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Summary of LED Headlight Issues

1 message

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Sun, Feb 6, 2022 at 8:51 AM

To: wayne.peacock@usaa.com

Cc: vicky.bonney@usaa.com, dharkey@ihs.org, Nisa Khan <nisa.khan@iem-led.com>, John Moody <john_moody@sbcglobal.net>

Dear Wayne Peacock, CEO, USAA Insurance,

LED headlights are bad for USAA's bottom line. LED headlights have never been approved for use on American roads by NHTSA and we find it likely that LED headlights are a major contributor to the drastic increase in vehicle crashes over the past few years. USAA is insuring vehicles that are using illegal LED headlights that are likely causing more crashes and thus more payouts by USAA.

USAA is a member of the Insurance Institute for Highway Safety that continues to produce invalid research for vehicle headlights. IIHS has failed to use the proper measurement techniques, measuring devices, and mathematical formulas necessary for flat surface emitters such as LEDs. This invalid research by IIHS is impacting the profitability of USAA.

The compilation video below was made by one of our members showing the eye-damaging blue-rich light and dangerous glare from LED headlights.

Video: <https://youtu.be/sQHpkG7UhA>

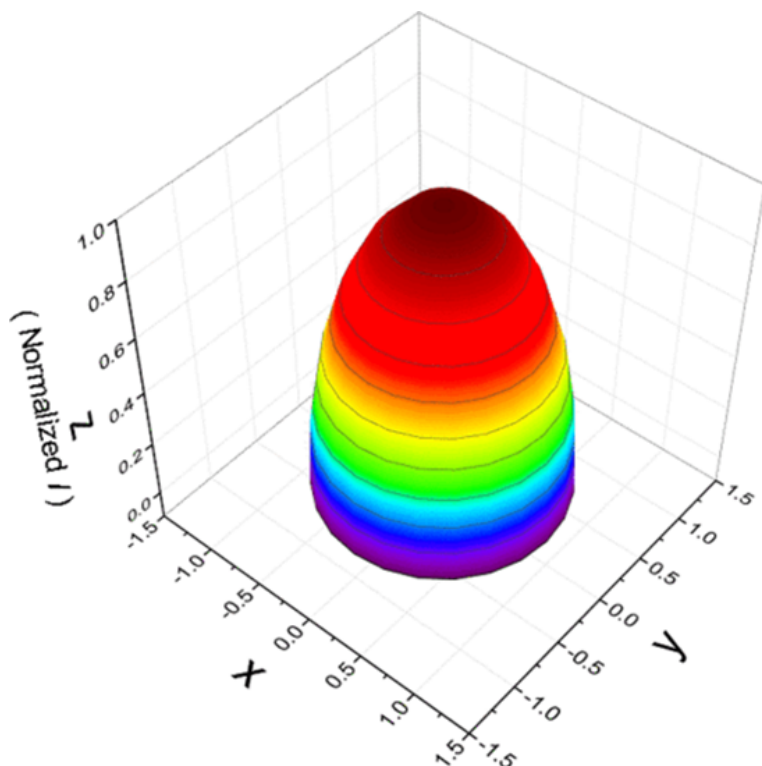


LEDs produce a different type of light than tungsten/halogen. Per Dr. Nisa Khan: *“Flat light sources produce Lambertian light distributions and only flat light sources do this. This means that luminous intensity and luminance are both non uniform in space for the source and what the viewer sees. ALL of illumination scientific theories are based on point light sources, which means there is spherical uniformity for luminance and luminous intensity regarding the light source and what the viewer sees.”* – February, 2022, Dr. M. Nisa Khan, President IEM Lighting Technologies and Author, *Understanding LED Illumination*.

The drawing below shows the marble shape of incandescent light. The energy is uniform in all directions.



The graph below shows the bullet shape of LED light. The energy is non uniform.



Source: Derivation and Experimental Verification of the Near-field 2D and 3D Optical Intensities From a Finite-size Light Emitting Diode (LED)

Because USAA is a member of IIHS, and because of the need to protect the public and USAA financial health, we urge USAA to demand that IIHS correctly address the bullet shape of LEDs, use only near-field measurement data, and admit that LEDs cannot be "technology neutral" as IIHS has claimed.

Sincerely,

Mark Baker
President
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