



Ms. Taylor Jantz-Sell
Energy Star Lighting Marketing Manager
Environmental Protection Agency
1200 Pennsylvania Ave., MC 6202J
Washington, DC 20460

**Philips Lighting Comments on Energy
Star Luminaires V2.0 Draft 2**

Date: 2015-4-3

Dear Ms. Jantz-Sell,

Philips Lighting appreciates the opportunity to provide the attached comments on the Energy Star Luminaires V2.0 Draft 2.

As you may know, Philips North America is headquartered in Andover, Massachusetts. The U.S. Philips companies are affiliates of the Netherlands-based Royal Philips N.V., a diversified health and well-being company, focused on improving people's lives through meaningful innovations. Our long history in North America began in 1933, and today, it is the company's largest single market in the world, with approximately 22,000 employees and operations at 55 major facilities in 25 states and across 3 Canadian provinces. Sales for the region in 2013 was more than \$9.5 billion*, which accounts for more than 30% of Philips global revenue.

Philips is a diversified technology company, focused on improving people's lives through meaningful innovation in the areas of Healthcare, Consumer Lifestyle and Lighting. Innovation has been a cornerstone of the company's strategy for over 120 years, creating a strong and trusted Philips brand with market access all over the world. Philips is a leader in cardiac care, acute care and home healthcare,



Philips Lighting

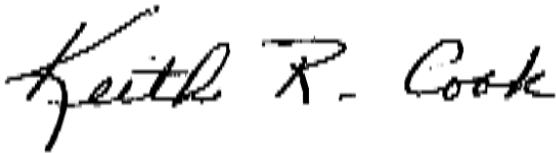
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energy efficient lighting solutions and new lighting applications, as well as male shaving/grooming and oral healthcare. Philips lights 65% of the world's top airports, 30% of offices and hospitals and landmarks such as the Empire State Building, the Sydney Opera House, the New Year's Eve Times Square Ball and the Great Pyramids. Philips owns more than 64,000 patent rights, is one of the world's top-50 most valuable brands, one of the world's top-50 most innovative companies, and ranked as one of the Best Global Green Brands by Interbrand.

Please find our detailed comments below. We look forward to working with you further on this important effort. If you have any questions on these comments, please contact me.

Sincerely,

A handwritten signature in black ink that reads "Keith R. Cook". The signature is written in a cursive style with a large initial "K".

Keith R. Cook
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Below are Philips' comments and recommendations regarding the development of the Energy Star Luminaires V2.0.

We are glad to see that Energy Star is allowing screw-base lamps in luminaires. Elimination of the GU24 base requirement makes sense. The concern that someone will replace an expensive LED lamp with an incandescent seems to be a remote concern –certainly not large enough to require a different base type and the accompanying multiplication of SKUs. The elimination of low efficacy incandescent lamps is happening anyway, making the concern even lower. We do not see a good reason to exclude directional screw base lamps, however, and encourage Energy Star to also allow screw base directional lamps in luminaires. There are many suitable directional lamps with excellent thermal performance. Large lamps, such as BR30/40 and PAR lamps have particularly good thermal performance because of their large surface area. Many Philips lamps (and possibly competitor lamps as well) contain thermal sensing and reduce power automatically if temperature becomes high, making them suitable for difficult thermal situations, even when the user disregards instructions and uses them in uses not covered by the instructions

We appreciate the scope expansion to include color tunable luminaires. We appreciate the attempt to keep testing minimal for these products. Detailed comments have been submitted to Energy Star Lamps discussion on connected lamps. These comments apply to tunable luminaires as well. Please apply our comments to the Energy Star Lamps discussion to Luminaires as well.

We are also submitting comments for the following:

- Standby Power
- ANSI nominal CCTs 2200 and 2500 Kelvin
- IES TM-21 Addendum A
- Downlight Efficacy
- Future tiers
- Overlap with DesignLights Consortium
- IEEE P1789

Standby Power

We see connected lighting as a whole new area for digital lighting. And although there are major efforts underway to reduce standby power, many protocols are

not there yet. For the lighting industry, this is a relatively new technology and it may be premature to start restricting design options and reducing creativity. As a result, for the time being we suggest maintaining the existing 1W maximum for standby power.

ANSI nominal CCTs 2200 and 2500 Kelvin

We would like for Energy Star to include the new ANSI nominal CCTs 2200 and 2500 Kelvin as defined in the forthcoming ANSI/ANSI C78.377-2015. We have received strong input from the market for these color temperatures and believe Energy Star will benefit from their inclusion.

IES TM-21 Addendum A

We would like to caution the EPA about the use of IES TM-21 Addendum A in its current version. The problem is it does not include preamble language informing the reader what exactly is intended to control: the original language with some additions, or if the Addendum is intended to replace the relevant portions of 2011 language. We understand that Dr. Cameron Miller at NIST, Chair of the IES Testing Procedures Committee, is personally working on this. It would be good for EPA to connect with Cameron.

Future Tiers

The “future tiers” is more accurately described as an automatic increase in efficacy, that will take effect two years after the specification effective date. Philips has concern that the 20% increase is based on assumptions that may not come true – or may come true with accompanying negative factors, like high cost or poor color maintenance. We believe that automatic changes based on future *assumed* performance improvements should not be made. We prefer that changes to the specification that reduce scope should be managed at the time the change is realizable, with all consequences apparent.

Overlap with DesignLights Consortium

For those products that overlap Design Lights Consortium, we recommend setting the efficacy levels to the same value as DLC. This may lead to elimination of redundancy between the two specifications and eliminate significant manufacturer testing/reporting burden in those product lines affected

IEEE P1789

We note the appearance in Draft 2 of references to IEEE P1789 – a standard being developed to address temporal light artifacts (flicker and stroboscopic effects) from LED products. This standard provides recommended limits for light output variation, based on a review of literature related to health concerns that are only qualitatively understood, if at all. It makes no allowance for application dependence. For instance, although certain stroboscopic effects (particular frequency and modulation depths) may increase hazards in a machine shop, where rotating machinery may appear to be stopped, they create no hazard in the vast majority of applications. Even incandescent lamps, which exhibit percent flicker from about 5 to 13%, fall partially in the low risk and partially in the non-low-risk area (which will probably be interpreted as high risk). If the standard excludes even incandescent lighting, then its usefulness is questionable. It may provide extremely low risk levels that are useful for specialty applications, but we think that P1789 is too limiting to be used by organizations such as Energy Star, which cover products used for a wide variety of applications.