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January 12, 2007

Mr. Richard Karney  
DOE ENERGY STAR Product Manager  
richard.karney@ee.doe.gov

Dear Mr. Karney,

This is in response to the "Draft ENERGY STAR Program Requirements for Solid State Lighting Luminaires; Eligibility Criteria – Version 1.0" dated December 20, 2006. I work for PolyBrite International, Inc. with corporate headquarters in Naperville, Illinois. We design and manufacture LED decorative and general illumination lamps including the PAR38 and MR16.

The specific topic I would like to address is summarized in the following sentence from the Draft: "No standards or test procedures exist or are planned in the foreseeable future to measure system efficacy of LEDs (p. 5)." With this letter we request that you reconsider this position. We would like to be eligible to apply for the ENERGY STAR label for our LED decorative and general illumination lamps because they are an energy-efficient, cost-effective alternative to incandescent, metal halide and, soon, fluorescent light sources.

I would like to begin by addressing the first two reasons given on page 5 for using *luminaire* efficacy (lamp, ballast and fixture) instead of *system* efficacy (lamp and ballast only) for the new ENERGY STAR requirements. With regard to the first reason, I have not seen an LED array whose "geometry, configuration and size" would prevent it from being "accurately measured in an integrating sphere." Given that such arrays evidently exist, would it not also present a problem once the array is embedded in a fixture? Could not a large-scale goniophotometer be used in either case to obtain the measurements? With regard to the second reason, in our lamps the heat sink is incorporated into the design of the lamp. In sum, our lamps are self-contained and are not sold with a fixture. They do not require a fixture for the purpose of providing a ballast, heat sink or any other component.

Next, I would like to discuss what I think is a good reason for measuring luminaire efficacy instead of system efficacy that was not presented on page 5. While you would be in a much better position to know if this is true, I would imagine that lamps with an ENERGY STAR label are frequently installed in a fixture that not only does not have an ENERGY STAR label but, in fact, may have a very low efficacy, even well below 50%. This practice partially defeats the purpose of the energy-efficient, ENERGY STAR lamp. Measuring luminaire efficacy ensures that the efficacy of the fixture will be taken into account.

However, to enable LED lamps to be eligible for the ENERGY STAR label and ensure that energy efficient lamps are installed in energy efficient fixtures, we would like to propose that you consider giving the ENERGY STAR label to LED lamps that not only meet an efficacy requirement but are also fitted with non-standard bases such as the GU24 which can be fitted only into non-standard sockets in fixtures. Fixtures with these non-standard sockets could be required to meet the ENERGY STAR requirements for fixtures.

You may have other ideas as to how LED lamps could become eligible for the new ENERGY STAR. Our primary concern is that LED lamps not be denied the opportunity to apply for the ENERGY STAR label. Residential customers already enjoy a high degree of acceptance and comfort with lamps like the A lamp and the PAR38. Our PAR38 lamp has an independently confirmed efficacy of 35 lumens/watt; we expect to surpass 50 l/w during the next 12 months. We would like to have the opportunity to use the ENERGY STAR label to promote the purchase of these kinds of energy-efficient lamps. Thank you for giving your consideration to this proposal. If you have any questions, please feel free to contact me at the above telephone number or via e-mail.

Best regards,

Guy Vaccaro