

February 26, 2023

**BY EMAIL**

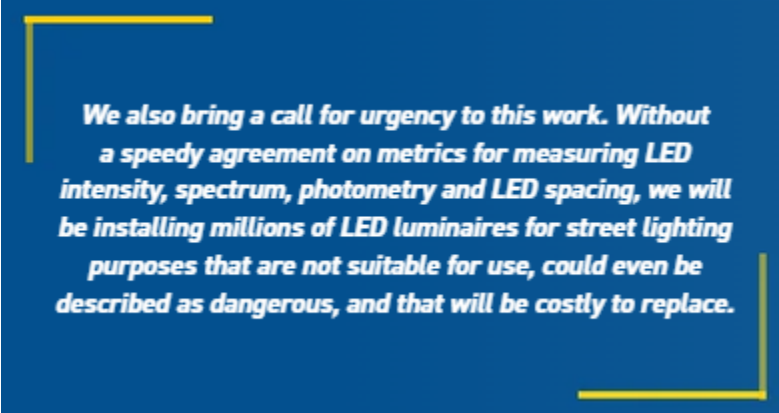
Charlotte Burrow, Chair  
Equal Employment Opportunity Commission  
info@eoc.org

**Re: Hazardous and Unregulated Light Emitting Diode Products**

Dear Charlotte Burrow,

The Soft Lights Foundation advocates for the protection of the natural night resource and for the protection of citizens from the harms of Light Emitting Diode visible radiation. We are writing to you now to alert the Commission to the fundamental safety and federal legal issues of Light Emitting Diode products.

In December 2021, Cree Lighting published a white paper that alerts government officials to the fact that, *“None of the existing metrics [for LED street lighting] takes into account the non-uniform emitting surface of a LED luminaire.”*<sup>1</sup> Cree went on to say that LED streetlights are dangerous. Even though Cree speaks of only street lighting, their message about lack of metrics is applicable to all LED products.



*We also bring a call for urgency to this work. Without a speedy agreement on metrics for measuring LED intensity, spectrum, photometry and LED spacing, we will be installing millions of LED luminaires for street lighting purposes that are not suitable for use, could even be described as dangerous, and that will be costly to replace.*

In March 2022, the US Department of Energy signed a Memorandum of Understanding with the Illuminating Engineering Society to develop *“needed metrics and standards for solid-state lighting (SSL)*

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<sup>1</sup> <https://online.flippingbook.com/view/702884488/>

*technology.*<sup>2</sup> The significance of this statement is that the metrics are “needed” and have not yet been developed. It is of course astonishing that these metrics were not developed before the release of billions of LED products into the environment.

LEDs emit an unnatural type of visible radiation with spatial, spectral, and temporal properties that are known to be hazardous to human health.<sup>3,4</sup> The Food and Drug Administration is the sole agency with regulatory authority for LED products. This authority was vested in the FDA by the 1968 Radiation Control for Health and Safety Act. The FDA has confirmed that they have this regulatory authority and no other federal agency has regulatory authority for LED products.<sup>5</sup> The federal agencies we have contacted, such as the DOE, NHTSA, FHWA, OSHA, EPA, and FAA, have each deferred to the FDA for regulations. To date, the FDA has not published the necessary comfort, health, or safety standards for any LED product and has not vetted LED products. Thus, an employer has no regulatory authority to install or operate LED products, which creates a significant liability and economic risk for the employer due to the known hazards of LED visible radiation.

The Americans with Disabilities Act and Rehabilitation Act both prohibit discrimination and requires equal access at places of employment. LED products create discriminatory conditions for the class of individuals who cannot neurologically tolerate flat surface, directed energy LED visible radiation. LED products have been documented to trigger photosensitive seizures, debilitating migraines, anxiety, nausea, and numerous other adverse neurological reactions.<sup>6</sup> Because the FDA has not vetted LED products and their impacts on the disability community, there are no existing federal guidelines or requirements that an employer can refer to. Since LED products have been proven to be hazardous and discriminatory for certain individuals, an employer is required by the ADA to remove the barriers to access created by the use of LED products. The undue burden and reasonable accommodation claim typically used by employers cannot be used because the employer did not receive approval from the FDA.

LED General Service Lamps are marketed to businesses as being energy efficient.<sup>7</sup> This is a false marketing claim, as LED GSLs do not emit the same type of safe, uniform light emitted by an incandescent light bulb. A product may only be claimed to be energy efficient if it provides the same quality of service as the baseline comparison product. An LED General Service Lamp produces a low-quality, hazardous visible radiation that is not the same quality as the safe, uniform illumination created by an incandescent light bulb.

The Soft Lights Foundation petitioned the FDA to regulate LED products on June 12, 2022, and this petition is currently under review.<sup>8</sup> Only once the FDA publishes the necessary regulations and restrictions for LED products will an employer be able to install and operate LED products in a legal, safe, nondiscriminatory manner.

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<sup>2</sup> <https://www.energy.gov/eere/ssl/us-department-energy-and-illuminating-engineering-society-partner-advance-industry>

<sup>3</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9420367/>

<sup>4</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7830240/>

<sup>5</sup> <https://content.govdelivery.com/accounts/USDHSCBP/bulletins/1a00f8a>

<sup>6</sup> <http://www.softlights.org/stories/>

<sup>7</sup> <http://www.publiclightingauthority.org/>

<sup>8</sup> <https://www.regulations.gov/document/FDA-2022-P-1151-0001>

Sincerely,

/s/ Mark Baker

President

Soft Lights Foundation

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