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Luminaire Cutoff Requirements. All outdoor luminaires rated for use with lamps greater than 30 lamp watts, determined in accordance with Section 130.0(c), shall comply with Backlight, Uplight, and Glare (collectively referred to as "BUG" in accordance with IES TM-15-11, Addendum A) requirements as follows:
1. Maximum zonal lumens for Backlight, Uplight, and Glare shall be in accordance with Title 24, Part 11, section 5.106.8

Hubbell Lighting Inc. respectfully disagrees with the extreme decrease suggested for wattage requirements from 150W to 30W. The combination of adherence to table 5.106.8 and the reduction of the excluded product from 150W to 30W has a significant impact in application of commercial lighting in outdoor spaces. Keeping the 150w requirement will benefit all stake holders with:

1. Fewer fixtures, poles, & labor cost associated.
2. Decreased Energy consumption
3. Decreased carbon footprint.
4. Better lighting uniformity.

The stringent BUG requirements, specifically the Glare (G) rating limits, greatly restrict the use of forward throw and wide distribution optic configurations that have higher levels of measured zonal lumens in the 60° to 90° vertical per IES TM-15. To meet these BUG rating requirements, property owners will be limited to very short and narrow optic distributions or very low output luminaires. This will increase the quantity of luminaires needed to illuminate an area. The consequences will be an increase of overall power consumption (watts) and increase in the costs associated with material procurement, installation, and operation to the property owner.

As an example, 4 single Type V 30-watt fixtures per pole individually meet a BUG rating of B3-U0-G1. Yet a single 100w Type V B3-U0-G3 can equal the lighting of the 4-30w fixtures. The lumens at the glare angles of the 4-30w fixtures together would be more than the single 100w fixture. Thus using luminaires with the lowest BUG rating without the proper professional expertise can produce not only increased material & labor costs, but also increased carbon footprint and energy consumption as shown with the example of utilizing 30-W luminaires, with the currently mandated G rating of 2 or less, in lieu of utilizing a single 100 or 150-W luminaires with a G rating of 3.

Additional disadvantage from a substantial lowering of the threshold is poor light uniformity from short narrow distributions condensing the lumens in smaller areas increasing the maximum values and decreasing the minimum values leading to hot spots under the pole and dark spots between poles.

While BUG is a significantly improved metric for evaluating a single luminaire, when used to develop a site plan, the results without the proper professional expertise can produce negative results. We hope the CEC rethinks the proposed change.

Respectfully Submitted
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