

March 30, 2015

U.S. Environmental Protection Agency
Energy Star Program
Attn: Ms. Taylor Jantz-Sell

Re: Responses to Draft 2 of the Luminaires 2.0 Specification

Dear Ms. Jantz-Sell,

Good Earth Lighting appreciates the opportunity to further comment on the proposed changes to Energy Star Luminaires V2.0 Specification as included in Draft 2 of the Document. Below is our Executive Summary for the Key Issues followed by a detailed discussion of actual changes.

EXECUTIVE SUMMARY:

Good Earth's position on the Overview of Changes from Draft 1 to Draft 2 identified in your Cover Letter dated March 6th, 2015:

1. Increasing Efficacy – for Under Cabinet and Accent Lights

Good Earth suggests the efficacy of Under Cabinet lights and Accent lights should be 50 lm/W and not 55 lm/W as suggested in draft 2. EPA has recognized, based on technical information provided in Good Earth's response to draft 1, that to fulfill customer demanded features and performance such as "smooth light" (the practice of avoiding reflections of "LED Dots" in their granite counter tops, etc.) and very low profile in Under Cabinet fixtures, we must use technologies such as frosted diffusers and different quantities, spacing and types of LEDs which can lower efficacy by 15% to 20%. During the time of the review of the Draft Standards this is further complicated by rapidly growing demand for edge lit technology which is even more demanding. We feel our suggestion of 50 lm/W represents a very substantial increase over Luminaires 1.0 while allowing the new light technologies which are "in demand" to be used at reasonable cost and very high efficiencies.

2. Scope - Addition of the option to ship non-directional Luminaires with Energy Star Certified Lamps.

Again, Good Earth does not support allowing any light source socket mounting which would allow legacy light sources of lower efficacy (incandescent) or inferior thermal/electrical performance to be used as a replacement light source. EPA has partially addressed some of the concerns by adding thermal "in-situ" testing which helps insure the lamp shipped in the fixture operates acceptably but for those consumers unhappy with the color temperature or other characteristic of the shipped lamp or replacing a failed unit, there is no guarantee they will replace the lamp with one that will operate acceptably or for that matter, be Energy efficient.

3. Adjustments to Luminaire Classification – Change to the Classification of Outdoor Security from Non-Directional to Directional.

Good Earth strongly feels the Outdoor Security lights should remain in the non-directional category. Security lights are adjustable, multi-head products which today can be Wall or Eve mounted. The addition of the Zonal requirements will either eliminate the Eve mounting position by restricting the adjustability of the light heads as well as adding complexity and testing costs. Further details are discussed below.

DETAIL DISCUSSION

Each detail references a page/paragraph or Note Box Number as shown in Draft 1 of Luminaires 2.0. Our recommendation and our reasoning behind our position follows.

1. Luminaires Version 2.0 Draft 2 Page 10 Note box 4 – Additions/Changes to the CSD

- A. Addition of a section for certified drivers once the Methods of Measurement is complete
 - I. We support this as it will help reduce testing costs slightly.

2. Luminaires Version 2.0 Draft 2 Page 14 Note box 7 – Changes to Luminaires Efficacy Requirements

- A. Addition of thermal testing of lamps in enclosed luminaires
 - I. We support this as it will help insure the original lamps operate acceptably but does not address the safety, life or efficacy of lamps replaced after initial purchase.

3. Luminaires Version 2.0 Draft 2 Page 17 Note box 9 – Changes to Luminaires Efficacy Requirements

- A. We propose changing the efficacy requirements for Under Cabinet lights from 55 LPW to 50 LPW, slightly lower than the 55 LPW in proposed in Draft 2 of the Luminaire 2.0 Specifications. The 50 LPW is needed now because:
 - I. As discussed in the Draft 1 comments, we are finding that both the consumer and our major retail partners are challenging us, as a manufacturer to develop luminaires that offer smooth light output, very thin product chassis. More recently we are seeing a rapidly increasing demand for edge lit technology, at lower costs. We find that we are able to meet this demand by further improved diffuser and optics technology, however, this is placing further demands on efficacy making 55 lm/W more expensive to achieve at this time.
 - II. We still strongly believe the adoption rate of energy efficient cabinet lighting by the American Consumer will be much greater than if we can begin with a 50 LPW standard, with a wider variety of light technologies, at reasonable costs and increase the efficacy as the technology improves.
 - III. The improvement from 29 LPW in the current 1.0 standard to our suggested 50 LPW is a 72% increase, combined with a 10% per year improvement beyond that, shows a commitment to continuous improvement by the EPA and the Energy Star partners.

4. Luminaires Version 2.0 Draft 1 Page 17 Note box 9 – Additional Zonal Lumen Density requirements for Outdoor Security

- A. As discussed in the Draft 1 comments, almost all security lights are adjustable multiple head designs (1 to 4 heads are common). These adjustments allow both wall mounting and eve mounting (which is a very common configuration). If the current Zonal Lumen Density requirements are adopted some limits to the adjustment range would have to be made which would also limit the fixtures ability to be

used in both configurations. Furthermore, the Zonal requirement references the fixture nadir and any adjustments which can be made by the consumer make any reference to the fixture nadir irrelevant. We suggest Security remain non-directional or be exempted from the Zonal requirements. Since the main concern here is the “Dark Sky”, it may be better to simply define the upward light in either or any mounting configuration to be less than 5% after mounting.



Conclusion

We look forward to work together in the evolution of Luminaires 2.0 and the improvements it will bring.

Sincerely,

The Good Earth Lighting Energy Star Team