Hamden Low-K LED Allaiance

An advocacy group founded to advocate for Low-kelvin CCT LED streetlights
CTforStarrySkies.wordpress.com

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Environment Committee
Connecticut General Assembly
ENVtestimony@cga.ct.gov

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Reply to UI Testimony in Support of SB 425 Regarding Light Polloution & LED Lighting.

Dear Members of the Environment Committee,

I write today to respond briefly to the testimony submitted by Al Cabrone of UI/Avangrid.

I would simply like to point out that Mr. Cabrone does not address the issue of color temperature in his letter. While Eversource has offered 3000k LED fixtures as a matter of course since October 2016 (after release of the AMA report recommending 3000k or less LED street lights), UI still recommends and is installing 4000k LED streetlights.

The Hamden Low-K LED Alliance was formed to advocate for a 3000k option, and it was only with sustained citizen action and the full support of the town government that we were able to negotiate the possibility of a 3000k option from United Illuminating. Even with that exceptional effort, and despite the testimony of Mr. Cabrone that towns can select the wattages they desire, we have not been offered a low-wattage, 50 watt HPS lumen equivalent fixture that meets the "Portland Standard" of HPS/LED roadway lumen output.[1]

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[1] Illumination equivalents are based on the LED conversion experience of the city of Portland (2014-2016) as reflected in the Municipal Solid State Lighting Consortium Newsletter cited here (pp 3-4), and in the Gateway report prepared for the DoE in 2015. During their conversion project, real-world spot illumination measurements across target areas showed that to provide equivalent illumination on target roadways/sidewalks to the replaced HPS (High Pressure Sodium) fixtures, Initial Lumen Output (ILO)

Because of our inability to truly select the wattages we feel are appropriate for our town, we feel that the text of SB-425 should be amended to include language that meets the American Medical Association recommendations in regards to CCT Color Correlated Temperature.

We have ample evidence that CCT does not affect the price of roadway lighting fixtures, and that there is little meaningful effect on light output, particularly in comparison to replacing HPS fixtures. In fact, there is substantial evidence that bright, blue-rich light increases glare during adverse weather conditions such as rain, fog, and snow. It is well known that fog headlights are yellow tinted. This same principle holds true for blue-rich streetlights, which make it harder to see when driving in poor weather.

The Hamden Low-K LED Alliance agrees with the Environment Committee that light pollution is a growing issue in Connecticut, and that now is the time to begin meaningful legislative efforts to regulate overlighting, uplighting, and color temperature to prevent harm to human health, public safety, ecosystems, and quality of life.

Preferred Text:

"Whenever state or municipal funds are utilized for the purchase of light-emitting diode (LED) lamps, preference shall be given to warmer, yellow-tinted LED lamps lamps rated at a Correlated Color Temperature of 2700 Kelvin, and shall not exceed 3000 Kelvin."

Sincerely Yours,

Christina Crowder

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could be calculated at one third of the ILO for HPS bulbs. For example, a 50w HPS bulb has a Mean Lumen output of 3,600 (Mean Lumens equals the average maintained lumens over the life of the product). One third of this initial lumen output would be 1,200. The average maintained lumens (mean lumens) from an LED streetlight bulb is calculated at roughly 110 lumens per watt.

Thus:
50w HPS=3,600 Mean Lumen x .33=1,200. 12w LED x 110 lumen/watt=1,320 (more than the HPS).
70w HPS=5,350 Mean Lumen x .33=1,766. 17w LED x 110 lumen/watt = 1,870 (slightly more than the HPS).
100w HPS=8,550 Mean Lumen x .33=2,850. 28w LED x 110 lumen/watt=3,080 (slightly more than the HPS).