

**itl boulder**  
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

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10 November 2014

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TO: Energy Star Lighting – U.S. Environmental Protection Agency

RE: ITL Comments – Energy Star Luminaires V2.0 Specification Development

Dear Program Manager,

Independent Testing Laboratories, Inc. (ITL) respectfully submits the following comments regarding the development of Luminaires V2.0 as directed by the Specification Discussion Document dated October 2014.

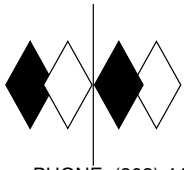
1. Goals for V2.0:
  - a. ITL supports all stated goals for V2.0 and adds the following general comment:
    - i. Where possible it is important to improve specification “usability” for all stakeholders while providing appropriate detail and scope for listed categories.
2. Requirements considered for modification or elimination:
  - a. Color Angular Uniformity:

ITL supports the revision of color variance requirements from 0.004 to 0.006. The current requirement of 0.004 is too restrictive for most applications and provides far too high a failure rate for otherwise top performing directional luminaires. This will also allow some manufacturers to relax the current practice of using a diffuser for uniform color distribution, which will allow for better efficacy, distribution control, and will reduce high angle luminance for some systems.
  - b. Start Time:

ITL supports the continued use of ‘start time’ as a luminaire performance indicator. It should be noted that start time is an important metric for the continued market penetration of LED technologies, and has historically played a role in the emerging acceptability of CFL systems. Start time is a component of testing that is observable and is probably the first indicator of “acceptability” for the average consumer. Also, if it is determined that start time will remain a measured parameter for luminaires, ITL recommends that the test method issued for Lamps in August of 2013 be referenced or reissued to cover the luminaires specification.
  - c. Lamp Current Crest Factor:

ITL supports the continued use of LCCF requirements for the luminaires program. LCCF is one of the most indicative determinants to lamp life for HID and fluorescent systems.
  - d. Zonal Lumen Density:

ITL supports the continued evolution of zonal lumen requirements in order to further expand category inclusion for under cabinet lights, cove lights, and non-symmetric downlights / accent lights.



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(continued)

3. Scale directional solid-state lighting:
  - a. It is ITL's opinion that within a specified wattage tolerance, directional luminaires incorporating identical LED's, optics, housing profile and drive current should be allowed to certify family members with wattage variations only using integrating sphere (lumen output) tests for non-worst case variants.
  
4. Changes to efficacy level requirements:
  - a. ITL recommends that a "change in efficacy" threshold be set across the board for all luminaire categories. Once the threshold is reached the efficacy requirement should be increased by a predetermined percentage.

Thank you for your consideration of these comments. Please contact ITL Senior Lighting Engineer Mr. Court Stout at (303) 442-1255 with any questions.