

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460



OFFICE OF  
AIR AND RADIATION

May 4, 2015

Dear ENERGY STAR® Lighting Stakeholder:

With this letter, the U.S. Environmental Protection Agency (EPA) announces the release of the Final Draft of the ENERGY STAR Luminaires V2.0 specification. The Luminaires V2.0 specification is intended to replace the existing Luminaires V1.2 specification.

EPA would like to thank partners and stakeholders for their thorough review of each draft, and the extensive comments received. In response to the feedback from Draft 2, a number of suggested modifications have been included to improve the clarity of the specification, provide additional flexibility and maintain a broad selection of labeled products. Changes from Draft 2 are highlighted below, but details regarding all changes made can be found in the draft final specification and note boxes. All comments were carefully considered, and will be posted for your review on the Luminaires specification development web page ([www.energystar.gov/luminaires](http://www.energystar.gov/luminaires)), along with a comment summary document with Agency responses.

EPA made the following changes in the final draft, based on stakeholder feedback and discussion.

- Testing:
  - Clarified testing for color tunable luminaires.
  - Provided direction on testing LED light engines that do not have integral heat sinks.
  - Adjusted the additional test data required for allowable variations to better align with current practices and allow more flexibility.
  - Added testing guidance for enclosed fixtures shipping with ENERGY STAR lamps.
  - Added guidance for photometric and thermal testing of downlight retrofits to improve consistency.
- Light Output:
  - Revised the minimum light output requirements for non-directional luminaires to allow for a wider variety of designs.
  - Added a minimum light output requirement for Inseparable SSL Luminaires.
  - Harmonized the light output requirements for cove and under cabinet lights.
- Zonal Lumen Density:
  - Adjusted the zone for accent lights to account for wide flood distributions.
  - Adjusted the zonal lumen density requirements for under cabinet and cove lighting to remove the asymmetrical distribution requirements and have a consistent requirement.
- Efficacy:
  - Removed the higher efficacy requirement for light engines without secondary optics.
  - Removed the proposal for increased future tiers.
  - Harmonized under cabinet and cove lighting efficacy.
  - Lowered downlight and SSL downlight retrofit efficacy requirements.

- Outdoor Products:
  - Clarified that outdoor luminaires (other than security lighting) can be certified using the non-directional or directional certification pathway.
  - Provided an exemption from the Zonal Lumen Density Requirements for outdoor directional products approved by the International Dark Sky Association.
- Color:
  - Adjusted the R9 requirement to a reported value for fluorescent products.
  - Adjusted the area of interest for color angular uniformity so the evaluation is restricted to the beam angle of the luminaire.
  - Provided further clarification on how the color maintenance should be evaluated.
- Start and Run Up Time
  - Adjusted start time requirements to 750 milliseconds for luminaires without connected functionality, and 1 second for luminaires with connected functionality.
  - Adjusted the run-up time requirement to 45 seconds.
- Standby Power:
  - Revised the exceptions for standby power to allow combined benefit of energy saving features in addition to connected functionality.
- Labeling and Packaging:
  - Clarified that color terms are optional and added flexibility for communicating product light distributions.
- Other:
  - Clarified and simplified language for dimming and connected luminaire requirements.
  - Removed the restriction in use of wire nuts as an electrical connection method.
  - Included the ability for partners to indicate luminaires utilizing a Zhaga light engines listed in the Zhaga Consortium certified products database.

While EPA has removed the future efficacy tiers, capturing efficacy gains in the future will be a major consideration for future specification revisions, and the levels proposed in draft two indicate EPA's starting point for consideration. Additionally, future revisions may include lowering standby power, and enhancing or updating connected lighting criteria as the technology evolves and standards emerge with a focus on interoperability and consumer benefits.

The effective date for Luminaires V2.0 will be June 1, 2016. Stakeholders wishing to provide additional comments should submit to [lighting@energystar.gov](mailto:lighting@energystar.gov) by May 22, 2015. Please note that comments received will be posted to [www.energystar.gov/luminaires](http://www.energystar.gov/luminaires) unless marked "Do Not Post". With the final specification, EPA will share additional information related to its implementation.

Please contact me at (202) 343-9042 or [jantz-sell.taylor@epa.gov](mailto:jantz-sell.taylor@epa.gov) or Austin A. Gelder at ICF International at (770) 419-9249 or [lighting@energystar.gov](mailto:lighting@energystar.gov) with questions or concerns. As always, thank you for your support of ENERGY STAR.

Sincerely,



Taylor Jantz-Sell  
ENERGY STAR Lighting Program Manager