

Email received on June 18, 2010 from David Shiller.

Dear Alex,

Hello. Below, please find MaxLite's formal comments on DRAFT 1 of the Luminaire V1.0 spec. Congrats again on the major step forward for the program in moving closer to a technology-neutral spec. While MaxLite shares some significant concerns below, we also strongly support and applaud the on-going integration of fluorescent and LED specifications.

### **MAXLITE COMMENTS ON LUMINAIRE V1.0, DRAFT 1**

- Page 7, Acceptable Sources of Documentation. Development of the new ENERGY STAR Laboratory Accreditation Program creates significant uncertainties over whether certain test report requirements will continue to be submittable by manufacturers' labs, most notably, the maximum ballast case temperature test. MaxLite, as well as many of our OEM customers (RLF partners) are very concerned over this issue. If the "heat test", required of luminaire manufacturers, will be required from a third-party laboratory, testing expenses will rise significantly, especially for the partners that qualify the most E\* luminaires. We are not aware of any evidence that thermal testing conducted by current RLF partners has resulted in widespread thermal problems in the market. **MaxLite strongly recommends allowing luminaire partners to continue performing their own heat testing in-house, and/or allow their lamp/ballast supplier to perform the test for them.**
- Page 10, Luminous Efficacy and Output Requirements: Non-Directional Luminaires. The fluorescent proposed requirement of 70 LPW will have the following impact on current GU24 self-ballasted lamps in the program:
  1. As of 6/16/10 at energystar.gov, there are 192 GU24 lamps listed as 13W or below. **Of these 192 models, only 56 models meet 70 LPW. That is only 29% of existing platforms at 13W or below that meet 70 LPW.**
  2. 13W GU24 lamps make up the vast majority of current E\* RLF (sales-weighted) market share. Based on MaxLite's own OEM sales of GU24 lamps, roughly **90% of GU24 lamps sold for use in E\* fixtures are 13W.**
  3. If MaxLite and other Luminaire partners are forced to meet 70 LPW, the simplest and most cost-effective way will be to switch from offering 13W GU24 lamps to 15W GU24 lamps. While EPA would be able to claim higher efficacy of 70 LPW, the reality is, EPA will have forced the majority of E\* fixtures sold up from 13W lamps to 15W lamps. **This would represent a 15% increase in power consumption for these fixtures. MaxLite strongly recommends 65 LPW be required of all fluorescent platforms, especially lower wattage lamps.**
- Page 10, Minimum Light Output. The fluorescent and LED requirement of 850 lumens will eliminate all light sources in the 9W range. While EPA made an exception for chandeliers of six or more sockets, this ignores ceiling fan light kits that commonly have three or more sockets, and chandeliers of five or less sockets. A five socket chandelier will be forced to have the light output of 300 incandescent watts! **This is another case where EPA will force GREATER power**

**consumption, which serves noone's interests.** MaxLite recommends the exception be extended to any fixture with **4 or more** sockets, including chandeliers, ceiling fan light kits, bath bars, among others.

- Page 10, LED Light Engine Source Efficacy. The LED proposed requirement of 70 LPW will currently prevent warm white LED luminaires from qualifying. Warm white is the color most preferred by the residential market. MaxLite recommends 65 LPW be required of LED light engines.
- Page 13, Zonal Lumen Density Requirement. The proposed requirement that outdoor post- or arm-mounted decorative luminaires must deliver 95% of total lumens within the 0 – 85 degree zone, with no light above 90 degrees, will eliminate most traditional pole mount styles from the program. This is contrary to the stated EPA position in the May 10 letter, *“The ENERGY STAR program’s successful labeling efforts over the years can be attributed in part to the Program’s commitment to giving consumers energy saving options while honoring their preferences for product features and functionality. Expecting consumers to sacrifice in the interest of greater efficiency, experience has demonstrated, results in sales reductions and reduced overall benefits.....Consumers have made clear through their purchasing habits that for some applications, the aesthetics of a given fixture are as or more important than its ability to efficiently produce light.”* MaxLite recommends dropping the outdoor post- or arm-mounted zonal lumen density requirement.
- Page 16, Lumen Maintenance Requirements. Each method has its place in different applications. For LED luminaires, MaxLite strongly supports maintaining BOTH Options 1 and 2 for demonstrating lumen maintenance performance.
- Page 18, CCT. Historically, the RLF program did not qualify many fixtures above 4100K because it was specifically a residential specification, justifying FCC class B and lamp shipment requirements. With the addition of LED luminaires to the specification, many more E\* luminaires have the opportunity to be utilized in commercial applications (where LED luminaires are the most cost effective). Indeed, the proposed spec accommodates commercial applications in the stated scope, as well as in the Electromagnetic and Radio Frequency category, but not CCT? Commercial markets require 5000K CCT products. The proposed LED maximum CCT of 4000K will prevent E\* LED Luminaires from competing in a large portion of the commercial market. In addition, 4100K is the historic ANSI standardized commercial CCT, not 4000K. MaxLite recommend allowing LED luminaires to qualify at 2700K, 3000K, 3500K, **4100K, as well as 5000K.**
- Page 20, Color Angular Uniformity. MaxLite supports the proposed color angular uniformity requirement on directional solid state indoor luminaires.
- Page 21, Lamp Shipment Requirement. No justification was provided for proposing recessed downlights to ship with lamps. They have not been required to ship with lamps in RLF versions 3 nor 4. Why start requiring it? Exempting solid state luminaires from all lamp shipment requirements bypasses all of the LED quality requirements. E\* LED lamps are NOT widely available to provide protection to consumers. Why exempt solid state luminaires from the lamp shipment requirement? No justification was provided.
- Page 22, Source Start Time. Exempting HID from start time requirements is NOT technology neutral. HID has terrible start time that will very likely disappoint consumers. This represents a significant weakening of the specification.

- Page 22, Source Run-up Time. EPA states in the comment box, “*EPA recognizes run up time as a performance criterion of importance to consumers...*” However, EPA exempted HID with terrible run up time. How does EPA justify tightening run up time for fluorescent, while exempting HID? How does this protect consumers? How is this technology neutral?
- Page 25, Power Factor. MaxLite strongly supports the proposed power factors for fluorescent, HID, and solid state sources. Raising fluorescent power factor would hurt the program.
- Page 31, Minimum Operating Temperature. There is no industry definition of minimum operating temperature, and EPA does not propose one either. Is it merely starting of the lamp? Do start time or run up time requirements apply at -15C? There is no “manufacturer protocol!” It is meaningless to require -20C operating temperature without any industry definition, nor test procedure. What good does this accomplish? MaxLite strongly recommends that manufacturers be required to list a minimum reliable operating temperature of their luminaire/light source, on their packaging.
- Page 35, Lighting Toxics Reduction Requirements. RoHS mercury requirements are tiered by wattage. Many linear and GU24 lamps at 32W and 42W will have trouble with a flat 5mg maximum. MaxLite suggests that fluorescent lamps <30W not contain more than 5mg of mercury.
- Page 36, Warranty Requirements. Use of the term, “unconditional warranty” is problematic. MaxLite recommends, “A written warranty must be included.....”
- Page 37, 1,000-Hour Lumen Maintenance. This 1000 hour requirement was dropped from the fixture requirements, but was left in the GU24 lamp requirements. This is inconsistent. MaxLite recommends either retaining the 1000 hour requirement in the luminaire requirements or dropping it from the GU24 requirements.

Thank you in advance for your consideration,

David

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