



# IFC/GEF Efficient Lighting Initiative Voluntary Technical Specification Public Area Lighting

## **Background**

Developing countries often share common market barriers to the use of energy-efficient lighting. Barriers include inadequate information about the energy, economic and environmental benefits of efficient lighting, and a lack of credible sources of such information.

To address these barriers, ELI develops and promotes voluntary technical specifications that include rigorous technical and quality criteria. ELI has a labeling system that helps consumers identify energy efficient lighting products that meet the ELI specifications. ELI programs include marketing, educational, market building, and financing activities. Each participating country tailors its activities to meet the needs of the local market. These activities are supported by US\$15 million in Global Environment Facility funding, and by additional local and international funding. Lighting manufacturers whose products meet the ELI specifications are invited to launch product promotions and advertising campaigns in cooperation with ELI's local marketing programs.

Manufacturers interested in ELI should review the ELI voluntary technical specifications to determine whether or not their products could comply. They should then review the ELI qualification protocol for guidance on how their lighting products could receive the ELI label.

## **Public Area Lighting**

A wide variety of mature, energy efficient options for street and public area lighting technology are now available. The following specification recognizes that most purchasers of public area lighting will be well informed and will be buying on behalf of commercial or institutional organizations. It also recognizes that different applications for public area lighting require different levels of light quality, longevity, etc. Therefore, this specification establishes only a minimum efficiency level. The proposed specification is not technology specific, but the proposed efficiency level probably will exclude most of the older generation of mercury vapor products.

## **Definitions**

### **Public Area Light**

A light source intended for general outdoor lighting of areas such as streets and other public areas. Public area lighting is usually mounted on a mast or pole.

### **Ballast**

An electromagnetic or electronic device used with an electric-discharge lamp to obtain the necessary circuit conditions (voltage, current and waveform) for starting and operating.

### **Efficiency**

Luminous flux divided by Input Power in units of lumens per watt (lm/W).

### **Luminous Flux**

Lumens generated by the street light after an initial burn-in period of 100 hours. Luminous flux shall be the lumens generated by the lamp-ballast circuit used in the public area luminaire in question under stable operation at maximum power.

### **Input Power**

Power drawn by the lamp-ballast circuit in stable operation after an initial burn-in period of 100 hours. Input Power shall be the power measured in watts (W) by the lamp-ballast circuit used in the public area luminaire in question when under stable operation at maximum power.

**Luminaires intended for public area lighting:**

<b>Parameter</b>	<b>Performance Specification</b>
At rated wattage for lamp-ballast circuit At Input Power of < 150 W: At Input Power of $\geq 150 < 250$ W: At Input Power of $\geq 250$ W:	$\geq 70$ lm/W $\geq 90$ lm/W $\geq 100$ lm/W Tested in accordance with IEC 60598-2-3. Luminaires. Part 2: Particular requirements. Section 3: Luminaires for Road and Street Lighting.
Light Distribution	The luminaire must emit no light upward and must be restricted to less than 200 cd/steradian in the region 80 to 90 degrees from the downward vertical.
Luminaire Design	Luminaires must be designed to reduce lumen output degradation from the build up of dust and insects.

Note: Technology choice may also be influenced by local requirements regarding Color Rendering Index (CRI) or other light quality concerns.

**Reference Specifications**

IEC 60598-2-3 Particular requirements; Luminaires for Road and Street Lighting.

**Inquiries**

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