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Performance Tiers Definitions

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Tier 0: Minimum Acceptable Performance for Off-Grid Applications

This tier is intended to be the minimum acceptable performance when products are used for off-grid applications. Products in this tier are safe to use and reliably provide basic lighting. They use less energy and last longer than basic incandescent sources.

SSL products in this tier have/are:

- Efficacies that enable significantly longer battery life and more efficacious than technologies currently being used.
- Light output sufficient for basic domestic applications/reading or studying.
- Provide basic lighting with longer operating lifetimes than basic incandescent sources.
- Safe to use.

Tier 1: Minimum Acceptable Performance for Grid-Connected Applications

This tier is intended to be the minimum acceptable performance when products are used for grid connected applications. Products in this tier reliably provide basic lighting and use less energy and last longer than basic incandescent sources.

SSL products in this tier have/are:

- Efficacies providing significant energy savings relative to incandescent lamps. In the case of linear fluorescent replacements, these SSL products perform at the level of an electronically ballasted T8 fluorescent lamp.
- Reliability and lifetimes are superior to the lighting products they are intended to replace.
- Total light output and intensity distribution should be roughly similar to the products they are intended to replace.
- Safe to use.

Tier 2: Performance Required by Established Quality Programs

This tier is intended to be similar or equal to the performance required for established voluntary programs for quality LED products, such as the EU Quality Charter, the US Energy Star or Japan's Green Procurement Law.

SSL products in this tier have/are:

- Efficacies providing similar energy use relative to CFL products or in the case of linear fluorescent, these SSL products perform at the level of a high-performing, electronically ballasted T8 fluorescent lamp.
- Reliability and lifetimes are superior to the lighting products they are intended to replace.
- Light output, quality of light and intensity distribution should be similar to the products they are intended to replace.
- Safe to use.

Tier 3: Current Highest Commercially Available Performance

This tier is intended to represent the highest performing products available on the market in late 2011 and early 2012. It is similar to the performance required for program for the most efficient LED products, such as the US Department of Energy's L-Prize, the SEAD program or the Japanese Top Runner program.

SSL products in this tier have/are:

- Efficacies providing significant energy savings relative to CFL products. In the case of linear fluorescent, these SSL products perform at the level of a T5 linear fluorescent lamp.
- Reliability, quality of light and lifetimes are superior to the lighting products they are intended to replace.
- Light output and intensity distribution are similar to the products they are intended to replace.
- Safe to use.