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San Jose, CA 95131

April 25, 2011

Alex Baker
ENERGY STAR Lighting Program Manager
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: ENERGY STAR Lamps V1.0 specification development process

Dear Mr. Baker:

We appreciate the opportunity to comment on the ENERGY STAR Lamps V1.0 specification development process. The following represents Switch Lighting's comments in response to the March 2011 Product Specification Framework.

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 extremely 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 its City of Light™ self-cooling technology, Switch Lighting is the first to introduce a true 75W equivalent, warm-white A19 incandescent replacement bulb to the residential and hospitality markets. Switch will also offer other standard A19 LED lamps in 40We (450 lumens), 60We (800 lumens) and 75We (1100 lumens) versions in warm white and neutral white. Follow on lamps will include reflectors (PAR, BR and R), globes and candles, among other styles.

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

Question #1

We are concerned that by not requiring CFL replacement "A" lamps to meet ANSI C78.20-2003 that these products will either be difficult to fit into existing incandescent lamp fixtures or will not fit at all. Even meeting the ANSI specification, as LED lamps are required to do, greatly limits design alternatives, makes performance challenging, and may still fail to meet customer expectations due to the allowed straight walls and sharp angles of the ANSI "A" lamp bulb envelope.

If the consumer is buying a replacement "A" lamp then the design of the lamps at the retail store should meet the customer's expectations as defined by the incandescent ANSI C79.1-2002 form factor. CFL's should be required to comply to ANSI C78.20-2003 as do LED replacement lamps.

Question #3

The consumer is trained to look for incandescent wattage while searching for replacement bulbs of a certain light output. Many CFL and LED products on the store shelves claim Watt equivalent (We) performance to incandescent but then either claim lumen output that does not match the We performance or in testing does not achieve We performance.

The LightingFacts labels do not identify We performance and only shows lumen output. It would be helpful for consumers if labels listed both lumen output and We since consumers have not fully come to appreciate the new measurement standards in energy efficient bulbs. As consumers increase their reliance on lumen output as a guide while shopping for bulbs of a certain light intensity, a change in categorization in graduations of lumens (i.e. rather than be categorization by incandescent bulb wattage) would be a truer measure of performance.

Question #6

Yes. There is significant concern that a consumer will be faced with degrading performance rather than a termination of performance which could lead to consumer skepticism over the entire LED sector. A lamp left in operation past its L70 performance level, and thus not performing to consumer and industry standards, is a rapid departure from current technology which will cause confusion among consumers and potentially harmful sentiment toward the industry and adoption of energy saving products.

Question #7

Yes. The binning to a specific tight tolerance, i.e. Warm White = 2700K on the black body locus within one MacAdams ellipse, will require an increase in LED manufacturers' control of tolerances to achieve these goals with high yields. Initially these devices will cost more, but prices should decrease with time as the manufacturing processes become more refined and cost effective.

Question #8

No. It is widely understood that the current CRI metric is flawed.

Question #9

Currently the CRI metrics are augmented with other color quantities (i.e. R9 values) but it would be beneficial to see a refined CRI metric that does not require additional measurements of color rendering.

Question #13

Yes. The "steady state" operating life is misleading both from a performance and operating economic point of view.

When comparing incandescent, CFL, and LED lamp technologies, the "steady state" lifetime is often compared. While CFLs in this state are quoted to last 8,000 to 10,000 hours, in real applications the actual lifetime for a CFL that is switched on and off a couple of times a day can be closer to 1,000 hours. Thus, over the 25,000 hour lifetime of a LED lamp, consumers would need to replace a CFL up to 25 times rather than 3 times as assumed using the "steady state" lifetime. Without changing the definition of "life" to better reflect standard operation rather than "steady state", consumers will face confusion and skepticism toward the industry and products.

Thank you for your time and consideration of these issues.

Sincerely,



Boris Lipkin
Chief Executive Officer
Switch Lighting