



# The Cape Light Compact

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June 21, 2010

Alex Baker  
US Environmental Protection Agency  
Ariel Rios Building 6202J  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

Dear Mr. Baker:

The Cape Light Compact (CLC) respectfully submits the following comments in response to the ENERGY STAR Luminaire Draft 1 Version 1 Specification, released by the Environmental Protection Agency (EPA) on May 10, 2010.

Cape Light Compact is an intergovernmental organization consisting of the 21 towns and two counties on Cape Cod and Martha's Vineyard. The Compact's mission is to serve our 200,000 customers through the delivery of proven energy efficiency programs, effective consumer advocacy, competitive electricity supply and green power options.

CLC values the role ENERGY STAR plays in differentiating energy efficient products and services that we support locally. We appreciate the opportunity to provide these comments.

## COMMERCIAL LUMINAIRES

CLC believes that the differentiation of commercial and industrial lighting will likely benefit the customer groups involved, and we support ENERGY STAR including commercial luminaires in the program. The CLC would like to encourage stringent performance requirements to identify high quality commercial products that deliver significant energy savings and meet customer expectations. The CLC also urges EPA to add other commercial luminaire categories according to market availability, to establish a fuller range of commercial products. The Cape Light Compact asks that ENERGY STAR work with affected stakeholders to determine the program's role in the commercial sector, and communicate the outcome of those deliberations as soon as possible so that the result can be incorporated in efficiency program planning efforts.

## CATEGORIZATION OF LUMINAIRES

At a conceptual level, CLC supports requiring all light fixtures to undergo luminaire photometry for the following reasons. First, luminaire photometry provides the most accurate estimate of product's actual efficiency and light output to the consumer. Second,

it accounts for luminaire losses. Third, it may allow efficiency programs to capture new savings opportunities from well designed, efficient luminaires. In order for programs to continue to support the purchase of ENERGY STAR products, it's important that all categories of the ENERGY STAR luminaire specification deliver significant energy savings to the end user.

However, the CLC would like to express concern for the definitions of “directional” and “non-directional” as it does not appear to be very clear. In light of some of the distinctions between the two definitions, there is opportunity for confusion in the market as customers, programs, and manufacturers may not have the best definition for their luminaire. For example, portable light fixtures in our area are considered “functional” lighting as many of the older homes do not have hard-wired fixtures. Portable light fixtures, including torchieres are often used as the main source of illuminance in homes. Others in the same situation will include: ceiling and close-to-ceiling mount, pendant mounted, bath vanity, outdoor porch, outdoor pendant, and outdoor security, and potentially wall sconces.

The CLC is not supportive of the two different definitions as it may be confusing for customers. Instead, a single definition of lighting applications for homes should be considered to help the consumer understand the savings that these luminaires will deliver as well as ensure that energy efficiency programs will utilize the ENERGY STAR brand in future programs. With the “non-directional” lighting definition, it may be necessary for energy efficiency organizations to create a new “qualified” list to ensure quantifiable savings.

We also seek greater clarity on the definition for “inseparable luminaires.” For example, in some luminaires there is one embedded module that includes all components, while in other products, the chip, chip and driver, or the heat sink can be replaced separately.

## EFFICACY LEVELS

Given the efficacy of current ENERGY STAR qualified luminaires and the capability for technology improvements as outlined in DOE’s Multi-Year Program Plan for solid-state lighting (SSL), the proposed luminaire efficacy levels appear to be low. CLC encourages ENERGY STAR to consider trends in product innovation and to set efficacy levels that maximize energy savings when the specification becomes effective in June 2011.

In addition, given the CLC’s comments above on non-directional lighting, the CLC would be supportive of luminaire efficacy rather than source efficacy across the categories to ensure significant energy savings.

## LUMEN MAINTENANCE

In the draft specification, EPA identifies two options for measuring lumen maintenance. Option 1 would measure lumen maintenance at the chip level using the IES LM-80-08, while Option 2 would measure lumen maintenance at the luminaire or light engine level, taking into account degradation of the driver and any secondary options. EPA has stated a preference for Option 2 within the notes section of the draft specification. CLC generally

agrees that Option 2 appears to offer a more robust examination of lumen maintenance; however we have a number of outstanding questions, listed below. Once we have more information, we will consider commenting on the specific proposal in the draft specification.

- What is the status of test procedure IES LM-xx-1x?
- What is additional cost and time for manufacturers for Option 2?
- Is 6,000 hours enough testing to determine whether the driver will last?
- Is it possible just to add a driver test to Option 1?

## LIFETIME

The draft specification includes a proposal that manufacturers would not be allowed to claim over 25,000 or 35,000 hour lifetimes for their products (depending on product type). CLC understands the purpose of this requirement is to prevent manufacturers from overstating lifetime claims based on 6,000 hours of testing and we support ENERGY STAR's efforts to protect the consumer. However, the current proposal would affect the longevity of efficiency programs' savings estimates and their cost/benefit calculations. For example, if the finalized TM-21 test report indicates that a product lasts 50,000 hours, efficiency programs would like to "count" on those savings for that entire lifetime, at least for higher hours of use applications. We ask that ENERGY STAR further consider the implications of this requirement on efficiency programs and perhaps allow manufacturers to claim greater lifetime if they provide sufficient data (e.g. test reports indicating they are under-driving the LEDs or performing more than 6,000 hours of testing).

## MINIMUM LIGHT OUTPUT

The proposed minimum light output for non-directional luminaires is a minimum 850 lumens, which is roughly equal to a 60-75W incandescent. While CLC understands EPA's desire to prevent under-lighting and falling short of consumers' expectations, we are concerned that the proposed minimum lumen level could lead to over-lighting in some applications. We ask that ENERGY STAR further consider this requirement, specifically whether it makes sense to have a minimum light output requirement for all non-directional luminaires versus specific applications, such as outdoor and to provide further rationale for why 850 lumens is the desired minimum level.

## CORRELATED COLOR TEMPERATURE (CCT)

In the draft specification, EPA has identified allowable CCTs up to 4100K for indoor luminaires. We support this requirement with the understanding that it will help ensure that the color of ENERGY STAR-qualified luminaires meets consumer expectations in terms of warmth and consistency. However, we ask ENERGY STAR to consider expanding the range of allowable CCTs in the near future. We believe that a full range of color temperatures would more completely meet the needs of commercial customers and enable ENERGY STAR luminaires to be used in a wider range of applications.

Thank you for your consideration of these comments. Please contact Margaret Song at 508-375-6843 with any questions.

Sincerely,

*Margaret Song*

Margaret Song  
Residential Program Manager  
Cape Light Compact