

## **American Lighting Association Comments ENERGY STAR Lamps V1.0, Draft 3**

The American Lighting Association<sup>1</sup> (ALA) has been following the development of ENERGY STAR Lamps V1.0 closely since ALA members participate in and support the manufacture and sale of ENERGY STAR lamp and lighting products. We particularly appreciate the significant work that ENERGY STAR, NEMA and the ENERGY STAR Partner companies have done since the 2012 Partner Meeting in St. Paul to include lighting control considerations in the ENERGY STAR lamp requirements. It is our view that lighting controls, and especially dimming controls, are essential to the proper application of light in addition to their energy-saving benefits.

### Quality of Light

ALA concerns with respect to lamps for the residential consumer are (not necessarily in order): choice, availability, value, performance and quality of light. ENERGY STAR labeled lamps currently have a reputation for energy efficiency, product quality and value according to ALA retailers. Consumers assume that ENERGY STAR lamp products will be energy efficient, so the use and resulting energy-savings impact of ENERGY STAR lamps depends upon user acceptance which leads to user purchases and use. Given the reported<sup>2</sup> limited acceptance of ENERGY STAR lamp products, especially CFLs, so far, residential consumers in the view of the ALA are not purchasing and using ENERGY STAR lamp products because those products do not yet provide, at the current price points, the lighting quality that consumers expect. We believe that consumers generally view the lighting quality from currently available ENERGY STAR lamp products as inferior to the lighting quality from incandescent lamps. Further, the ALA believes that higher consumer acceptance of energy efficient lighting products depends primarily upon competitive costs and importantly upon the lighting quality factors of color followed by dimmability and flicker assuming that the consumer has chosen lighting products that provide the proper quantity and distribution of light.

### Color

The ALA believes that the highest residential consumer acceptance of energy-efficient lamps will be achieved with lamps that have a chromaticity of 2700-3000 K and a color rendering index as close to that of incandescent lamps as possible. The ALA has worked with the researchers at the National Institute of Standards and Technology (NIST) and has visually experienced highly-efficient LED lamps of incandescent-like color quality and has found such lamps to be comparable in color quality to incandescent lamps.

We recognize the inherent problems of trading off lighting quality with lamp efficacy and lamp cost; but we also believe that consumer acceptance of high-efficacy lamps will be achieved when consumers are convinced that efficient lamps will enhance the appearance of their homes.

We suggest that, as an alternative to a single ENERGY STAR lamp performance specification, a tiered system, designating lamps as “standard qualify” and “residential quality”, or something similar, would expand consumer lamp choices and help consumers understand the performance, efficacy and cost trade-offs.

### Dimmability

ALA retailers report that consumers complain about “poor dimmability” when discussing screw-in CFL lamps promoted as incandescent lamp replacements. Sections 12.1 and 12.2 of Draft 3 address the dimmability issues commensurate with the technologies now available in our view; but we continue to urge ENERGY STAR to also address the use of dimming and controls further

in the Luminaires Product Specifications as well as in the Lamps Product Specifications with a view toward qualifying lighting systems with controls as energy saving products.

#### Flicker

The ALA agrees with NEMA that the definition of flicker in Draft 3, Section 4 “Definitions” is not correct. We propose the published International Commission on Illumination (CIE) definition which is: “Flicker: the impression of unsteadiness of visual perception induced by a light stimulus whose luminance or spectral distribution fluctuates with time.”<sup>3</sup>

The flicker index (Draft 3, Section 12.3) appears to be the best metric available now, but we ask that ENERGY STAR monitor the work of the IEEE PAR1789 as well as research on the subject and implement an improved metric when available.

Thank you for the opportunity to comment.

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1. The ALA is a trade association with 3,000 members representing the manufacturers of: lighting fixtures, lamps, lighting components, controls and ceiling fans; manufacturers’ representatives; retail lighting showrooms and lighting designers in the United States, Canada and the Caribbean.

2. ENERGY STAR CFL Market Profile, U.S. Dept. of Energy, September, 2010.  
[http://www.energystar.gov/ia/products/downloads/CFL\\_Market\\_Profile\\_2010.pdf](http://www.energystar.gov/ia/products/downloads/CFL_Market_Profile_2010.pdf)

3. International Lighting Vocabulary (e-ILV). CIE Central Bureau, Kegelgasse 27, A-1030 Vienna, Austria. <http://eilm.cie.co.at/term/443>