August 25, 2008

Energy Star Program Requirements for RFL
Eligibility Criteria V 4.2

This industry feedback is being supplied by American Fluorescent Co., which is a fluorescent and LED luminaire manufacturer located in Waukegan Illinois. It is written by Mr. Dan Filips P.E., who is employed as a Senior Project Engineer for this privately held company.

In general, American Fluorescent Co. (AFC) believes the Energy Star requirements for the performance parameters under Table 4- [Indoor & Outdoor Fixtures Employing LED Light Engines for Primary Illumination] are too stringent for the SSL industry at this time.

Specifically, American Fluorescent Co. has direct experience with industry leading LED illumination component and driver manufactures who are currently incapable of providing light-engine parts and sub-systems that conform to some of the proposed requirements. Below are AFC's recommendations for the color rendering index, power factor, and efficacy.

Light engine color rendering index (CRI) greater than or equal to 75 or better: This requirement should be 63 for the next couple of years which will allow manufacturers to change the design and or phosphorous coating thereby improving the CRI output.

Power factor value of 0.7 or better: Some of the leading LED driver manufactures presently are not capable of producing a commercially available constant current LED driver in the 6 to 16 watt output range that can meet this requirement. A power factor of 0.5 or better is far more reflective of the current commercial capability for such a device. Moreover, a lower wattage luminaire will consume far less energy than a larger device and therefore can tolerate a lower power factor requirement value.

LED light engine efficacy [for covered LED light engines of] greater than equal to 40 LPM: This requirement does not seem account for the use of LED light output (which is inherently focused & directional) to illuminate the luminaire itself - exclusively for aesthetic reasons - in addition to supplying functional light for primary task-lighting purposes. Moreover the efficacy is proportional to the LED driver power factor. Therefore, a light-engine powered by a less efficient driver will have a lower efficacy than a comparable one that uses a higher power factor LED driver. American Fluorescent Co. is recommending a value of 20 LPM for this version of the Energy Star Program Requirements for RFL.

Otherwise, we find the rest of the document pertaining to SSL to be agreeable.

Sincerely,

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