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Office of Air and Radiation
Washington DC, 20460

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Ms. Jantz-Sell,

Northeast Energy Efficiency Partnerships (NEEP) appreciates the opportunity to provide comments to ENERGY STAR's Luminaires V2.0 Specification Draft 1. After a careful review of the document and attending the associated webinar on 1/21, this letter is submitted on behalf of NEEP and the Cape Light Compact, henceforth referred to as 'NEEP'.

In general, NEEP is very pleased with the specification draft and the direction that EPA is headed with improving the quality and efficiency of luminaires.

Regarding section 6.3, Note Box 8, NEEP appreciates EPA's actions to streamline and simplify the testing process for stakeholders. This is a continuous challenge and NEEP feels the actions taken here are in the best interest of all parties.

Regarding section 8, Note Box 10, NEEP appreciates the expansion of the luminaires specification to include products that ship with ENERGY STAR certified lamps. The requirements listed are fair and reasonable and NEEP further agrees with the added stipulation that the lamps must be certified to the *current* effective version of the ENERGY STAR Lamp Specification.

Regarding section 9, Note Box 10 and 11 (there seem to be 2 Note Box 10s), NEEP is supportive of the direction EPA is taking regarding increasing efficacy levels. NEEP encourages EPA to set forward strong efficacy levels, especially as we are seeing new products in the market are gaining in efficacy. This will help the specification remain relevant for longer as well as increase the energy savings from the Luminaires product category. We have a few notes regarding a few specific product categories as outlined below:

- Regarding Cove lights, undercabinet, outdoor, and portable desk task products, we feel that the over 50% of current products qualifying is too many and would urge EPA to push those efficacies higher so that the ENERGY STAR Specification applies only to the most efficient products in all categories.
- When reviewing the gross number of products qualifying within these categories on ENERGY STAR's Product Finder, we find that for some categories, such as portable desk task lights, there are not many products that qualify under the current specification (58 products as of 1/13/2015). In that case, we are willing to be more lenient with the percentage of current products that would qualify for the new specification, though would still urge the EPA to set an efficiency level such that less than 50% of current products qualify. For Cove, undercabinet, and some of the outdoor categories, we feel that the efficacy level could be increased to help keep the percentage of currently qualifying products closer to the 25-30% that is the goal of ENERGY STAR programs and still have a diverse array of qualifying products.

NEEP also supports the EPA's considerations for lamps that provide secondary optics. Finally, NEEP supports the idea of tiered increased in efficacy, though the rapid improvements in LED efficacy make those decisions challenging at this point. NEEP feels that the right efficacy levels to set for the future hinges on when EPA see the next specification taking effect. NEEP requests that the EPA provide a schedule of anticipated enforcement of higher specifications upon which stakeholder could layer



efficiency levels. Roughly, however, it seems that a 10-20% increase in efficacy each year has been possible, and we are still relatively far away from LEDs reaching their max tech levels.

Regarding Zonal Lumen Density in Note Box 11, as they are the ones designing these luminaires, NEEP would request that EPA collect proposed categories from industry stakeholders which could be shared and commented on for the next round of revision. We feel that would be the most effective way to address this issue. In the meantime, however, we reiterate our ZLD comments made on the discussion document:

- We agree that there are some specialized categories of products and/or applications where the current ZLD Requirements may not be appropriate. Where justification can be made that these products/applications represent a significant energy efficiency opportunity, and the current ZLD requirements preclude consumers from choosing ENERGY STAR luminaires appropriate for those applications, we believe ENERGY STAR should explore development of additional ZLD requirements for those specific categories of products. It will be important that ENERGY STAR develop specific definitions for how those categories of products are different from existing categories so that the ZLD revisions do not become loopholes for misapplication that can lead to consumer dissatisfaction. Additionally, we encourage EPA to help ensure that consumers have adequate education on how the light is distributed for the various products. Perhaps a visual schematic could be developed for the direction categories mentioned to demonstrate how the light is distributed to suit consumer needs. NEEP offers the following specific comments to each proposed category:
 - **Non-symmetrical Downlights** - NEEP agrees that the current downlight ZLD requirements are not appropriate for non-symmetrical downlights that are often used for accent lighting. NEEP encourages ENERGY STAR to develop a new category and associated ZLD requirements for these products.
 - **Accent Lighting** - NEEP seeks detailed understanding from ENERGY STAR and stakeholders as to how the current ZLD requirements are not appropriate.
 - **Cove Lighting** - NEEP seeks detailed understanding from ENERGY STAR and stakeholders as to how the current ZLD requirements are not appropriate. The current asymmetric ZLD requirements were developed to ensure that light is distributed away from the cove itself to better meet consumer expectations and improve the application efficacy. Without a better understanding and justification, we question whether new ZLD requirements are needed.
 - **Undercabinet Lighting** - NEEP seeks detailed understanding from ENERGY STAR and stakeholders as to how the current ZLD requirements are not appropriate. The current asymmetric ZLD requirements were developed to ensure that the full counter-top is lit uniformly to better meet consumer expectations and improve the application efficacy. Without a better understanding and justification, we question whether new ZLD requirements are needed.

Regarding 9.3, Note Box 13, NEEP is supportive of color rendering requirements.

Regarding 10.1, Note Box 15, NEEP is very supportive of EPA's proposal to raise the lifetimes and lumen maintenance requirements for inseparable SSL luminaires. This will help ensure that products without replacement parts are in place for a long time and help efficiency programs better calculate the duration of energy savings. Additionally, the reduced sample size and increased passing requirement for fluorescents seem to be an appropriate specification improvement.

Regarding 11.1, Note Box 18, NEEP supports the EPA's decision to add start time back as a measure and additionally supports the smaller sample size and the reduction of time to .5 seconds. Ensuring start time is acceptable is key for continued consumer acceptance of efficient lighting, and .5 seconds is a



very reasonable time limit. Since most products do not struggle with start time, limiting the testing to 1 product seems fair and to be balanced with the critical importance of keeping this test in.

Regarding 11.5, Note Box 21, NEEP supports the changes for the power consumption of luminaires and stresses the importance of limiting the standby power consumption to .5 watt, at a maximum, for connected products. Adding connected functionality should ultimately make luminaires more efficient as it allows for better luminaire control such that the luminaire is only used when needed; allowing more than a .5 watt provision for connected or controlled luminaires will start to negate the positive efficiency impacts these products have.

Regarding 15.2.4, Note Box 28, NEEP agrees that the product must share information, but urge EPA to add the energy used by the product as another data point that must be able to be communicated. Luminous intensity when being dimmed will go down, but it is more important to understand the energy used (for example, is the product using 90% energy at 50% luminous output?). We feel that both the luminous intensity and the actual energy consumed at that time should be reported.

More generally, NEEP appreciates the approach this specification takes towards explicitly targeting residential applications. This should help clarify some existing confusion between the ENERGY STAR Luminaires program and the NEEP-administered Design Lights Consortium (DLC).

Thank you again for offering this opportunity to provide comments on this first draft of the Luminaires Specification. Please don't hesitate to contact me with any follow up questions or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read 'Claire Miziolek', with a long horizontal flourish extending to the right.

Claire Miziolek
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