

Environmental Protection Agency
Energy Star Program
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Subject: Draft 2 Version 1.0 of the ENERGY STAR
Program Requirements for Luminaires.

Date: October 29, 2010

Dear Mr. Baker:

Philips Lumileds continues to actively support the development and expansion of the ENERGY STAR program and strongly believes that it will have a positive impact on market confidence and adoption of LED lighting. Our collaboration with EPA is intended to assure technical and business alignment and to remove barriers to the design, development and market introduction of new, energy efficient, lighting solutions.

We were pleased to see the continued development of the ENERGY STAR Program Requirements for Luminaires. In our review of Draft 2 we found the changes from Draft 1 to moving more in line with what we believe are the proper LED emitter level requirements that are evolving in the marketplace. We do take exception to component level metrics and standards being applied to luminaire level performance metrics. There are two specific parts of the requirement where we feel the EPA needs to consider a different approach presently being proposed.

1. **Light Source Life Requirements: All Luminaires: Source Type: Solid State** (Page 16) – As a method to substantiate any Lifetime claims in excess of the stated requirements an LM-80-08 test report and projections based on guidance from IES TM-21-11 are required. This methodology is a mis-application of the LM-80-08 test report and IES TM-21-11 guidelines. These are component level methods of measuring and extrapolating whereas the Life Requirements are for the complete Solid State Lighting System and not just the LED component.
2. **Lumen Maintenance Requirements: Directional and Non-Directional Luminaires: Source Type: Solid State Option 1** (Page 17) – This present approach is again based on component level methods and does not take into consideration the impact of scaling component level behaviors to a system with multiple components. The approach does not look at other factors that can impact lumen maintenance of the complete Solid State Lighting System (e.g.

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LED component end-of-life, optics, thermal management or drivers). Consistent with our previous comments, this approach is a mis-application of the LM-80-08 test report and IES TM-21-11 guidelines.

There are some methods being practiced by system designers in this and parallel markets that can address these concerns. We hope that EPA will strongly consider reviewing these methods with the industry stakeholders involved in these activities. There are a number of groups looking at how to best characterize the system level performance of Solid State Lighting solutions in an effort to deliver high performance, reliable products that meet the needs and expectations of the end-consumer. The following are some references to information on these efforts:

http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/led_luminaire-lifetime-guide.pdf

<http://www.philipslumileds.com/uploads/167/WP15-pdf>

Best regards.

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