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July 23, 2013

Taylor Jantz-Sell

ENERGY STAR Lighting Program Manager
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, NW
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lamps@energystar.gov

Re: ENERGY STAR Lamps V1.0 Final Draft Comments

Dear Ms. Jantz-Sell:

We appreciate the opportunity to comment on the ENERGY STAR Lamps V1.0 Final Draft. The following represents Switch Lighting's comments in response to the July 9, 2013 ENERGY STAR Program Requirements Product Specification for Lamps: Eligibility Criteria Version 1.0, Final Draft ("***Draft***").

BACKGROUND

Switch Lighting™ is dedicated to innovative design and technologies that create cost-effective light-emitting diode ("***LED***") lighting solutions for consumers and businesses, replacing ordinary incandescent and compact fluorescent lamps ("***CFL***") with long lasting, reliable, energy-efficient solutions.

The company's high-performance products are designed to contribute to human and planetary health with their efficiencies and reclaimable components. Using unique cooling technology, Switch Lighting is the first to announce a full line of A19 incandescent replacement bulbs for the residential, commercial, and hospitality markets. Switch Lighting is backed by VantagePoint Capital Partners and endorsed by Cradle to Cradle writer and sustainability expert Bill McDonough. The company is privately held (incorporated as Switch Bulb Company, Inc.) and headquartered in San Jose, California.

Comments

Product Variations

CCT Variation
In this Final Draft Color Maintenance is required for SSL Products. This test requires 6,000hrs of testing and negates any benefit to variants and will increase their time to market and cost and time devoted to testing. We ask that the requirement be removed for SSL Products as it is for CFL's.

Luminous Intensity Distribution

SSL lamp Distribution

Many SSL "A" lamp manufacturers currently have lamps available on store shelves that meet the current ENERGY STAR LED Lamp Version 1.4 for standard omnidirectional luminous intensity distribution which requires "Luminous intensity at any angle within this zone shall not differ from the mean luminous intensity for the entire 0° to 135° zone by more than 20%." These lamps from the SSL community surpassed the incandescent lamp performance, having put in the investment to adhere to this standard. By proposing to relax this specification to "90% of the luminous intensity measured values shall vary by no more than 25% from the average of all measured values" allows the introduction of lamp that are inferior to what is commonly available to consumers as a standard omnidirectional today. So while the technology and the manufacturing cost structure necessary to meet the tighter specifications exists, it seems like the specification change is an effort to include inferior lamps and more lamp manufacturers under the ENERGY STAR banner. As a concession we would recommend moving to a variation of 100% of the data points to be within 25% from the mean luminous intensity. Allowing 90% of the data points to be within 25% variation would only weaken the mark of ENERGY STAR.

Rated Life

There remains a sizable gap between what the consumer will experience between and Energy Star Certified SSL Lamp, ≥25,000hrs and a CFL, ≥10,000hrs and failure rates. We understand that the CFL is a legacy technology but in order to compete with today's SSL performance we recommend reducing the gap between the two technologies by specifying CFL minimum lifetime as ≥15,000hrs to 70% of the initial lumens.

Electrical Performance Requirements

Power Factor Requirements

Due to environmental concerns, over the next year the ability to generate power worldwide will become increasingly more difficult and expensive. A high power factor means that the energy we harvest will be used efficiently, which reduces the strain on our resources, which in turn benefits utilities, consumers and the environment. Money saved by utilities often results in rebates to consumers, incentivizing the further adoption of energy efficient technologies (informed by the ENERGY STAR label). For the past several years the power factor specification has not progressed with the growing concern for clean energy generation. We recommend making some progress on this important specification by raising power factor to a minimum of ≥0.75 across all technology categories.

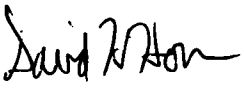
Dimensional Requirements

Lamp Shape Dimensions

Allowing a 5% tolerance on the ANSI MOL (Maximum Overall Length) on top of the tolerances built into ANSI C78.21 for general purpose lamps defeats the purpose of the ANSI specification. The MOL is established so that luminaires can predictably fit lamps of a specific size and performance. Adding a tolerance means that consumers will purchase replacement lamps with the same form factor, i.e "A-19" but will experience lamps that no longer fit their luminaires. We ask that the 5% tolerance on the ANSI MOL requirement be removed.

Thank you for your consideration of these issues.

Sincerely,



David H. Horn
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Switch Lighting