.

Manufacturers and installers have done whatever they want: everything seems designed so that current lighting is more about assaulting our eyes rather than providing proper and subdued illumination.

It is a dictatorship leading us to a dystopian environment for a portion of the population that suffers: “the LED dystopia.”

Because of LED lighting and its daily impacts on our eyes:

I have to change my personal and professional habits;
I have to flee at night and give up any outings or activities;
I can no longer drive at night and stress about being assaulted wherever I need to go;
I have lost the freedom to move as I wish;
I am becoming socially isolated;
I am losing the health of my eyes and fear losing my sight!

Furthermore, I can no longer tolerate seeing and enduring these “light signatures” from cars that cause retinal persistence phenomena or light trails, dangerously obscuring vision.

LEDs have created a real phobia in me: “LED phobia.”

LEDs are a nightmare and a missed opportunity to reduce our impact on health and the environment at a time when it is impossible to gaze at the starry sky and biodiversity is collapsing.

November 8, 2024 – Sandpoint, ID – Other

Since LED lights have come out on cars (and especially pickup trucks) I have been unable to drive in the dark. The lights create a halo that fills my entire vision field, making it dangerous to me and others. I cannot see even the side of the road..... Even after cataract surgery. This has caused me to curtail all evening activities. I am retired & live in the country so this is very isolating and causes depression.

November 7, 2024 – Vacaville, CA – Autism

I was in the city just after sunset and all the blue LED car headlights and blue LED streetlights started appearing. I started to go into a panic. It felt like it was an emergency, so I reached into the center console of my car and found some orange tinted clip on glasses. I put these on over my glasses, and the panic immediately stopped. All of the blue-rich LED lights were still far too intense, but the feeling of life-or-death panic was completely removed by putting on the orange-tinted glasses which filtered out the blue wavelength light.

November 1, 2024 – Fresno, CA – None

The lights are so bright now, I hate driving at night to pick up my kids from activities. Now its dark earlier due to time change. It is terrifying. Seriously. Sometimes I just pray I make it. I have flashed before as a reminder the brights are for oncoming traffic. Numerous times they flash back and its even brighter! I get white spots in my eyes everyday. Im buying night vision glasses. Do ya'll night drive at night or cant see from the back of your limo? What is going on?

October, 2024

October 27, 2024 – Los Angeles, CA – Autism

My partner and I took turns driving from Sacramento to San Diego during the day. For the most part, the drive was without incident. At about 4pm, we were in the Los Angeles area.

First, we witnessed the result of a fatality crash, with about 6 emergency vehicles with red LED flashing lights. I was the passenger, and was forced to shield my eyes from the flashing LEDs. Then I was struck at close range by the blue LED lights on a highway patrol car further down the freeway, causing me pain and anxiety.

Around 5pm, the blue-rich LED headlights started appearing, causing me to have to look out the passenger window. Then the blue-rich LED streetlights started turning on, causing me to flinch with each exposure. Then there were blue-rich LED wall packs and floodlights on my right and left which increased my agitation at each exposure.

As the sun set, we exited on a ramp, and tiny yellow LED flashing lights on multiple curve signs struck me directly at close range. After dark, we were inundated with blue-rich LED headlights, blue-rich LED streetlights, blue-rich flood lights, LED business signs, parking lot lighting, and intense LED red taillights. A commercial truck had red LEDs wrapped around the entire back of the truck.

When we arrived at my mother's house, a place I know well, I was hyper vigilant. Every light was now too bright. Every light was a danger. Everything was too bright. For the first time in my life, I was unable to greet my mother with enthusiasm. I was in shock.

My mother turned off all but one incandescent lamp, but when she asked me if she could turn on one more lamp, I broke down crying. I am now on edge. I am on hyper alert. Every light is an enemy.

October 21, 2024 – Paoli, PA – Migraine

I have recently started to suffer from severe chronic migraines. As a result, I am photophobic almost all of the time. This makes LED lights not only painful and very uncomfortable when I drive at night, but also dangerous. Whenever a car with LED lights passes me at night, I am blinded for about three seconds. I have to pray that a deer or other animal will not run out in front of my car, especially now that it is deer rutting season and the deer are very active. This is all made so much worse by the fact that many people in my area have new cars, meaning ultra bright or powerful LED lights. I did not have a migraine earlier today, but I may develop one soon after driving tonight.

October 20, 2024 – Harbor Springs, MI – None

I can't drive in the morning or at night because of these blinding headlights. This is crazy, worse than drunk drivers. What happened to the Auto Safety industry or safety regulations? I am either going to have to lose work/get fired because of this or literally drive blind and pray I don't die or kill someone else.

October 18, 2024 – Portland, OR – Astigmatism

I thought I could get over it, because LED headlights are so unavoidable. I tried everything I could possibly do to cope. But lately it has evolved to suicidal thoughts, because I feel like I'll never be able to live a normal life again. I was thinking maybe I have autism, maybe I should get that checked out, but I feel ridiculous. Do I really go tell a therapist that LED headlights make me want to kill myself? Is that what I have to do?

October 12, 2024 – Esparto, CA – Autism

I was driving behind a vehicle when it suddenly pulled to the side of the road. Coming towards us was an ambulance with LED flashing lights. I felt like I was electrocuted and was going to go unconscious. I instantly closed my eyes and stopped my car. After a few seconds, a car behind me honked, and when I opened my eyes, the ambulance was already gone. Now I'm suffering the psychological after-effects.

October 11, 2024 – Yolo County, CA – Autism

I was driving East on a County road in the day when a vehicle came towards me with intense, rapidly flashing amber LED lights. I felt panic rushing in and put my arms up to block the assault. Since I now couldn't see the road, I came to a full stop. Then somebody honked a horn. I moved my arms, and saw that the lead truck had passed, but a wide-load mobile home on a truck was inches from the left side of my car. These LED flashing lights are a menace and violation of our civil rights. My anxiety ran high for 30 minutes after the encounter.

October 11, 2024 – Brooklyn, NY – Other

Causes nervous system dysregulation which impacts motor skills & orientation, migraines, seizures, nausea, ability to digest food, vomiting

October 7, 2024 – Augusta, ME – Astigmatism

There are multiple times, every time that I am driving at night that certain oncoming vehicles had their high beams on, and I would put on my high beams, only for them to flash their brights at me because I was wrong. It seems to have gotten worse now that 1. I've been diagnosed with astigmatism, 2. I now live in a town that doesn't have street lights, and 3. I am driving more at night. It just seems as if EVERY oncoming vehicle have the high beams on. I try every trick in the book to not look directly at the lights, to focus on the right side line on the road and physically block out the lights with my hand. I am afraid of myself and the safety of others if I cannot see when I am driving, especially living in the state of Maine where moose are not easily seen in the dark.

October 6, 2024 – Howell, MI – None

Nice to find out I am not alone regarding this topic. Engineers at automotive companies are responsible for what I consider an environmental pollution nightmare. I never had any trouble driving at night until about the past 8 years or so when I noticed the blue LED lights being applied to more and more vehicles. At first, it was only a few vehicles so a bit of a nuisance, but

manageable. Now almost 80% of the vehicles on the road have these super bright blue spectrum LED emitters just blasting out light. I can literally feel the pain in my eyes when these vehicles approach. I started wearing my polarized sunglasses for driving all the time including nighttime. Does anyone know how those lights may be damaging our eyesight, especially at night when the pupil is dilated due to ambient darkness? Come on engineers, do your job! Ask the questions and demand the answers before you release products which can cause harm.

October 3, 2024 – Bethlehem, GA – None

I can no longer drive in what I feel to be a safe manner due to the piercing brightness of headlights.

Over the last year they have become so sharp on the eyes that even in the various hours of the morning, dusk night and even overcast days I am forced to stare at the white line in the side of the road. Giant, oversized trucks with these horrid headlights are near perfectly at eye level often times leaving me stunned.

I've had my eyes checked to ensure they're is no damage to them or a condition being developed that's in need of correction. This is not the case as aside from a mild prescription I received a couple years ago, nothing has changed personally.

I've also made mention of the problem to friends and family and ALL agree that it's out of control. My mother refusing to drive at night as well at this point.

It's flat out dangerous to the public and out of control.

October 1, 2024 – Elk Grove, CA – Autism

I attempted to enter a large box store that had installed collections of LED "white" tube lights in the ceiling. I glanced up at these LED lights and immediately felt eye pain. I turned and left the store, knowing that the situation would only get worse if I remained.

October 1, 2024 – Easton, MA – None

There are multiple times, almost nightly, that I would bet my paycheck that certain oncoming vehicles had their high beams on, and I would put on my high beams, only for them to flash their brights at me because I was wrong. I've been driving for almost 50 years and I have always preferred driving at night until the last 5 or 6 six years or so. It just seems as if EVERY oncoming vehicle have the high beams on. I try every trick in the book to not look directly at the lights, to focus on the right side line on the road and I've even purchased a few pairs of night driving glasses. The glasses reduce the glare a little bit, but doesn't help much. Most of the sunglasses I have work, but I can't see the road properly. After an oncoming car passes I have difficulty seeing, have spots etc, that last anywhere between 20 and 55 seconds where I have limited visuals on the road, instead of my usual 100% attention, while waiting for my eyes to adjust. Sometimes after I get to my destination, I realize I have a headache. My first car had two round, sealed beam headlights with incandescent lamps. Only one was functioning and that was plenty of light for me to see and drive. My current vehicle, a 2018 Silverado has more than enough light and projects for what seems like a half mile in front of me. I don't need to see that far down the road!. When I put the brights on, its crazy bright! I don't need all of that light. Things would be a little better if they eliminated to Auto-High-Beam function. Massachusetts drivers complained years ago of the brightness of the State Police emergency lights being too bright, practically blinding you as you were approaching the police cruiser. Eventually after a

few collisions and unfortunately injured troopers, they changed the lights to be less intense. I get stressed out when I have to drive at night because of this easy-to-rectify problem with LED Lights being so bright, when they don't have to be.

September, 2024

September 30, 2024 – Westminster, CO – None

Sitting at an intersection with a car on the other side whose lights were so bright that the traffic lights could barely break through the “white out” effect from LED lights. Multiple people (myself included) flashed their lights at the driver in hopes they would turn them off but instead the driver made them brighter. Even if this person was not on the road with illegally modified headlights I come home every night with so many spots in my vision that I am almost blind and it seems to get worse with every repetition, I fear I might lose my eyesight.

September 28, 2024 – Denver, CO – Other

This report is for many different incidents as I don't feel like submitting over 500 different incidences. It's a daily problem, every time I drive I am affected by these lights. There has been times I've almost driven off the road because I simply can't see the road from being blinded. It's absolutely absurd that this has not been regulated. I get migraines from these lights now, it produces extreme amounts of stress, it has made me dread night driving which I work a night job so I'm kind of stuck dealing with it. I've had pedestrians run out in front of my car and I almost killed them because I was being blinded. These are an extreme safety hazard and something **MUST BE DONE**.

September 27, 2024 – Bar Harbor, ME – Migraine

Have had migraines since youth, worsened by post-concussion syndrome in young adulthood. Construction vehicles, night driving, and even LEDs at pool facilities are intensely disruptive. Most recent example was a construction firm pickup with blinking yellow/white at 6am. Has seared my retinas for days and increased sensitivity to other lights. I already have to live with enough avoidance of crowded noisy places and entertainment venues due to strobes and music-LEDs make avoidance near impossible and driving potentially hazardous.

September 26, 2024 – Idledale, CO – Migraine

LED headlights have ruined my life by being the primary trigger of my migraine headaches. I never had migraines until these awful lights became common place. I can no longer drive at dawn, dusk, or night, and have frequently had migraines triggered by LED headlights during the daytime. I can't even stand the light from my own LED headlights and wish there was a way to replace them with halogen bulbs. Unfortunately my new car was pounded by hail shortly after purchasing it, or else I'd get rid of it in a heartbeat. When will these dangerous headlights be outlawed. As it is the auto industry and lack of action by Congress has forced me to stay home and limit my activities at night. I consider this discrimination.

September 25, 2024 – Anytown, VA – Other

In night time car headlights are blinding and the state does not allow you to tint windshield.

September 21, 2024 – Shippenville, PA – Migraine

At the dance studio. A parent had SUV running outside while child took class. So they were sitting not driving with the headlights on full (low beam). Plus there was this weird strip of running

lights wrapped the headlights and the grill. The lights were more white and not as purple as most. So the hit seemed a bit less. I know to not look up or towards the door. I always put up a hand by my eyes to block and avoid grazes. I've had troubles with headlights coming in the door historically. In which a seizure was triggered (in front of children). So now I always keep my head down and walk on the one side of the building to avoid the door to the outside. This door is a full see through business type glass. As I walked along the "safe" side of the building. The led headlights reflected off an interior (glass see through) door (it was at a slight angle), and hit me in my left eye, mostly. Part of the right eye. Instant reaction. Blink reflex. Yet couldn't open eyes. Couldn't walk. Felt short of breath. Almost threw up. Stood in a veg state for several minutes. Couldn't respond to anyone's questions despite hearing them. Slowly I pulled myself back to the world after 5 min or so and was able to walk away. Sat down. Couldn't do any of the work I was working on. Organizing and cleaning the teacher shelves. Etc. Couldn't even finish the task I started. Barely made it through our team meeting. Couldn't think or filter my thoughts and words. I had severe pain on left eyebrow felt like an ice pick stabbed in. Yet felt like a bomb went off in my brain. Pain was so severe. Eyeballs hurt. The clarity of my vision decreased. Couldn't read fine print like I usually can. Left side of my face went numb. Size of my fist of an additional throbbing pain around my eye socket. I got super super super cold. Started shivering and had goosebumps. I have an apple watch. My heart rate skyrocketed at the exact time I got hit. And continued to be high for 20-30 min. But the worst was immediately following the hit. When hit by LEDs I struggle to sleep at night. It's like my brain is soooooo tired and sore but it's wired. Electrified. I can't sleep no matter what I do. Yep this happened. Couldn't sleep well at all. Today I have a massive migraine. The whole left top side of my brain is beyond sore. Can't touch my scalp. My eyeballs are killing me. Left area around the eyeball is pulsing in like mini pulses. Quick but defined. I can't think. I can't come up with the right words. Im so tired. This is all because a led headlight reflected off a glass door.

September 20, 2024 – Raleigh, NC – None

Headlights on newer cars make daytime and nighttime driving a constant safety and health risk. These weaponized devices are a clear violation of my rights.

September 17, 2024 – Easton, CT – Electromagnetic Sensitivity

My neighbor keeps her very strong LED lights on over her garage all night long from 7 p.m. to 7 a.m. and I cannot sit in the room where their light shines into my kitchen area. I feel sick and nauseous. I feel there is a very strong connection with the LED and frequency that is generated by the towers, wifi-routers, smart meters on their home and my home since I cannot have it removed. I place a date in this form but it is daily I am subjected to these harmful energies from the LED. The bright light is a light trespass into my private space.

September 16, 2024 – Kensington, MD – None

I have personally side-swiped a pile of debris on 270 that was jutting into the lane at highway speed that was ****invisible**** because of oncoming LED Headlights almost taking out myself and my family. Luckily it just scraped up the side of my car. On other occasions I have barely seen pedestrians on the street who were completely shrouded in darkness because of the contrast these ultra-bright lights create outside of their dazzling beams. I often find it very difficult to see the road markings or the actual profile of an oncoming vehicle because the only thing visible is the floating white ovals in my windshield.

September 16, 2024 – Shippenville, PA – Migraine

On August 27, 2024, my husband took me to an appointment with a Neurologist/Headache Specialist at the Cleveland Clinic at their Brunswick location. On the ride there I had a few minor hits from LED headlights which caused a migraine. While at the doctors office I was met with LED lights throughout the office. I got a severe migraine and a tingling feeling in my face. It made the visit with the doctor very difficult as I was unable to come up with the right words to describe exactly how the LED lights are effecting me due to the cognitive loss I had from the LED lights. During this visit it was stated by the Neurologist that LEDs are a common trigger for migraines.

September 16, 2024 – Shippenville, PA – Migraine

I was riding in a vehicle with co-workers as I am unable to drive because of the LED lights. I picked my head up to look around because we were in the woods when the vehicle in front of us hit their breaks and the lights came on and caused an immediate migraine. Note that the vehicle that caused this was a government vehicle. I had an aura and severe cognitive decline that lasted for hours. Also had a numbness feeling on the left side of my face around my eye and nose.

September 16, 2024 – Nashville, TN – Other

I have Mast Cell Activation Syndrome. My body produces an allergic reaction to things that wouldn't normally cause anyone else a problem, including LED lights. My brain interprets the rapid flashing light as if there's something attacking my body, resulting in what we call a "histamine dump." Histamine dumps lower blood pressure. But given I have a condition known as Postural Orthostatic Tachycardia Syndrome, which already gives me low blood pressure, the combination of this condition with MCAS histamine dump causes me to go into hypovolemic shock. It causes the worst pain I've ever known, where my brain is screaming for oxygen and nutrients, fading in and out of being hyperaware of how much pain I'm in only to dissociate from it as a way to protect myself from the mental anguish of that pain. I've almost died from this several times. For almost a decade, I exhibited symptoms of hypovolemic shock at the end of nearly every day, only to be told it was a cervicogenic headache or migraine. Now that I'm diagnosed, I'm on a medication to treat it. But that medication isn't strong enough to counteract the effects of extremely bright LED headlights, let alone LED streetlights. Every time I leave the house at night, I get sick. I'm already disabled my multiple chronic conditions. My life is already limited. I don't know how to live life unable to even go outside at night.

September 14, 2024 – Vacaville, CA – Autism

I was driving at dusk when a fire truck or ambulance suddenly appeared with LED lights flashing. I immediately threw both of my arms in front of my face and hit the brakes to stop the car. I thought that this might be the end of my life. The LED flashing lights are sheer terror and I can't function. After the fire truck/ambulance passed by, I felt like I was going to cry from the emotional trauma. My brain then feels like it's dead even hours later.

September 12, 2024 – Moorhead, MN – None

When driving on roads with multiple lanes last night, I turned my driver's side mirror out and flipped the tab on my rearview mirror because the headlights around me were causing me physical pain and making it nearly impossible to drive. I couldn't see the road in front of me when the headlights were reflecting from the mirrors into my eyes. After adjusting my mirrors, I couldn't see anyone on my driver's side without turning my head, and I couldn't see well behind

me in my rearview, but I felt like a much safer driver with those changes because I could actually see the road in front of me.

September 5, 2024 – Keene, NH – Other

Driving down a tree lined road at around 6 PM (dusk) there was a vehicle stopped in the oncoming lane with their lights blinding me. As I slowed down and continued on my side, I saw a headlight blink. That was the only warning I had that there was someone in the road. I slowed down to a crawl, and the driver was out walking around their vehicle with the driver's side door wide open into my lane. If I continued going the speed limit (30 MPH) I may have hit the driver or at the very least hit their open door. I was able to stay calm driving home, but when I got home 10 minutes later and realized how close I came to possibly killing someone (because the LED headlights were blinding me) I had an anxiety attack, including shortness of breath, racing heartbeat, and a feeling of doom. I already only drive as strictly necessary because of these lights, and this incident further fuels my fear of these headlights causing me to get into an accident.

September 3, 2024 – West Deptford, NJ – Photophobia

This is an ongoing problem. For the past few years I have been unable to shop at the local Shop Rite ever since they doubled or even tripled the amount of lighting above the checkout lines. I get migraine symptoms within minutes even while wearing my tinted glasses and a wide brimmed hat to block much of the light. The lighting is that intense. I get visual distortions, nausea, and the Pain starts in about 5 to 11 minutes (I've timed it)

I can no longer shop at my local supermarket. The manager I spoke to had callous disregard for my condition, and my emails to management have received zero replies of any kind.

Other Shop Rites aren't nearly this bad. The Glassboro location recently remodeled and installed DECENT, HUMAN LIGHTING that doesn't bother me at all. Why can't all supermarkets do this?

There is some financial damage from this: I've been paying the higher prices at Acme because I can stand the lighting, or driving the 16 mile round trip to the Glassboro location just to feel human when I shop, so that's extra gas and miles on my car every time.

September 3, 2024 – Deptford, NJ – Photophobia

I tried to shop at the Five Below in Deptford NJ on Almonesson Road. I only needed one item, I hadn't been in this particular Five Below before. I barely lasted 5 minutes in there before migraine symptoms started, even with the protection of my FL41 tinted sunglasses. The LED lighting is so intense it completely overwhelmed any protection. I was fine when I entered the store, but within minutes I felt nausea and the beginnings of the familiar headache. I had to rest for a few minutes in my car where it was dark, just to recover.

September 2, 2024 – Zwolle, The Netherlands – Migraine

Hello, I am not able to use any screens that use dithering and low frequency of PWM. With in use of a product that use these technologies it will give me migraines instantly. I am really concerned of the future because more screens are made with this technology. I have 3 kids and for so long I can't I will not let the use devices that use PWM on low frequency and dithering. It will do damage on the long run. For now there is too low attention for this problem and I hope sincerely that in the near future this will be widely known.

September 1, 2024 – Novi Sad, Serbia – None
Dear FDA Representatives,

I am writing to bring to your attention a serious health concern I have experienced with MacBooks manufactured after 2022. All MacBooks purchased after 2022, including the MacBook Pro M2 Max, cause severe eye pain, muscle tension around the eyes, and migraines. These issues occur when using macOS, with symptoms appearing almost immediately upon using the device. I sustained a severe eye injury during testing, limiting my work time to 40-minute intervals. Even a year later, I cannot work for more than 8 hours a day. Despite consulting several ophthalmologists and specialists in binocular vision disorders, no significant issues were found, and all professionals confirmed that my eyes are healthy. My symptoms disappear when I stop using MacBooks and switch to other devices that do not use Temporal Dithering. There is a clear connection between my symptoms and the use of Temporal Dithering technology in MacBooks. More information on this technology can be found on the following forum: <https://ledstrain.org/t/temporal-dithering>. As further evidence, MacOS users who managed to disable Temporal Dithering no longer experience headaches or eye pain: <https://ledstrain.org/d/2686-i-disabled-dithering-on-apple-silicon-introducing-stillcolor-macos-m1m2m3>. I am deeply concerned that in the future, I may be unable to use any Apple device, compromising my rights and ability to work.

I urge the FDA to regulate the use of technologies that involve pixel flickering for color display in Apple products. Your intervention is essential to ensure that sensitive users can continue to use Apple technology safely and effectively.

August, 2024

August 31, 2024 – Madison, California – Autism

I was a passenger in a car. As we approached a roundabout, a truck with white LED lights, the circular ones near the bumper, struck me directly. I screamed profanity and began crying. The other 3 passengers all confirmed that the light was excessively bright. For me, however, it was severe emotional trauma. The after effects are very long lasting.

August 29, 2024 – Christchurch, New Zealand – Sjogren's

I was driving and came to a set of roadworks where I had to stop at some temporary traffic lights. I was the car in the front of the queue at the light. There was a worker's utility vehicle parked right behind the light in my line of sight. It had its rapidly strobing lights on. I am unable to function if I look at strobing lights due to neurological and eye symptoms from my common autoimmune condition called Sjogren's (for example Sjogren's impacts an estimated 3-4 million people in the U.S.). I do not have trouble with sunlight or incandescent lights, but LEDs are painfully glaring to me, and strobing lights cause even worse disability. In the incident I am describing I had to block my eyes with my visor and arm, which meant I could not look at the traffic light and I had to wait until the car behind me tooted so that I could know when to drive on. Even then I had to do so VERY slowly as I had to keep blocking my eyes as I went past the strobing vehicle and there was a danger I could hit a roadworker.

August 28, 2024 – Esparto, CA – Autism

I was driving and encountered a utility truck with both sets of headlights turned on. I turned on my non-LED high beams in the hope that the driver would turn off the high beams. Instead, the

driver turned on amber LED flashing lights that incapacitated me. I was unable to proceed forward and stopped my car. Instead of driving off, the driver of the utility truck stopped also. My vision and cognitive abilities were severely impaired, with panic setting in. Finally, I started to inch forward, and then so did the utility truck. It seems like the driver was doing it on purpose. After he left, I spent several minutes simply stopped in the middle of the road, trying to breathe and let the panic subside.

August 24, 2024 – Crawfordville, FL – Epilepsy

Hi! I was diagnosed around 27 with epilepsy, cataplexy, and narcolepsy. It is a rare condition. I am now 52. I lost my license to drive at 27 bc I had a grande mal seizure front the sun shining down through the trees and as I drove thru them the light would blink and next thing I had totaled my car. I noticed that the sun was a problem to me around the age of 16. Wearing sunglasses doesn't really help much. I am very sensitive to the light. My favorite thing to do is shop. The LED lights in the stores have now even made it to where I can not shop if they have the newest led lighting. I know what stores to avoid It will actually make me very sick if I go into a store w led. I'm not sure to tell you if I am shaking but I do know I get very confused and I will pouring with sweat. It almost paralyzes me. I can barely move or walk. I recently was in Big Lots where I had my last episode less then a week ago. I'm begging someone to listen. I will even have my mom record an episode and send it to you. Many people are affected by this. I want to be the voice that gets heard. I am literally begging to make this lighting go away so I can safely buy groceries.

August 23, 2024 – Monroeville, PA – Autism

I am unable to focus when I drive at night due to LED headlights. I had zero issue driving prior to their introduction. Even during the transitional hours of morning and evening sometimes these headlights are too bright. I am blinded to the point that I see afterimages of the lights in my eyes even without directly looking at them as if there were many tiny suns on the road.

August 22, 2024 – Rocklin, CA – Autism

LED headlights, along with increasing levels of aircraft noise, have literally taken away my ability to live independently.

I was diagnosed with high functioning autism when I was 17 and one of my symptoms is a high sensitivity to light and noise, which is common among autistic people.

I worked as a mechanical engineer in the San Diego metropolitan area for about 3 years after graduating college in 2020. During that time, I was with a long-term girlfriend and was even living with her for the last year of my time there. While living in San Diego I was getting more and more anxious and overwhelmed to the point where I wasn't able to function enough to keep my job or be a good partner with my girlfriend. Eventually, I had something akin to a nervous breakdown and I am now living at home with my parents and working at my local grocery store (thank god I have loving parents who are willing to help me out).

I believe that the exponential increase in recent years of both LED headlights and ceaseless air traffic over residential communities were the main cause of my anxiety. As an autistic, I need to live in an environment that's a sensory safe space (dim and quiet) so that I can recharge from the stimulation of a full day in the hustle and bustle of life. When there's aircraft noise penetrating my room and LED light every time I drive, there's very little break from the overstimulation. If

I'm not able to get this recharge time, the sensory overload causes a cumulative effect, and anxiety builds in me.

While living with my parents, in an area with much less air traffic, I've been able to work reduced hours and limit my nighttime driving. I'm starting to see my mental health improve. However, I still have to be careful not to drive for more than 15 minutes or so at night and I mostly have to stay indoors where I can control the lighting and noise levels.

I used to love exploring at night. In fact, I would often go out during the nighttime because this was when the noise of the city quiets down and I feel more comfortable. It's not fair that the world is taking this freedom away from me by creating an unnecessarily harsh environment for sensory sensitive people. I also used to love camping for similar reasons (it was an escape from the noise of the city), but the proliferation of aircraft have taken this escape away from me as well. I have done a lot of brainstorming and can think of several ways that we could make our world more sensory friendly without significantly reducing quality of life for neurotypicals, such as reducing brightness / adding diffusers to LED lighting, enforcing common sense vehicle noise laws, and creating no-fly zones over designated sensitive areas.

August 19, 2024 – Marietta, OH – None

I work mornings mostly, which means I'm on the road when it's dark out. Every led that passes me or gets behind me blinds me. Most times I have to stare down at the middle line to make sure I'm still on the road. Even dark dirt road my cars yellow brights work just fine. There's no need for someone to light up the whole state of Ohio

August 16, 2024 – Middlefield, OH – Migraine

I went to my bank while it was closed on the weekend to get money from the ATM, but there were so many LEDs that I had difficulty making out the buttons, I felt disoriented, and quickly started to have pain in my eyes and head, resulting in a low grade migraine. I had difficulty responding to the passenger with me in the vehicle and making quick judgements while driving afterwards. I had a headache the rest of the day and into the next day after the couple of minutes at a machine to access my funds.

August 15, 2024 – Round Lake Park, IL – Photophobia

I have had glasses since I was 10 years old and am now 31. After reaching my 20s my eyes leveled out and my prescription did not change for over 6 years. In the past year and a half I have worked from home on a computer. Between computer screen and the blue LED headlights my prescription went from -3.5/-3.75 to -4.25/-4.25. Even more recently for 2 days my left eye experienced a 'halo' effect when looking at lights that worsened at night. Thankfully it went away after a few days, but 2 ophthalmologists couldn't determine the cause. Driving at night is an increasing hazard due the brightness headlights, especially the LED ones. There does not seem to be any regulation on how bright headlights can be and all the LEDs make it difficult to see the road when there are oncoming and they leave a lingering effect on my eyes after they've gone. I have order my new prescription with blue light filter lenses to lessen the effect of headlights and screens. Those special lenses seem to range anywhere from an additional \$30 to upwards of \$100 on top of the cost for the frames themselves. And that was on a cheap website like ZenniOptical.

August 14, 2024 – Goodyear, AZ – Migraine

I have migraines that get triggered from bright lights from light bulbs and sun glare. I used to be

safe from this affliction at night, but that hasn't been the case ever since LED headlights have become popular. I now feel that I have to wear sunglasses at night as well as during the day to avoid what feels like the unabated light of the sun from traffic from the opposite side of the street or from trucks who tailgate me for not going 80 mph on the freeway. I am essentially left blind and with a burgeoning migraine every time a passing car shines their lights at me, and I am certain I am not the only one who suffers from this.

August 12, 2024 – Queen Creek, AZ – Electromagnetic Sensitivity

My wife started to develop dizziness every time she would go inside of a newly opened Costco near our home. When she would arrive home, she would be nauseous and have to rest for a while. Now, she struggles to go there alone because of how being in the store makes her feel, and usually needs someone to go with her. The lighting in the store is the bright white LED type. Very agitating to the eyes. Not sure if there's other factors at play, but the lighting is definitely an assault on the eyes. When I go in there, I'm in and out pretty fast because the lighting is so stressful.

August 9, 2024 – Jefferson, OH – Other

I have worked with injurious light emitting devices for 15 years. The act of being forced to look into high powered led arrays has been a continuous thing for me and at least a few other people at work. This has increased to a ridiculous glaring issue, and nobody seems concerned about. I became more interested in all of this recently when i noticed a sort of hole in my vision where if I look at something for a few seconds it just starts to go black. A common daily routine for me involves taking measurements thermal and electrical measurements of several very high powered lights in the space of a meter that output 72,000 lumens pointing up at my face, my face is less than 2 feet away. I was not given proper PPE and had to ask for it, then i received improper ppe, and by way of my own ended up using a shade 5 ppe for welding.(which is still not good enough because the stuff hurts my eyes also there appears to be zero science in choosing the right ppe for staring into injurious light) I am confused about what ppe to use for reading meters while viewing intense light. I went to the optometrist, and he claimed my eyes did not seem damaged, suggested i am experiencing some sort of photo bleaching and said that they will be damaged and he recommended that the company i work for should seek a safety hygienist. But like i said stuff disappears if i look at it for a few seconds a plus i seem to experience mental problems while being around these intense lights. I have read through all the regulations and shortcomings of various federal regulatory bodies and i just don't know where to start besides letting the safety coordinator person know my problems. I have not done that because i want to make a clear case and show everyone what is really wrong. That and i don't want to end up being ignored or dismissed.

August 7, 2024 – Knoxville, TN – None

Excessively bright, unshielded lights are being set up over the city, some residential, some commercial. Despite being against code, the City does not effectively address the issue. Lights close to my home leave me and my neighbors blinded to own properties, as well are problematic for drivers. I am literally unable to look across my lawn when they are on, as the glare is blinding and painful to my eyes (I have no eyesight issues), meaning I cannot see anything. They're also an ecological catastrophe. It is unbelievable these lights have gone unregulated this long.

August 7, 2024 – Valley Stream, NY – None

LED headlights are incredibly irritating and they've become far brighter than is necessary. Not

only are they absolutely blinding in some cases but they're DISTRACTING, and I can't imagine what could be worse on the road. Headlights should be sufficient and shouldn't pose an issue for other drivers. The fact that they do risks lives every day!

August 6, 2024 – Winters, CA – Autism

I was driving on a country road in the daytime. Over 1 mile ahead of me was a utility truck on the side of the road with amber LED flashing lights. For the entire mile, I was either glued to these LED flashing lights, or forcing myself to look away. As I approached the truck, the LED strobe lights were overwhelming and I could not see through the lights. I stopped my car in the road and started to panic. I put my hand in front of my right eye, and then tried to use my left eye to navigate around the truck. It is impossible for me to think or see with these LED flashing lights blasting me and I suffer extreme anxiety and panic.

August 6, 2024 – San Diego, CA – Other

Honestly, this is an issue I must deal with EVERY time I have to drive at night! There are far too many outrageously and dangerously bright headlights that blind me and so many others I know. Whether it's headlights that haven't been positioned correctly, or large vehicles beams that shine directly into my review and side mirrors, either way it's awful! In order to drive without being blinded nonstop, I must flip my review mirror up, and use my left hand to block my drivers side mirror. This GREATLY reduces my safe usage of these needed tools, but I have no choice. I either do these things or be completely blinded by these eye scorching beams. I can recall when there were warnings against looking into these LED beans when flashlights started using them, and now, we are forced to be blinded by them WHILE DRIVING!!!

August 6, 2024 – Culver City, CA – Other

I have to hold one hand w/ a newspaper, and bring down my visor, the rear view & side mirrors to block all LED headlights. This makes it very difficult to see any traffic hazards. If the light does hit my eyes, i get a piercing pain back to my optic nerve worse than a migraine.

August 5, 2024 – Beaverton, OR – Migraine

Poorly designed LED lights impact my health severely. Flickering LED lights induce migraine headaches, and this affects my health nearly every day. Overly bright LED headlights and street lights impair my night vision and make driving more dangerous.

August 5, 2024 – Bradford, England – None

I walk my dog along part of a busy road, the car LED lights are so bright coming toward me that one night I did not see a bramble which hit my face leaving blood running down my face!

August 4, 2024 – Spokane Valley, WA – Epilepsy

The use of LED lights in public spaces has and continues to become a more and more serious issue as more and more are being used and lights are being switched to this. In department stores like Walmart, I can only be in there for about 10 minutes max and it sets off my epilepsy. I get nauseous, and dizzy and begin to have auras. I have to immediately go outside to natural light. They are being used as street lamps and at night with it already dark outside, it makes them that much more awful for people like me. They are being used in headlights and I made a serious note of this when my son and I drove to Denver and back from WA. If there was oncoming traffic at night and older cars with older style headlights, there is no issues driving at night. Sure they are bright and you always have a little of that bright headlight thing going on, but those new

LED headlights are just obnoxious beyond belief. Not only are they bright, but when you get a row of them and you have epilepsy – they flicker, and some flicker noticeably because when it is temperature change ie colder they seem to have an issue and cause flickering. As a person with epilepsy you only have the instinct to close your eyes and you can't because you are driving the car. Same with going down a street light with LED street lamps. And while I get that if you have epilepsy and they say don't drive. I CAN drive, and DO have my license and it is unfair to me to take away my license because of some light bulbs!!!! When I am otherwise allowed to drive. In my recent drive to Denver and the flickering head lights – some were almost to a point of flashing like an emergency vehicle. How on earth is that even safe for any driver encountering that in the dark at night? It is visually distracting like a strobe light.

And then finally – I can not even have lighting in my own home or my office any more. You have completely gotten rid of any light bulb that a person with epilepsy or a person with strokes etc can use in their own home and using those ones that change the lighting tone from natural lighting to bright lighting really doesn't help sorry. So what do you expect all of us to do? Go back to only lighting our houses by candlelight? You, as the FDA need to LISTEN! I am in architecture and interior design, I am well aware of design and lighting. This is a very REAL issue that needs to be looked at. It is a health/ medical concern. My mom recently had a serious of mild strokes, and upon researching it since I have epilepsy – I discovered that strokes including decreasing blood flow to the brain CAN because by LED lighting! Before this is dismissed as a whim, you need to actually look at this. It is a real problem. If I go in to Lowe's or Home Depot in their lighting section I can last about 2 minutes and I have to go running out of there and want to throw up it is so bad. I used to love their lighting section – even just a couple years ago it was still ok because not all the lighting had been switched out yet – there was still a balance. Today I can make it about 2 minutes – you want to tell me that is not a serious health concern? I am just one person out of millions with epilepsy, strokes, migraines..... This effects a lot of people – not a handful. On my same adventure drive to Denver the other day – we stopped at hotel and stayed the night. When I came to the reception counter, the woman behind the counter had the lights above the counter area turned off. So I asked her about it and told her I had epilepsy and just wondered if she did and that's why she had the lights off. She told me that ever since the hotel had switched to the new lights, she can't keep them on any more. that she had a car accident and now had a serious stigmatism that caused her migraines. The new lights make it so bad she gets sick and can not be around them at all so she had no choice but to turn off the lights just to be in that space.

The FDA needs to listen – it is a REAL problem! Thank you

August 4, 2024 – Kittitas, WA – Astigmatism

I have had to stop my car entirely when driving at night because the lights were so blinding. I literally can not see and choose to stop my car in the middle of the road for everyone's safety. I don't have this issue with all the headlights. For some lights, I do use my hand to shield my eyes from the headlights. I had to do this over the weekend once again. I have noticed that when I use my hand to shield my eyes I feel heat on my hand. This weekend's incident stood out because I had the a/c on in my car and I could still feel heat on my hand from the on coming headlights. I have also noticed that my left eye, the eye that gets the most direct LED light, has been slowly getting worse.

August 4, 2024 – Webster, MA – Migraine

When the migraine sets in after just ONE oncoming LED vehicle I have much trouble focusing

my eyes back on the road. Especially on darker back roads which I travel to work on in the early morning and also have trouble focusing at work.

August 3, 2024 – Riverside, CA – Other

Retinal retention where bright lights blind and the retina holds the image

August 3, 2024 – Greenville, SC – None

Because of super bright LED lights, I can no longer drive at night. My eyes are very sensitive to that horrible brightness and I had to change my life around this problem. I had to look for a job where my schedule is not ending at night. How can this be allowed? All of you know that this is wrong. WHY?

August 3, 2024 – Onsted, MI – Astigmatism

Led headlights (low beams) , white led running lights, LED brake lights, emergency flashing Led lights and Led streetlights have adversely affected my ability to drive safely. I do not drive at dusk or Night anymore unless I have to (for work). I live in Michigan with snow covered roads and the most dangerous aspect of driving is being blasted by someone's Led headlights. I cannot use my read view or side mirrors anymore because of the vehicles behind me blinding my visions with their Led headlights. I have to constantly shield my eyes to be able to see the road due to oncoming Led headlights. I love nature and now my ability to enjoy the Night skies is ruined because of bright Led lights on at night. I never had any problems driving at night prior to Led headlights. Now driving has become a nightmare and a very dangerous task. Led headlights should be banned or at least some type of regulation regarding luminance and Kelvin temperature. Many Led low beams are much brighter than halogen highbeams. In addition to the dangers of led headlights being dangerous, they cause me headaches and eye pain. It's common knowledge that blue light is detrimental to the health of humans and don't understand why this type of lighting is being used in the public.

August 3, 2024 – Portland, OR – Other

A few years ago I was driving on Hwy. 211 in Oregon near Molalla at night when I encountered a pickup truck with LED (BLINDING!) lights headed toward me. The glare caused me to be blinded to my lane from the oncoming LED lights, and there was a deer I did not see until after the pick up truck passed. That was too late. Although I was not hurt, the deer could have crashed thru my windshield; I have seen this before. My car was "totaled".

August 3, 2024 – Fountain Hills, AZ – None

Apparently the plan to get drivers off the road is working with the BLINDING LED vehicle headlights. The police LED flashing lights are SUPER BLINDING.

August 3, 2024 – Canaan, NY – Astigmatism

The LED headlights are a hazard. I'm still fairly young and have had to give up driving at night completely due to how unsafe it is getting blinded by them and not seeing the road for several seconds afterwards. I, like millions of others, have astigmatism in one eye, but I also have had migraines triggered by these lights, even during daytime driving from drivers with headlights on! My optometrist and doctor's office staff have stated that many other patients report similar issues. The internet is full of forums with people complaining about these lights, and their accounts are very similar – if not even worse – than mine. It's astonishing and reckless that these lights are being inflicted on the driving public!

August 3, 2024 – Bellevue, WA – None

Interestingly, I believe this is also an issue for people with very good vision and not wearing glasses like me. The lights can focus very well onto my retina and make me uncomfortable looking forward at night, but how can people safely drive cars without looking at where the car is going? Due to the strong headlights in new cars, I simply avoid driving cars at night now.

I live in Greater Seattle Area where it's mostly cloudy over the year, and the sun sets very early in winter. Some of these LED headlights are so bright, it's even a pain for me driving around noon during day time. As a paradox, Daytime Running Lights should promote road safety, but they do act as a safety hazard on some cars now. This video should demonstrate my point well: (https://www.youtube.com/watch?v=s4Ws0_yiXg)

Thanks.

August 3, 2024 – Rochester, NY – Astigmatism

LED lights have caused a multitude of problems for me since their general use. I'm blinded by LED headlights making it impossible to see after they have passed. LED lights in and on public buildings have resulted in headaches and migraines. LED streetlights makes driving difficult as it does not give diffuse light pole to pole. LED streetlights in a snowstorm create a dazzling reflection making orientation of the road impossible. LED strobes on emergency vehicles, construction vehicles and personal vehicles have induced seizure type symptoms. Driving at night and being exposed to LEDs cause sleeplessness

August 3, 2024 – Acton, MA – Sjogren's

Having Sjogren's makes it extremely difficult to see with oncoming cars with unregulated LED headlights. They make it impossible to maintain any degree of driver safety. I must focus on the right edge of the road to be certain there are no pedestrians walking on the side of roads in the suburbs and country. Leaving the left side of my car exposed to the driving skills of the offending driver, which does not follow the defensive driving skills I was taught and use whenever I am in the driver's seat.

The other issue I encounter are the extremely bright blue LED lights on police cars when I approach the scene of an accident or when they pull a car over for a driving incident. Even when driving at 2-5 miles an hour to be cautious not to hit anyone I cannot see what's in front of me. Their blue lights put me at risk of hitting a pedestrian even when driving at 2-5 mph.

Why should my passengers and my safety be put at risk because of unregulated LED lights? If it has not already happened, this will lead to many lawsuits with the automotive manufacturers throwing the weight of their legal teams defending themselves when the regulation of LEDs would have prevented the injuries and loss of life.

August 3, 2024 – Chicago, IL – Photophobia

EVERY DAY BLINDED AND SEE SPOTS VISION IS DECLINING EVEN IN DAYTIME!!!!

August 3, 2024 – Austin, TX – Other

I have early cataracts. The LED headlights blind me, whereas halogen lights do not impair my

vision at all. At a minimum adaptive driving beams should be required in the US like they have been used in Europe since 2012.

August 3, 2024 – Fresno, CA – Astigmatism

Why do we have dimmer switches on our cars' headlights if intensity doesn't matter?

As a person with astigmatism I just had a conversation about these lights at my ophthalmologist's office as several of the office staff were nearby and joined in. All agreed these lights are so blinding, especially to those with astigmatism, and it creates a driving hazard. We all opined that they need to be regulated because they said they see problems with them across the board with their patients and in their own lives.

I'm also very photosensitive and have to look away from those oncoming lights to not be blinded by them. Should you really have to take your eyes off the road to drive? Does that make any sense?

Again, why do we have dimmer switches on our cars headlights if intensity doesn't matter?

August 3, 2024 – Hamilton, MA – Astigmatism

Like myself, millions of Americans have astigmatism that makes it difficult to drive at night. LED lights from oncoming cars, esp on 2 lane country roads, make it almost impossible to navigate safely when coming home from work in the winter. I have almost driven my car into a lake after being momentarily blinded by this kind of headlight. While good for the driver who has them, they are DANGEROUS for everyone else using the roads at night. Thank you.

August 3, 2024 – Fort Collins, CO – Other

At 74 and having cataract replaced and it is nearly impossible to drive safely with the blinding blue white glaring LED lights. It is so distracting and frustrating I lose my concentration to drive properly. The lights seem to bounce up and down with a blinding flashing impact. Even police vehicles red and blue flashing on the side of the road are so blinding it is difficult and unsafe to go around them. I can't see what is in front of me. The contrast from dark to blinding flashing lights is too much to see what's in front of me.

August 3, 2024 – Chicago, IL – Astigmatism

Bright LEDs make it hard to drive at night. It's blinding and unsafe for me and the public. Sometimes sunglasses help but I shouldn't wear those at night

August 3, 2024 – Hinsdale, NH – Photophobia

I absolutely can't look straight ahead and watch the road when an oncoming car with LED light comes toward me. I actually turn my head to the right a bit so as to not get blindness. If I do look at them, I see dark spot in my vision, just like a dark shadow that blocks the road. I also get migraines and have come home from driving at night very upset because I realize my migraine is most like due to the bright lights. I have to limit my driving at night unless it is necessary. It is a danger to me and others to be on the road at night. Please help with this scary situation.

August 3, 2024 – Yonkers, NY – Migraine

Headlight blind me. I cannot go out at night even for dinner with friends without being blinded

and triggering migraines. I have better than 20/20 vision and these newer headlight blind like like the older ones never did. They really limit my quality of life. I went out for dinner with friends in the evening in July and was so blinded on the way home that I barely got home. I got a severe migraine lasting several days.

August 3, 2024 – Glenville, GA – Migraine

They make me have stroke symptoms every time I am near an LED light of any kind

August 2, 2024 – Portland, OR – Photophobia

I am 40 years old, and I cannot see at night when faced with LED headlights (can see fine when they are not present). I have been told by 4 eye doctors that there is nothing wrong with my eyes and I have no condition to warrant a diagnosable handicap. Because I cannot see at night, ESPECIALLY in the rain (here in Oregon we get 9 months of rain per year), I am forced to get rides from others or not drive at all at night. This significantly impacts my job opportunities and my income potential. I am incredibly stressed out because of this and do not understand why no government agencies are taking action on this problem. I plan to pursue further lobbying activities or and/or legal action.

August 1, 2024 – Mangonui, New Zealand – Migraine

After accidentally (I have to avoid exposure to the direct beam of the LED) viewing a small but powerful security light for less than a second, I had to violently throw up for up to two minutes at which point I lost consciousness and fell to the concrete floor and hit my head. I woke in a pool of blood and further vomit. The security light has been turned off so I am safer in my home but unable to go anywhere with LEDs safely. I am now registered disabled and struggling to maintain my work which now has to take place at home. I have had several severe episodes where they have caused me to have seizures that can take months to recover from. I now experience up to 3 led induced migraines as opposed to once every three months prior to the roll out of LEDs. If I look briefly look directly at an LED it damages my vision and I am left with spots in my vision for hours to days. If spending time in spaces lit by LED I can find it hard to think clearly, I am unable to speak clearly and cant remember words. this also happens when I have a migraine with aura set off by a strong LED. My life has changed in every way imaginable since they where rolled out in my location around January 2021.

August 1, 2024 – London, United Kingdom – Other

Council lawnmower with flashing LED lights drove past me while I was walking along the road. I felt immediate severe head pain, nausea and discoordinated, and fell into the roadside ditch. I then vomited, climbed out with blurred vision and pounding head.

July, 2024

July 30, 2024 – Federal Way, WA – Other

LEDs cause me so many neurological symptoms brain fog, anxiety, depression, OCD, headaches, ghosting (ex. When looking at led tail lights and looking away I see them but it's a ghost appearance that's green) , lose my place when talking, visual accomdation spasm trigger, disconnect feeling, nausea. It's been a nightmare with LED lights. Some are worse than others.. especially ones using PWM as their brightness control which induces flickering. Car headlights are the WORST. I can see the flicker of most led headlights it's very uncomfortable.

July 24, 2024 – Blandon, PA – Other

I had an LED come downhill at me with high beams on while I was driving. Despite having light blocking glasses on, and being in my car behind my windshield, I still managed to suffer a temporary vision injury. For several minutes following the car passing me, I had a GIANT hallucination of an oval of light, with regular sight in the dead center, in both eyes. It was my first time experiencing this, and after the second minute I had begun to think it may be permanent. The experience was terrifying, I was over an hour from home, and so emotionally distraught on top of the vision impairment that it was difficult to maintain stable driving.

July 17, 2024 – Sacramento, CA – Autism

I was driving on the freeway in the slow lane, when a tow truck in the fast lane ahead of me suddenly turned on LED strobe lights on the top of his truck. It felt like a lighting bolt when through my body. I instantly closed both eyes and felt like I should drive off the bridge.

July 16, 2024 – Albuquerque, NM – Migraine

When I am too close to these white LEDs, I tend to get a large, massive migraine and then I start to lose control of my senses. I become extremely quiet and my friend that I stay with has been noticing that I would act strange and also tend to get a little violent with him. Again, I have NO control of my senses when I am TOO CLOSE to these bright lights! I end up basically not remembering anything and my friend is telling me like, “why were you acting like that??” And I first did NOT know what was causing the problem, until I figured out that when I am REALLY CLOSE to these white LEDs, I tend to start getting that migraine and then lose complete control of my body! I currently am staying with my friend and where he lives, the city is refusing to take matters of these issues that SOME of the residents are experiencing SIMILAR symptoms. My friend who is Autistic will get really painful migraines! And he’ll take WAY TOO many painkillers to try and stop his headaches. Before the city of Albuquerque changed their streetlights to white LEDs, my friend and I have had NONE of these issues. After a few months of these leds being installed in the city, Me and my friend had started to get these strange symptoms and they have only gotten worse! I’ve personally contacted the state and city’s legislature and administration regarding this problem. BUT they don’t want to do anything about the problem! My friend has contacted the whole state PLENTY of times explaining that this is extremely dangerous, but again, they do NOT want to do anything about it! I’m hoping that somehow, we can make Albuquerque replace their led white lights to a softer light like, 2200k HID LEDs and also MAYBE some LED VAPOR lights! I hope you can help force Albuquerque to do this!

July 15, 2024 – Albuquerque, NM – Autism

I am Autistic and have a sensitivity issue with BRIGHT LIGHTS. My city has changed their streetlights to LED 3000k and 4000k lights from streets to parking lots. Ever since these lights were installed, I have been getting constant migraines and large headaches multiple times a month. My city is REFUSING to do ANYTHING to bring back ANY form of AMBER streetlights. I’ve contacted the city AND state A LOT! And they won’t do anything. I’ve even tried contacting the DOT of the state and he won’t even be much help. My city continues to IGNORE my concern and also continues to install these WHITE LEDs. I’ve tried EVERYTHING I could to help my city but they won’t do ANYTHING. I hope I can FIND a way to FORCE my city to bring back these AMBER AND VAPOR streetlights back! My city had installed these lights back in 2019 and I’ve done EVERYTHING I could to try and make the city understand that these lights are TOO BRIGHT, and I CANNOT continue much longer going to bed every

night and waking up every day with a LARGE MIGRAINE that causes me to even become DIZZY at times! I hope you can help me fight this issue in my city and FORCE my city to bring back AMBER AND VAPOR streetlights! Thank you for reading this!

July 9, 2024 – Woodland, California – Autism

A fire truck came down the street with LED strobe lights. The strobe lights caused me to suffer psychological trauma which lasts for hours after the incident.

July 9, 2024 – Mangonui, New Zealand – Migraine

While traveling in the passenger seat along the state highway felt sudden thunderclap pain to the left occiput passing three flashing LED lights on three diggers repairing the road. My left eye began to stream, my speech became slurred, then dysaesthesia to the left side of my face and arm occurred. I felt as though I had a concussion. The symptoms of this hemiplegic migraine event resolved gradually over a three day period.

June, 2024

June 29, 2024 – Hillsboro, OR – Other

My partner and I are blinded by LED headlights that drive behind us these days. It is getting worse. WE ABSOLUTELY HATE IT!!! It's unsafe and poses a safety hazard. LED Headlights are basically high beams. At least "high beams" have regulations on when they can be safely used.

June 21, 2024 – USA – Autism

An individual contacted the Soft Lights Foundation to report thoughts of suicide due to repeated exposure to blue-rich LED lights such as vehicle headlights. The neighbors called the police who came out for a welfare check. The police stated that only the city council could do something about the LED lights.

June 14, 2024 – Havre, MT – Other

The Bureau of Reclamation, a federal agency, is conducting a three-to four year construction project near our home. They are using high-intensity LED lights on the site. Our home is over one-half mile away from the site and 100 feet higher in elevation but the construction lights are projecting into our home, lighting it up from end to the other, and have been doing so since the summer of 2023. We have been asking them to modify their lights since August of 2023. When I started having daily migraines in December of 2023, we started blocking some of our windows with cardboard, but the damage turned out to be far worse. A few months ago, my husband was diagnosed with a sudden and drastic change of vision in one eye which alarmed his ophthalmologist, who was unable to find any physical reason for the loss of vision.

June 12, 2024 – San Tan Valley, AZ – Migraine

It literally feels like it is burning my retinas. I no longer feel safe driving at night. It's not safe for me or others. I don't know what to do. I feel like I'm going crazy.

June 12, 2024 – Tampa, FL – None

I recently visited a local establishment for lunch and every single one of their lights had 5000k

(maybe even higher) bulbs in their fixtures. The color wasn't the only problem, but they clearly used some cheap bulbs with a very low CRI and a terrible flicker rate.

I'm normally not *that* sensitive to bad lighting, but this place in particular immediately triggered a full migraine and a feeling I can only describe as nauseating. I looked up pics on Google maps and years ago this place had nice warm lighting and used Edison style incandescents. Makes sense that I had no ill effects the last time I was there.

June 8, 2024 – Brantford, ON, Canada – Photophobia

I am blinded by LED headlights while driving. This is extremely unsafe. LED headlights should be banned.

June 5, 2024 – Escondido, CA – None

As I walked into my local Costco, I was assaulted by an LED demonstration light. Immediately I got a headache and my vision turned blurry. Even after getting past the light, the effects lingered. As I walked down the first aisle, another demonstration light hit me, with the same result. I spent the rest of my time shopping under duress. I spoke with Jose H., the membership manager, and explained how dangerous those lights are, especially to people with neurological sensitivities, that they can cause seizures and worse, and requested that they be turned off. He said he couldn't do anything. He would have to confer with the corporate office.

June 5, 2024 – Doylestown, PA – None

The LED lights are like Searing Laser High Intensity Lights that BLIND the drivers visibility and harm my eyes with pain and headaches. There is no avoiding them, I find I have to shield my eyes anytime one of the LED vehicles come toward me on the road. It is Impossible at night to drive and extremely difficult during the day I suggest going back to a softer headlight and putting an AMBER shield on vehicles that have LED lights to soften and stop the blinding that they cause or best go back to the softer traditional lights. It is IMPOSSIBLE to drive at night and will eventually lead to burned out retinas and macular degeneration with this constant blazing brightness directly in the drivers eyes.

June 4, 2024 – Petrolia, CA – None

At night when an oncoming car or especially truck has LED bright lights, I stop right where I am. I can't see to move forward lest I drive into the oncoming vehicle or drive off the road, hit a tree or down a hillside. This happens frequently in the rural areas. In town, I cannot see pedestrians or even signal lights when the headlights are aimed at me. It makes all the other features like crosswalks and parked vehicles disappear. Certain headlights are a danger and I'm glad I haven't had an accident from being blinded by them.

June 4, 2024 – Cumberland, MD – Migraine

I have spent many hours trying to block the harsh alien light that floods our house since the LED streetlight has been installed in front of our house. It is summer now with leaves on trees. The light will be even more intense and be on for longer times in the winter. When I step onto my porch in the evening I am blinded by the LED streetlight and it is difficult to leave the porch without the risk of tripping on steps. I no longer take evening strolls because of the blinding glare on our streets. When I do walk at night, I get red spots in my vision and suffer headaches. I have had several panic attacks while trying to sleep. I feel that these have been triggered primarily by

the oppressive feeling that my home and home life has been severely impacted and there is nothing I can do about it.

June 3, 2024 – Oakland, CA – Other
blinded by oncoming headlights and totaled my car (1-17-2024)

June 1, 2024 – Fairfield, CA – Autism
During the day, I was driving a vehicle on a freeway when I struck by an LED flashing light from a bicycle on a parallel road. I reactively closed my eyes and then suffered a seizure reaction, which I would describe as like an electrical shock and loss of cognitive functioning and vision. I then had to emotionally fight off a panic attack.

May, 2024

May 31, 2024 – Logan, UT – None
Our city has a ‘suggested’ policy of dark sky compliance where often they will cheap out violating EISs for various road projects. I successfully had a ‘cobra’ style HPS light typically used at interstate interchanges removed from near my home due to light pollution. Now on the street the rest are being phased out for Dark Sky Compliant (DSC) LED lights and it is a wonderful change. The light is diffuse, lights up the sidewalks, and has minimal spill onto homes or the street. A new hotel has been built across the street from us and the owner incorporated Dark Sky Compliant LED lights in the parking lot and surrounding and it is only slightly more bright at night than before, and it is safe for the hotel guests. I’d recommend making formal comments to Beaverton City to mandate future construction to be DSC and incentivize retrofits to meet DSC. Glaring lights are only slightly less annoying to me than sound pollution, but I’ve worked with our city to address both.

May 30, 2024 – Jaffrey, NH – None
Being the director of a public library which offers evening hours, I regularly need to drive the 1/2 commute home in the dark. I also help care for my 93 year-old father, which again requires night driving. I am not elderly, do not wear glasses, and just passed the vision portion of my driver’s license renewal. I have no health issues that would make night driving difficult.

The new LED headlights have made night driving extremely dangerous for me and by extension, anyone else I encounter on the road. I am literally blinded by the headlight intensity of both the oncoming traffic and the cars behind me if they have LED headlights. I studiously attempt to not look at the oncoming cars with LEDs, which means I don’t have full visual scope, but as I live in a rural area, cars can come from around corners or over hills before I know where exactly to focus my eyes to avoid direct contact; thus I am constantly dazzled. If I accidentally have even a momentary direct eyeline contact with LED headlights, I have a blinding afterimage that lasts for several hundred yards. There are no shoulders on the rural highways I travel, so I cannot pull over until my blindness passes (and I would have difficulty seeing the shoulder after exposure anyway). If a car behind me has LED headlights, the glare in my rearview and side mirrors can interfere so badly with my ability to see that I sometimes have to turn all the mirrors away so that the glare is targeted elsewhere—very dangerous, if not illegal. The LED light from the car behind me is so intense, I could easily read a book if stationary. I have begun wearing special yellow glare-reducing glasses to drive at night, but as they reduce and darken my overall vision, this is risky.

I cannot cease driving at night if I wish to remain employed. I cannot cease driving at night if my father is to continue to receive my care. I don't wish to cease driving at night and limit my ability to freely live my life simply because all new cars have ridiculously blinding headlights. The invention of LED headlights has created a real problem in my life, and the danger of an accident is real. There doesn't even seem to be a justification for their widespread use, which is additionally maddening.

I have limited my comments to the issue of safety re LED headlights. In other areas, I also find LED light has reduced my quality of life (I can no longer see the night sky due to neighbor outdoor LEDs, etc.) and am outraged that I am given no choice in the matter of home lighting. For decades, I have line dried all my laundry in an effort to energy-offset my continued use of incandescent lightbulbs. Now it is illegal to sell incandescent lightbulbs and I am consigned to having to spend every night hour of the rest of my life illuminated by light that feels like nails on a chalkboard to me. That rant can wait for another day.

Please take complaints regarding LED headlights seriously. They are TOO BRIGHT. How many accidents will need to happen before this is addressed? I know I feel like an accident waiting to happen unless I cease driving altogether, which is not an option and shouldn't have to be.

Thank you.

5/30/2024 – Brighton, England – Migraine

My life has been devastated by LED lights. I am severely triggered by LED lighting, especially car headlights. I experience extreme migraine for up to 2-3 days after looking at a car headlight or a LED strip light, depending on duration of exposure. LED panels in shops, buildings and street lights make me very ill also.

I can be vomiting for 6 hrs or more after exposure and have severe head pain, weakness and complete disability. Consequently I am now pretty much housebound and excluded from all social activities, travel and work. I have tried all the blue light blocking glasses but it is the FLICKER that is the trigger. In the same way strobe lighting affects people with epilepsy.

It is totally unacceptable that so many peoples lives have now been pretty much ruined by ubiquitous LED lighting.

5/28/2024 – Kuala Lumpur, Malaysia – Photophobia

Instant trigger of chronic migraines. Can't even function at all.

5/28/2024 – West Springfield, MA – Other

Driving home at night from visiting my daughter and grandkids, my partner and I who are in our late sixties were constantly bombarded by LED lights. He was behind the wheel while we both kept aware for the usual zig-zagging speeders and with warm weather, motorcycles (why aren't they required to have a red light or reflector on the back of their helmets?).

It's like running the gauntlet having white/ blue blasts of light dazzle you from opposing traffic. Even on highways with wide median strips you never know when you will be temporarily blinded!

There is construction everywhere, lane shifts, narrow temporary lanes with rough pavement and confusing signs and then those lights, sometimes from packs of cars all with LEDs hitting your eyes. Trucks or SUVs behind you and your rear and sideview mirrors are useless! You have to fiddle around, while driving to tilt the side mirrors or literally drive with a hand up blocking your rear view. This affects all ages but is particularly bad for seniors! Older eyes have slower dilation response to glare. In a way it's age discrimination as older people will have to think twice about whether they can go out at night!

We have laws prohibiting people from shining laser lights into the sky as it can blind pilots in airplanes. This is the same thing. We worry about folks distracted by their phones or impaired by alcohol, but no one thought about super bright lights glaring in your eyes!

This impacts my life. It's dangerous! They should be recalled immediately. Like other car malfunctions manufacturers should change out the lights or put a filter on them. Let's do this now, not in 10 years or so. Switch back to halogen for the safety of all drivers.

5/28/2024 – Winsted, CT – Other

Dangerous driving conditions at night on my way home from work!! I have to literally close my eyes as ridiculously bright LED headlights blind me while passing in the other lane. This is so dangerous and damaging!!!!!!!!!!!!!! How can this not be being addressed. I have almost crashed multiple times. I feel my eye sight is being damaged from these lights and getting worse. Please help up.

5/28/2024 – Bangor, Northern Ireland – None

I see that because the Prime Minister has declared there will be an election in the UK, the petition for the issue to be debated has been declared null & void..... Raging ! The reflector size of dipped headlights gets ever smaller, increasing the intensity of dipped headlights – a triumph of style over function !

5/27/2024 – Avondale, PA – None

Unable to see the road, cars, or surrounding areas while driving when high beam LEDs are in use. Lowering these LEDs to regular or low beam does no use. Even in low setting these LEDs are 10 times brighter than my vehicle's regular incandescent lights and my eyes cannot adjust to account for dark adaptation to drive at night. Ban LEDs in vehicles or reduce them 75% to match other older model vehicles. Also – point them downwards so they light the roads instead of tree tops and telephone poles.

5/25/2024 – Portage, MI – Photophobia

Debilitating headaches, dizziness and seizure like response when exposed to LED lighting. Increased sensitivity to any lighting type after prolonged exposure in LEDs.

5/18/2024 – Houston, TX – Photophobia

While visiting a friend I was exposed to LED from overhead light fixtures in the apartment, and the extreme LED of Samsung TV. Together, they suddenly triggered photophobia, migraine, & brain fog in me and I am not a TV watcher. Just walking into a room with LED TV and lightning or shopping in grocery and drugstores with All the LED now triggers my eyes with pain. Shopping mall is out of the question for me. I have to wear very dark sunglasses and a cap with a bill. I Must have phone and other devices Very dark, And have limited screen time. I have to

cover lamp shades with scarves. I've tried blue block glasses which don't help at all. Obviously the LED has caused me to be much less social. It has also caused my eyes to twitch, and has made them have intermittent blurry vision.

5/18/2024 – Los Angeles, CA – None

LED lights make it dangerous to drive at night because my vision gets blocked while I'm driving a vehicle.

5/14/2024 – Sammamish, WA – Autism

I have largely avoided walking around my neighborhood at night for quite a while because of extremely bright LED headlights, except for viewing the aurora borealis on May 10, 2024, and I was horrified at the growing rate my neighbors are installing very bright LED light bulbs that far exceed 2700 Kelvin. I had to walk to darker parts of the neighborhood to avoid my view being ruined by the glare of LED lights. Even while walking around at 3 in the morning to view the aurora without seeing a single car with LED headlights, I was subjected to extremely intense blue-rich white light LED radiation from many homes along my usual route. I was honestly hoping the solar storm would knock our power out, which didn't happen.

In addition, I witnessed many poorly shielded LED lights without any diffuser at many stations along the newly opened Line 2 Link Light Rail in the Seattle area and was horrified at how these LED lamps are a potential discriminatory barrier. We always talk about diversity and inclusion here in the Seattle area and making transit accessible and yet never consider the needs of those with autism or epilepsy. I've even noticed that many buses by King County Metro (and likely Sound Transit) are now being fitted with LED headlights.

Banning incandescent bulbs is a crime against humanity and an attack on nature itself. We need very strict national light pollution laws instead of doing this at the local level. Or better yet, unban incandescent bulbs and let the customer choose instead of the government doing it for us.

5/14/2024 – Cambridge, NY – Epilepsy

My daughter and I walked out to run an errand one afternoon. As we came around a building, there was an LED streetlamp, still on though it was daytime. I'd been completely fine a moment before, but the light struck me and I was instantly incapacitated by severe neurological symptoms, stumbling and shaking. I couldn't walk, speak or see properly and my face and left arm went numb. We turned back immediately, and my daughter had to hold me upright so we could get away from the light as quickly as possible. We did not complete the errand. About a week later it happened again. This time I was alone, and my impression was that the street lamp snapped on as I got closer. This time there was no-one to catch me. I fell and couldn't get back up again. I was nauseous, dizzy and disoriented, unable to see, my limbs uncontrollably hitting the ground. Eventually I crawled/dragged myself back home and remained ill for many hours. I felt humiliated on top of everything else. I do not know if anybody witnessed what happened. Nobody came to help me and I could not call for help because I couldn't speak.

5/14/2024 – Chicago, IL – Other

blinding me and seeing spots all day. extremely stressed when i have to drive!!!! I hate these lights and cannot believe this is legal!!!!people don't give a crap!!!

5/12/2024 – Hancock, WI

I almost hit a pedestrian on the side of the street because the car in oncoming traffic had blinding LEDs. I did not see the pedestrian until the oncoming car had passed. If the timing was just a little different, there would have been a terrible ending. I reported it to the nhtsa. They said the lights just seem brighter. (This was a few years back.) I used to love driving at night. Now I can't handle the LEDs. This puts more traffic on the road during the day. Even when someone driving next to me has LEDs, I have to lift my hand to cover my side mirror from letting it blind me.

5/10/2024 – Yonkers, NY – Migraine

Led lights blind me in the road and flare up migraine. Have to stay home at night. Interfere with my life. Very dangerous.

5/9/2024 – Saint Paul, MN – Photophobia

My eyes have retinal injury and bright LED lights cause intense pain and discomfort. Overly bright LED's impact my life in numerous ways. There is widespread illegal use of intense LED floodlights in my neighborhood, but the local law for legal use of LED floodlights is not enforced. LED streetlights seem designed to blind drivers, rather than illuminate streets. Streets are dimly lit, but streetlights are shine right into drivers eyes. Vehicles keep their headlights on day and night, and shine into sideview and rearview mirrors. This causes eye pain and discomfort.

5/6/2024 – Cleveland, OH – Autism

LED lights give off a poor quality light, pure and simple. With the cheapening of everything these days, proper fixtures are usually non-existent, i.e., there is rarely any diffusion in the form of a large shade or lens—just the raw diode. For those who have in-focus vision (as everyone strives for with corrective lenses and such), the intensity of viewing a high-powered and undiffused LED at any distance is always an unpleasant one. As it happens literally thousands of times a day, our retinas get “etched” and degraded. This is not to say that an incandescent bulb can't be painful, it's just that in the days of incandescent bulbs we made proper fixtures.

For me, when I'm presented with an unexpected bright source of light, my eye naturally moves and centers it in my vision. There is something physiologically that makes it hard to look away instantly. It literally takes like a complete second to pull your eye away from it. However, the damage is already done. You stared directly into something that was of an infinitely higher magnitude of brightness in relation to its surroundings. **THE EYE IS NOT BUILT FOR THIS.** These encounters cause a tense visceral reaction throughout the body. Considering that there are BRIGHT LED lights on just about every conceivable object these days, and it's common for someone to have these negative encounters thousands of times in one day, and considering that the center of your vision is by far the most important throughout our lives, the collective pain and suffering is unimaginable.

There's a certain obsession with safety that I believe our society has falsely bought into. For example, daytime running lights used to be a small halogen bulb, perhaps 10 watts. Now, there are cars with many layered stacks of raw LEDs with candela measurements far exceeding our proper range of vision. It is saying that that person's car is the most important thing you ought to see down the road. Animals, pedestrians, everything else, doesn't get to grab your attention. Your vision system is so overloaded with the fact that “there's that car,” that other possible

visuals are much harder to see. Overall, the eye does not need that much light to see as long as the relative values are thoughtfully presented (as they used to be).

Nighttime is all but a faint memory as it is almost always ruined by the presence of stinging, streaking, damaging, high candella artificial lighting. We, as a species (and all species living in our vicinity) have lost a cherished and peaceful time; the hours of darkness that we once called, and still hypocritically call nighttime.

I don't believe that our nation should have any real discussion about mental health until we face the reality that we're degrading each other's eyes, our most important sense, on a grand scale.

People are literally suffering and slowly dying from the continued assault on their eyes, and thus, their brains.

5/3/2024 – Amherst, NY – Photophobia

Discomfort, people and sleeping patterns, also disruptive for me from exercising early mornings or evenings with street lights over 2700k

5/1/2024 – San Leandro, CA – Astigmatism

I regularly walk home from work in the evenings, which in the colder months means walking down a dimly lit street. Having poor eyesight and balance, I'm always afraid that the blinding headlights of the cars zooming down the street will cause me to stumble off the sidewalk and into the path of an oncoming car. It certainly doesn't help that some cars have headlights bright enough to leave afterimages in my vision, the last thing I'd want to deal with when walking at night.

April, 2024

4/30/2024 – Roseville, CA – Autism

I was standing in a room and another person's cell phone buzzed with a message notification. The iPhone also pulsed its LED camera flash, which struck me in the eyes. I fell to my knees, breathing hard, and trying to fight off a panic attack.

4/30/2024 – Auckland, New Zealand – Migraine

LEDs cause me to suffer hemiplegic migraines of three day duration. This has resulted in partial confinement to my home, exclusion from municipal life, partial loss of employment and deterioration of health. The migraine results in blurred vision, dysaesthesia to the left side of my face and left arm

with severe occipital pain. It has resulted in loss of consciousness on multiple occasions, one of which leading to a three part fracture to my right arm.

4/30/2024 – Swanage, England – Other

LEDs have been fitted as replacements for low pressure sodium street lights in the area where I live, which is within the Dorset Area of Outstanding Natural Beauty and immediately adjacent to a National Nature Reserve. The CCT rating of the LEDs that have been installed here is 4000K, which results in an eerie blue-white light which I find most unpleasant. The glare from the new lights is excessive, to the extent that when I walk beneath them I have to look down at the

pavement rather than looking forwards along the road, to keep the lights out of my field of view. The light spill from these lights is excessive, resulting in the blue-white glare of the lights penetrating the windows of my house, which makes the interior of my home feel unwelcoming. I find that the light penetrating my home negatively affects my sleep quality, even though I have blackout blinds on my windows (the light still penetrates around the sides). This light intrusion was never a problem when the lights were low pressure sodium, as the orange glow was quite restful and not at all disturbing.

My view across the Nature Reserve at night is now compromised by the new LED street lights, which produce an incredible amount of sky glow. My home is just 400 metres from the coast, so there is often mist or fog in this area, and these LED street lights cause the whole area to light up as the light scatters in the mist. It is exceedingly unpleasant. One of the lights is 185 metres away from my house and is over ten metres below it, yet the street light casts a bright image of my window onto my bedroom wall. It is so bright it appears as if a car is parked on the hillside with its full-beam headlights directed straight at my house.

I have been so disturbed by these lights over the past two years that I believe my current condition of ophthalmic shingles (herpes zoster ophthalmicus) was triggered by them. I have been suffering photophobia, nerve pain, a facial rash with blistering and acute inflammation of one eye because of this condition, which has resulted in the hopefully temporary loss of useful sight in that eye. Since I am otherwise fit and healthy and have had no other stress to cause this condition to appear, I firmly believe that it is a direct consequence of the installation of LED lighting outside my home.

4/29/2024 – Irvine, CA – Photophobia

I have photophobia and photosensitivity due to multiple autoimmune conditions, and my life has changed significantly for the worse with the introduction of intense blue-white LED car headlights and the (ongoing) replacement of a large (about 16000) number of HPS lamps with LED fixtures (at correlated color temperatures of 3000 K and 4000 K) in my city (Irvine, CA).

Street lights:

Bright exposed LED street lights of any color, but particularly those above 2700 K, pose a health risk and serious disability barrier for me. Being sharp and pointed sources of high glare and discomfort, they can exacerbate my dry eye symptoms (I have Sjögren's syndrome) and the likelihood of an autoimmune flare-up. As a SLE (lupus) sufferer, I need to keep my daytime exposure to sunlight limited. It used to be that nights were my go-to option for long strolls, a drive to the grocery or restaurant, or a chance to bask in moonlight or stars at night—something that the gentler glow of shielded HPS lamps afforded. Over the past decade or so, and particularly in 2024, most of these basic human comforts have been taken away from me. I have pleaded with city officials to undo the damage and the discriminatory barrier that street lights cause me, and despite their efforts to mitigate a small portion of the damage (I have met with a very modest degree of success) via glare shields in my immediate neighborhood, the city at night is becoming a cheap, vicious display of human sensibilities and human compassion gone awry.

Headlights:

Vehicle headlights with blue-white LED lights piercing into one's eyes from oncoming traffic are the stuff of nightmares—poorly-angled, egregious beam patterns pretending to be “safety features.” Even five minutes' exposure to this type of rampant glare while I drive or sit in a passenger's seat is sufficient to bring on severe eye pain and vision disturbances, headaches that

last days, and emotional distress. It is appalling that those objecting to these ill-conceived and risky fixtures are not taken more seriously.

Light pollution is a menace not just to humans but also to wildlife and foliage that suffer without shutters. Researching, designing, and implementing options that are conducive to safety and easy on the eyes must be high on the agenda, an urgent societal cause.

“So benumbed are we nowadays by electric lights that we have become utterly insensitive to the evils of excessive illumination”

— Jun’ichirō Tanizaki, *In Praise of Shadows*

This evil is eradicable; let’s do what it takes.

4/28/2024 – Algonquin, IL – Photophobia

I can’t go out at night anymore due to the plague that is LED light pollution. It brought me solace. I can’t walk my dog or enjoy it at all anymore. I don’t see wildlife at night anymore. I love nature and it’s harder to appreciate now. I used to love driving but I can’t without immediate extreme dizziness and migraine. I can’t look outside at all when the sun starts to set. The building I work at has hideously bright LEDs that make me ill on a daily basis. I’m always squinting and averting my eyes. ALWAYS. It took many aspects and simple pleasures of my life away and I miss them dearly. Please do something about this! I want my life back!

4/28/2024 – Los Gatos, CA – Astigmatism

With the increase in use of LEDs in car headlights in addition to cars raised too high (or their headlights tilted too high), driving on the roads at night is an incredible hazard. I commonly find myself unable to ascertain details of what’s going on behind me with traffic and the position of other objects/cars when faced with these blinding lights. I have to get creative to even be able to see, and still face blind spots due to these stupidly bright lights. It makes driving dangerous and I can’t believe LED lights in headlights didn’t get banned years ago.

Every day the government allows this is increasing the likelihood of accidents, health issues from staring at these lights and just a generally worse quality of life.

4/28/2024 – Amesbury, MA – None

I am blinded by these headlights, streetlights, floodlights morning and night every day. These lights are a hazard on the road and unnecessarily bright and incorrectly dispersed. This is a danger to everyone and regulations need to occur swiftly

4/28/2024 – Ottawa, Canada – Migraine

I am very sensitive to many things, including light and sound. I loved to walk a lot at night when the lights used Halide orange/pink lights. Now that the city has been switching out the Halide lights with super bright LED white street lights my walks are much less enjoyable. It feels like I’m walking around in the day time. I don’t understand this obsession people have with lighting the world up like a giant football stadium. It’s not necessary, it’s not pleasant, it messes with your circadian rhythm. In my case, it can cause headaches and light fatigue. It also hurts our environment. Birds, animals and insects cannot follow their natural rhythms because their environment is so bright at night now. Also, while driving, I’m blinded by headlights that use

these horrendous white LEDs. I hope there is an invention of filters for the lights that are currently on vehicles and that it is enforced to add the filters to the headlights. A return to a golden soft colour would be preferable. As well as adding golden/orange filters to street lights and/or a different design that mimics old styles and colours of street lights. I really hope the government begins to regulate this. It's dangerous for the environment, people's health and eyes as well as creating an ugly world to look upon.

4/28/2024 – Milwaukee, WI – None

I am blinded by the brightness of the LED lights not only at night, but during the daytime. Even from a car behind me glaring in mirrors during daylight. Making it dangerous for me to drive. My eyes cannot adjust due to the brightness. I've swerved off the side of the road. Had to pull over. Which is not always possible when there's traffic behind you and traffic coming at you. This is a problem. There should be a limit on the brightness of the LED. This is such an easy thing to fix, but for some reason nothing gets done.

4/28/2024 – Onsted, MI – Astigmatism

I get eye pain and headaches by being exposed to 4500K or higher led lights. Whether I am driving at night or during a sunny day I am constantly shielding my eyes from led low beam headlights, running lights and brake lights. I have to adjust my side and rear view mirrors so I cannot use them to see properly to avoid being dazzled by led lights. If streetlights are on during the day and night I put my sun visors down because the leds are too bright. I drive over 1000 miles a week for my job. I dread cloudy, rainy days, dusk and night driving because of led lights. It's like torture to my senses. I am constantly blinded at night and have been during the day as well because of led headlights. If I am walking in a parking lot on a cloudy day I have to shield my eyes because led running lights are too bright. I have asked my neighbors to shield their outdoor lights or use softer 2700K led and it has caused me civil lawsuits and many legal problems do to this simple request. I have to wear dark sunglasses inside of places that have led lighting. I never had eye pain or headaches prior to led lights. LED headlights are the most dangerous aspect of driving by far. These lights have ruined normal day and nighttime activity for me were they are present.

4/28/2024 – Marshfield, WI – Astigmatism

LED headlights are blinding to the point where I have almost hit deer and other vehicles because I cannot see when the LED lights are coming at me

4/28/2024 – Lancaster, PA – Migraine

I am a migraine sufferer, and my trigger is photosensitivity, especially from intense bright lights. For the last several years auto makers have installed LED headlights and the color temperature they have chosen to use is blinding for oncoming drivers. There truly is no need for the adaptive or "moving part" of the headlight if ya warmer color temperature is programmed into the LED headlight. The extremely intense and blinding colder "blue" white light emitted from LED headlights just feet away is MORE dangerous than looking up at the sun. If focused intense cold bright white light is not dangerous why do welders use masks? It is literally the same reason and effect these OEM LED headlights have on oncoming drivers. How many people need to die before LED headlights are given a warmer light temperature? It is really not that hard. The technology already exists. Just look at the average teenager and how they use LED lights in their bedrooms. They have a small remote and they can change the color and or color temperature of the lights at their will. Thank you for your time.

4/28/2024 – Webster, MA – Other

Large pick up trucks as well as SUVs and other cars especially in MA., were it seems that tailgating is legal, get behind you and blind you from behind making it very difficult to see ahead of you. Same situation with vehicles approaching from the opposite direction.

4/28/2024 – Hamilton, Canada – Migraine

LED headlights on numerous occasions have given such intense sharp pain in my eyes that induced migraines, forcing me to pull to the side of the road and vomit. Glare from LED headlights has blinded me on thousands of occasions. In some of those instances it has taken more than 5 seconds to regain my sight. LED headlights and taillights physically hurt my eyes when I'm in close proximity to them (I.e. stoplight) forcing me to physically block them with my hand. The glare, blindness, eye pain and migraines caused by LED headlights have been confirmed by my optometrist, Dr. Otto Lee. Among eye care professionals, LEDs are a known and documented problem in every age group. Driving at night for longer than 30 minutes has almost always resulted in me getting a migraine, which was never the case before LED headlights existed. As a result, I have to limit my nighttime driving to less than 15 minutes. This limits how much work I can do, or how much I can visit my family, especially in the winter months. I've had to restructure my life around LED lights.

4/28/2024 – Chicago, IL – None

Every single day day or night I am blinded over and over again even driving short distances, I get spots and yesterday my eye was in actual physical pain as 1 car was so dam bright like the eclipse!!!! I'm collecting evidence to sue. We all should sue every driver who damages our vision and the government for allowing this!!! you CANNOT drive anymore EVER. Our Country is lost.

4/28/2024- Baltimore, MD – None

I can't for the life of me understand how this is even something I have to report.

Do none of these people drive at night or in inclement weather?

Do none of them pass billboards?

I used to love driving at night, even prefer it in some cases, but the new street lights are terrible, especially the defective ones that turn purple and create such harsh lighting I literally can't look at it.

And the LOW beams on the new cars are more blinding than some of the old high beams!!!! I've flashed my lights at other drivers to alert them they're driving with high beams on and they flash back that it's their low beams.

Not only does it "daze" my eyes so that I see spots and can't see the road properly for a few seconds, but it also creates harsh lighting conditions that makes it hard to discern what's hiding in the shadows behind objects like trees and street signs.

And the blue hue of these LEDs that's being used is also not only harmful and exhausting on the eyes but colors things weirdly so it's harder to tell what's what.

The car I drive still has "older" (aka not blue or insanely bright) headlights, and I used to love renting cars for longer trips but now every car I rent has those headlights which makes it an unsafe environment to drive in, and in those vehicles I have other cars flashing their lights at me to alert me I'm driving with high beams when I'm not!!!! Which again, causes a "daze" and I see spots and my sight is not clear while I'm maneuvering roads at night.

This is clearly unsafe!!!

I'm in my 30s! I don't have other eye problems and I shouldn't sound like a crotchety old person

when talking about driving at night! It's absurd!

In addition to all that, I've recently experienced billboards that switched from canvas to LED and LED signs outside of businesses that are so insanely bright you can probably see them from space. It might be necessary during the day when the ambient light is brighter, but these things need light sensors and to adjust to a dimmer display during the night time. Because when I drive by it's like someone shining a flashlight in my eyes for a minute. It's absolutely not safe!!!!

I have a similar issue with the road crews that do construction on the highway at night. A bunch of those crews have these flood lights that are supposed to illuminate the area for them but they aim them in such a way that they blind the drivers too! Who's "genius" idea was that!?

Either the people making these things are blind as bats anyway or they just don't care.

4/28/2024 – Fareham, United Kingdom – None

Comment on statement "DOE researched studies and other publications to ascertain any known impacts of LED lamps on human health and has not found any evidence concluding that LED lighting used for general lighting applications directly results in adverse health effects.":

'General lighting applications ' is not the same as directed beam applications & the FDA should recognise this situation in the case of headlights.

4/27/2024 – Rodeo, CA – None

I drive a fairly small car. On the highway at night, I find the excessively bright LED headlamps are both disrupting and an impediment to driver safety. As cars approach from the rear on either side, their headlamps reflected in my side-view mirrors are often so dazzling that I have to hold my hand in front of the mirror to be able to safely see the road. Even with my rear-view mirror in the "night" position, the brilliance of these headlamps when behind me can be distracting and blinding.

When approaching from the opposite direction, especially on narrow roads, they present even greater threat to driver comfort and safety, often causing momentary blindness. The worst cases are often Tesla headlamps, but many newer SUVs and pickup truck headlamps exhibit similar characteristics and are very nearly as bad.

These headlamps are unnecessarily bright, producing a spectrum of light that is especially blinding. They often illuminate not only the road, but the overhead road signs and the interior of the cars ahead of them. These headlamps are both a nuisance and a hazard to other drivers. And, in recent years, it seems to be getting worse. The headlamp arms-race is rapidly getting out of control at the expense of driver safety. Car makers must be made to comply with existing headlamp regulations, and, in fact, those regulations must be amended to consider ever increasing lux levels, higher color temperatures, and broader and taller light-pattern spread.

4/27/2024 – Tuscon, AZ – None

LED headlights are having a negative impact on my driving continuously. I have good night vision, excellent reflexes, am generally quite alert at night. But I rarely drive at night because of the hazard of LED headlights. They blind me to the point where I cannot see the road AT ALL. I have very mild cataracts, and LED headlights totally make me see nothing but white. The only way I can navigate safely is to MEMORIZE the road ahead while I can still see it, and DRIVE TO THE RIGHT of the oncoming car. If it is a road I am not familiar with, I might not be willing to drive it at all. It is too easy to be surprised by an unexpected curve when I cannot see the road. I drive prudently. I am not willing to put up with this hazard. So I do not drive at night if I can

possibly help it, and this has an impact on my life, and my ability to get home safely if I end up having to stay someplace away from home longer than anticipated. People are going to do what they have to do to stay safe. The mere fact there are not more accidents is not proof that LED headlights are safe. It is only proof that people try to avoid hazards, and may not be driving at all during nighttime hours. And what kind of harm does a laser directly into the face do to the eyes any time of day? Unanswered question.

4/27/2024 – Izhevsk, Russia – Other

I cannot stand the LED headlights. It all started about 4 years ago when the amount of cars with LED headlights started to become noticeable. I understood at that time that I couldn't look at these lights because my mind goes sick, my eyes begin immediately to get irritated to a very considerable degree that it really hurts, my muscles are becoming stiff and I get nervous tics, that is involuntary rapid head movements. Moreover, I begin to feel some sort of panic attack. Back then the amount of cars with LED headlights in my area was around 12-16 percent and it was possible to get along. Since then, the situation only got worse. The amount of cars with very blinding and extremely piercing LED headlights nears probably already 40 percent in my area and I gave up at all staring in the oncoming traffic direction because I just cannot do it any more.

Because of a neurological condition, I was not allowed to drive a car and now it seems that it's even for the better. I cannot even imagine how people drive nowadays with this killer light. In my country we have day running headlights as a must so the headlights are on 24/7. While there is a sunny and clear weather I can somewhat go along the road facing the opposite direction, but with a gloomy weather, rainy weather, dusk, let alone nighttime I cannot physically do this. I have to avoid major roads going either along residential areas with much less traffic or going along a pavement that runs parallel to the incoming traffic, thus I somehow can move away my head and eyes and to see what is going on on the upcoming lane (a lane that is further away from the pavement). When using public transport I have to sit in that part of a bus/tram that has windows on the left right from the driver seat. so that I am spared to see the upcoming lanes with the upcoming traffic.

Thanks to all this, to a huge light pollution caused by LEDs and other numerous LED lights sources sprung up recently, I am almost confined at home during nighttime because I cannot stand this light. Only warm shielded LED in moderate quantities are more or less OK for me, but unshielded LEDs over 3000 K, bright LED shop signage, LED digital billboards and LED decorative building lighting makes me have fits of very severe panic attacks. I don't feel these attacks at all with outdoor halogen headlights and sodium/incandescent/CFL lamps or warm (2700 K and less LEDs in moderate quantities). The indoor LED lighting has less negative impact on me, though too much white indoor LED light is also uncomfortable while the indoor white fluorescent light is quite OK for me.

I am asking the US regulatory agencies to give the answer why LED light can trigger severe panic attacks while other light sources are quite alright and even uncomfortable. I am sure that I am not alone.

4/27/2024 – Elk Grove, CA – Autism

The Ziosk portable kiosk payment system has a bright LED screen. During dinner at a Chilis restaurant, we placed the kiosk face down on the table to avoid exposure to the LED Visible Light radiation from the LED screen. At payment time, my partner inserted the credit card for

processing. At the completion of the processing, a large white LED light on the side of the kiosk suddenly irradiated me with white LED Visible Light radiation.

Due to the intensity of the white light, everything around me became black, except for the overwhelming feeling of bright white light. I felt disconnected from reality and as if I had entered a nightmare dream. I believe that I was partially unconscious. As I began to recover consciousness, I thought that perhaps I was staring at the LED flash on a cell phone, but that this was much more powerful. Then, as I became more aware of my surroundings, I realized that that the white light was from a large, white LED from the side of the Ziosk device.

I felt nauseous, so I fell to my stomach and tried to vomit, but I only ended up coughing. I then felt overwhelming anxiety and panic and went to the kitchen, demanding accommodation. A staff person then began yelling at me. I ran outside screaming. I continued to try to vomit, but only spit came out. At some point, both of my hands went numb and tingly.

The police were called. I dialed 911 to tell them not to turn on their LED flashing lights, but they had the red and blue flashing lights on, which further debilitated me.

4/27/2024 – Coudersport, PA – None

I am beyond infuriated with the use of bright white LED lights, I'm beyond frustrated with the searing eye pain that LED lights procure, I am beyond infuriated with the intense migraines that I suffer from when dealing with bright white LED lights. I am beyond frustrated with the amount of pain that is brought upon me due to these LED lights. They are an unnecessary monstrosity that never should have been brought into public view! They are NOT beneficial in any way, shape, or form. In fact they are detrimental to society and the environment.

4/25/2024 – Horseheads, NY – Astigmatism

I have astigmatism, which is 30% of the population of ALL ages. LED headlights and all bright white LED lights give me a wicked headache all day that pain meds don't touch. I rented a car recently with LED headlights & I had a huge headache from the headlights reflecting off of other surfaces. So I can't even drive a car with LED headlights. Just in the past couple of weeks, I almost was in 3 accidents while being blinded by LED headlights. I have no problem with halogen headlights. My work commute is on a 2-lane road for an hour & I need to work to live. I can't just stay home. What kind of life is that? So I have to put my hand up to block the headlights of the line of cars going the opposite way and look at the white line. One morning when it was raining thus more reflections, I was on a slight bend and looked up just in time to see an older SUV unsafely trying to pass a huge line of cars coming right at me in my lane. They were hurrying to get back over maybe 20 feet from the nose of my car. They had aftermarket LED headlights, so it was like two big floodlights that blinded me. The 2nd time was I was approaching a roundabout and pickup truck from the opposite side had blinding LED headlights. I checked to make sure no one was coming from the left before I got there, but *poof* a car appeared out of no where and honked at me. They almost hit me. I was so distracted by being blinded by the LED headlights, I didn't see them. And another time I was at a crosswalk and had been stopped for other pedestrians. But a car going the opposite direction had blinding LED headlights. I didn't see the additional pedestrians until I was passing over the crosswalk. I had looked too. The pedestrian had thankfully stopped. They were partially blocked by my windshield frame too. Again, I never had these problems with halogens. LED headlights are dangerous! Explain to me how lights that are 800x brighter than halogens are not blinding other people. LED headlights are marginalizing almost 50% of the population...specifically people with disabilities that include astigmatism (30%), migraines (17% women & 6%), and seizures (4%). And we can't forget age discrimination against seniors with cataracts. It also affects the

circadian rhythm and eye health of both people and wildlife...all of them. That is why there are blue light filters on devices. Please do the right thing and ban bright white LED headlights and LED lights in general.

4/24/2024 – Mantua, NJ – None

Multiple incidents. I had to cancel 2 gym memberships because of bright LED lighting they installed, and there's no gym within a workable distance that doesn't have this insane lighting. I've cobbled together used gym equipment at home for more money than I could afford.

I can't work without special tinted glasses, or I get migraine symptoms within minutes. Even with this protection there are places I can't stand and directions I can't look because some of the LED fixtures are simply too intense and instantly painful.

I can no longer go to the local grocery store under any circumstances, it's too bright, and the list of places I can't go is growing as businesses install this harsh intense LED lighting.

Shop Rite, Five Below, Giant Fitness, Planet Fitness, Pantry One, T Mobile- these are some of the places I simply can't enter with any level of protection short of a complete blackout blindfold.

4/23/2024 – Dallas, TX – None

Makes me blind and hard to see road. Especially oncoming traffic when the lights are elevated higher than me.

4/23/2024 – Sammamish, WA – Autism

I'm a lifelong resident of the Seattle area, and I was diagnosed with Asperger syndrome in early childhood. Additionally, I have been diagnosed with depression, adjustment disorder, anxiety, attention deficit disorder (ADD), and I suspect that I might also have undiagnosed post-traumatic stress disorder (PTSD).

My biggest concern, especially in the last couple of years, is the dangerously bright light-emitting diode (LED) headlights that have been proliferating on our roadways at a disturbing rate since the early 2020s. They have had deleterious impacts on my quality of life since I can no longer exercise outdoors or drive at night without fear of being exposed to excessively bright LED headlights, experiencing sensory overload, and having meltdowns as a result. Even during sunny days, if drivers leave those LED headlights on, they are still too bright and extremely unpleasant to look at; it's particularly worse when it's cloudy or raining. LED headlights, especially those on Teslas, are some of the worst offenders, to the extent that I can recognize a Tesla from a distance solely by its headlights.

I am an avid lifelong cyclist and ride my bike all over King County. I have visited places such as Skagit County, Whatcom County, Snohomish County, Pierce County, Vancouver Island, Point Roberts, Snoqualmie Pass, Cle Elum, Vashon Island, Whidbey Island, the Kitsap Peninsula, and San Juan Island—all by bicycle. I have also ridden on nearly every regional trail in the Seattle area as well. However, my enjoyment of this activity has been greatly diminished by the excessive glare from these LED headlights, starting in the early 2020s. I have effectively lost one of the best stress relief methods I use to cope with my mental health issues, compounding my problems even more.

I also enjoy going on walks, and they have also been impacted by these LED headlights, making it unpleasant for me. I can no longer enjoy walking outside at night, robbing me of the ability to

walk during times when it's cooling off during what are supposed to be pleasant summer evenings. Again, even during the day, I constantly encounter excessive LED radiation and glare from these LED headlights.

Earlier this winter, my neighbor was driving a rental car equipped with LED headlights, which shone into my bedroom when they returned from work in the evening. They have since returned to their regular car, which still has halogen bulbs; however, one of their halogen lights has burned out, and I'm afraid the owner might install LED headlights to replace it. Despite this, I still have LED headlights shining towards my bedroom from passing drivers since I live near a "T" intersection. This situation makes me feel unsafe in my own home, particularly during winter when daylight is limited.

The distress caused by these lights has led to hospitalization, and I feel as though I'm under house arrest because of them, causing serious mobility issues for me. I have written to ALL, and I mean ALL, of my elected officials at the state and federal level, and the lack of any adequate response has only added to my frustration and anguish.

My ultimate goal is to urge the government and policymakers to acknowledge the problems of these excessively bright LED headlights and the dangers they pose to the general public. I advocate for regulations on their brightness and for using a warmer color temperature instead of the bluish light, which disrupts circadian rhythms and makes it difficult to spot road hazards at night.

Personally, I wish to see LED headlights banned completely from our roadways in favor of tungsten filament halogen bulbs, which are less harsh and easier on the eyes. The so-called benefits of LED headlights are outweighed by the risks they pose to the general public, and for many of the reasons I have cited, they need to be completely banned from our public roadways.

I'm extremely appalled and deeply troubled by the fact that I cannot safely use public rights of way that I have paid my tax dollars for because these LED headlights have formed a discriminatory barrier and infringe on my constitutional rights to freedom of movement. I strongly urge the Food and Drug Administration to take action. I believe that these lights are a threat to national security and public health, and swift action must be taken. The current situation is completely unacceptable!

4/22/2024 – Wakefield, MI – None

Sitting in the left-turn lane waiting for the light to turn green, the pickup truck in the opposing left-turn lane had a new pinpoint LED turn signal that was so bright and so focused, was like a laser pointer shooting right into my right eye. Even in broad daylight the LED was so bright and so focused like a laser pointer I had to shield my eyes with my hand until the traffic light turned green and I completed my turn. Hours later I am still seeing spots with my right eye. Praying there is no permanent damage.

4/21/2024 – Davis, CA – Migraine

I used to go for long walks at night in my neighborhood for exercise and as therapy for my chronic eye migraine issue. Since 2016 when the City replaced all the sodium vapor street lights with LEDs, I have not been able to walk at night due to the harsh glare and brightness of the lights. They are nothing like the old lights. Add to that all the LED house lights that have been

installed since then. My neighborhood has become a no go zone. I paid mello roos taxes for years to pay for all the green spaces I can no longer use because of these lights. Some are even on all day and hurt my eyes even in the day time. My health has suffered from not being able to get my walks – weight gain, high blood pressure. And this is just a fraction of the story. I can no longer drive at night because of the intense LED car headlights in my face. I cannot go into town at night to a restaurant or store for the same reason – LED lights everywhere. I cannot travel on a train or bus for the same reason. Airports also have these lights taking the joy out of plane travel. I have to shop for my groceries online in stores like Safeway that have installed these lights nationwide. If I get exposed to these lights, I will get a ripping eye ache that lasts for weeks, a feeling that the surface of my eyeballs has been lased.

4/21/2024 – Beaverton, OR – Autism

LED flashing lights cause me to suffer severe anxiety, panic attacks, and fear.

Physics of LED Light

By Soft Lights Foundation

LEDs emit light that has drastically different spatial, spectral, and temporal properties as compared to light emitted by traditional light sources such as tungsten filament.

Spatial Properties

A traditional light source, such as shown in the column on the left in Figure 1, emits light essentially uniformly in all directions in space. An LED, on the other hand, due to the flat surface geometry, emits light in a direction, and the light within the directional beam is not spatially uniform, as shown in the column on the right.

A lux meter can be used to measure the intensity of the light from a traditional light source by measuring the illuminance and then calculating the luminous intensity. However, a lux meter cannot be used for an LED light source because the LED chip emits high intensity light from such a tiny flat surface and because the light is not uniform in energy. Only computer modeling can be used to accurately calculate the intensity pattern of light from an LED source.

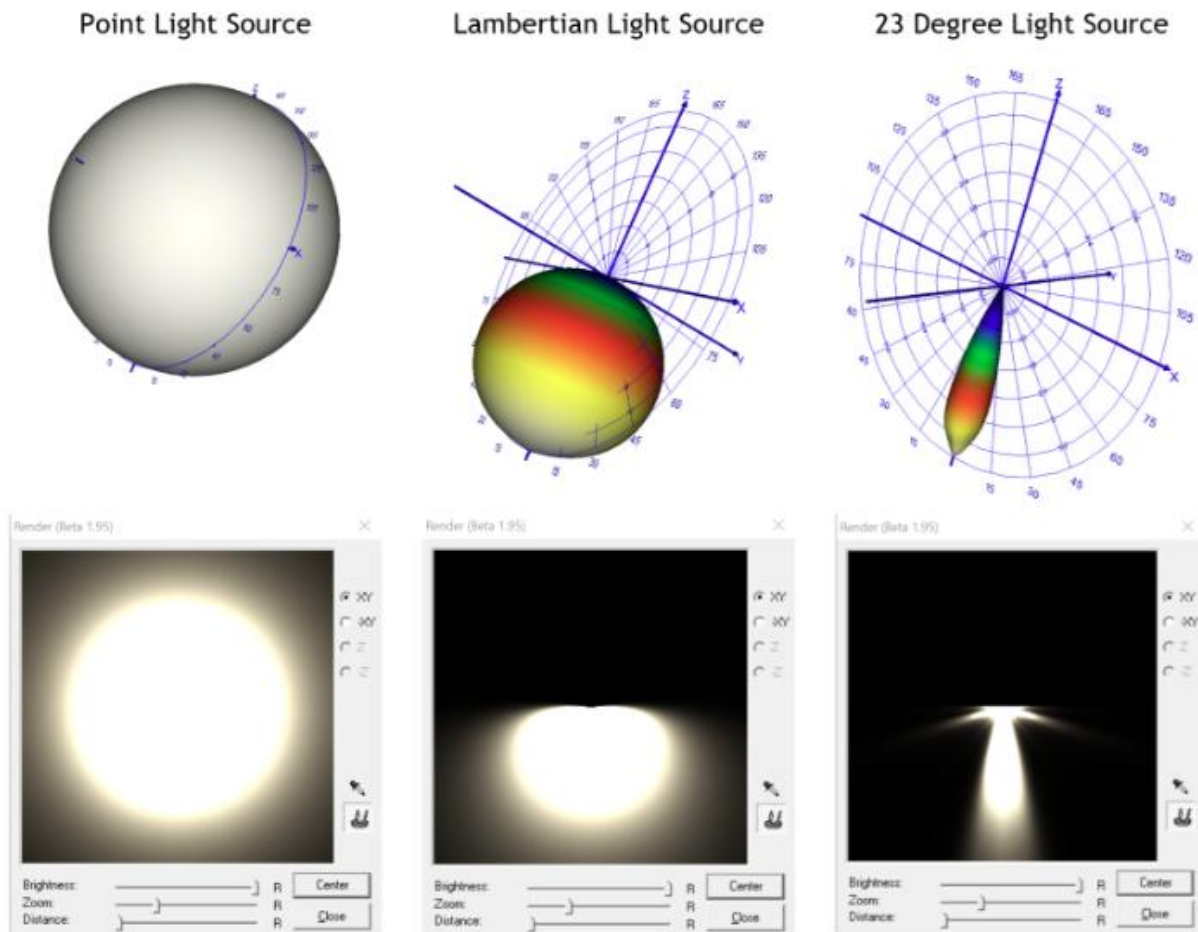


Figure 1 - Spatial Properties¹

¹ <https://luminusdevices.zendesk.com/hc/en-us/articles/4411289188109-Optical-What-do-the-Radiation-Plots-in-LED-datasheets-mean-and-how-do-I-calculate-Lux>

Spectral Properties

A tungsten filament light has a smooth curve of spectral power distribution, ranging from low blue to high red and infrared, as shown in Figure 2.

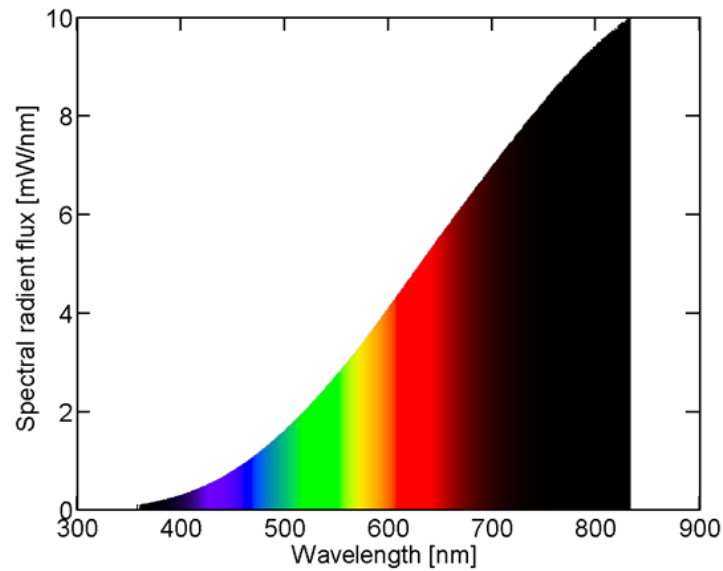


Figure 2 - Spectral Power Distribution of Incandescent

A 4000K LED has a spectral power distribution consisting of a sharp peak of blue wavelength light, very little red, and no infrared, as shown in Figure 3

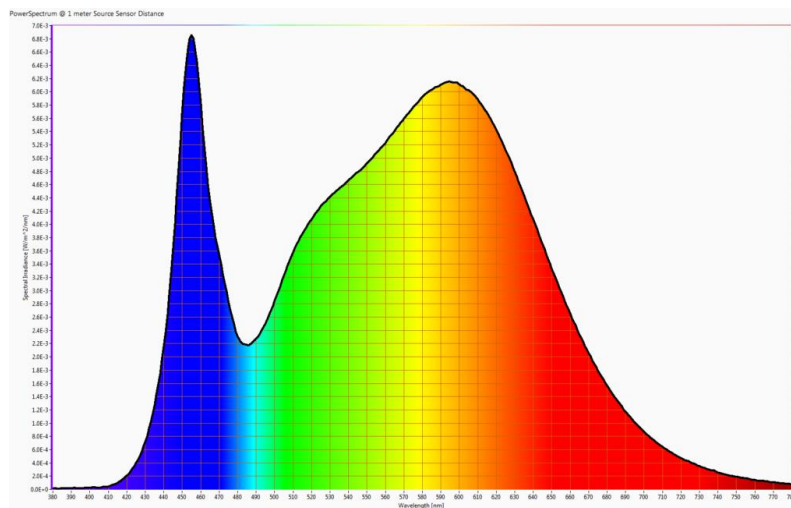


Figure 3 - Spectral Power Distribution LED

Temporal Properties

An incandescent light bulb has sine wave flicker with about 6.6% percent flicker when connected to an A/C source, as shown in Figure 4.

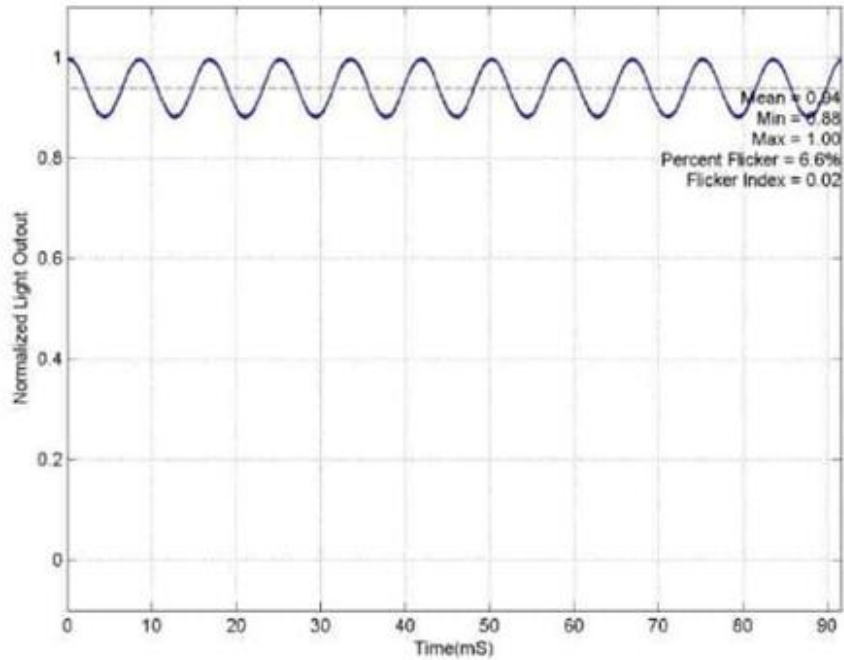


Figure 4 - Sine Wave Flicker

An LED exhibits square wave flicker with 100% percent flicker when connected to an A/C source, as shown in Figure 5. This graph also shows the effects of Pulse Width Modulation using an LED.

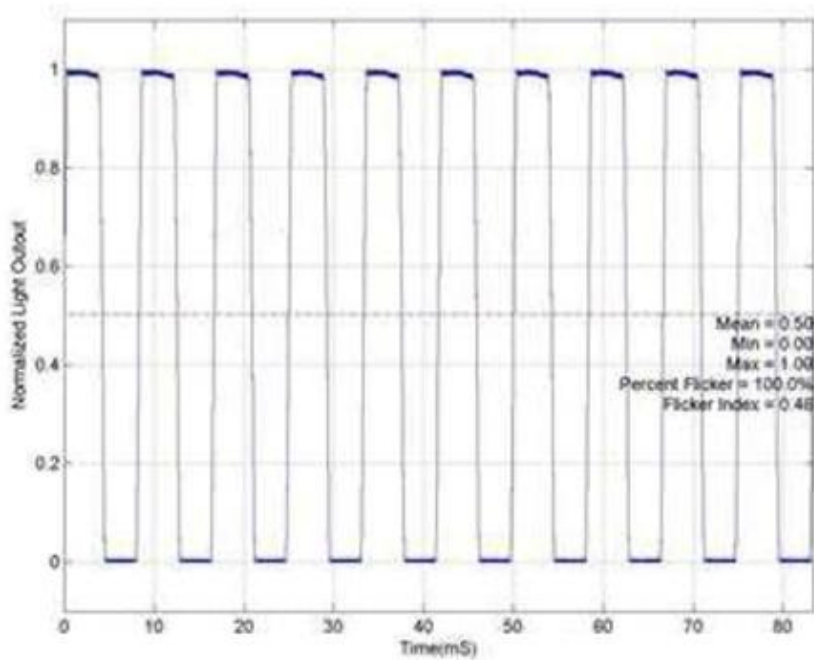


Figure 5 - Square Wave Flicker