

# IEC 62471

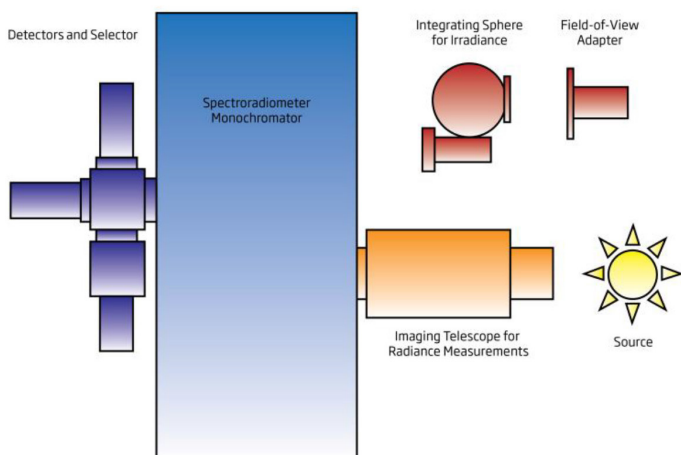
The lighting industry has fundamentally changed. New light sources are emerging rapidly into general lighting service. Manufacturers of lamps and emitters, lighting systems, and luminaires are required to measure the light produced, and evaluate the photobiological hazard in accordance with the IEC 62471 standard. Optronic Laboratories provides spectroradiometer systems worldwide to manufacturers of lighting components and finished products, as well as to leading independent test laboratories.

To assess the risk of injury to persons using lighting products, the spectral distribution of the emission must be determined not only for the visible but over a broader range, starting at 200 nm in the UV and scanning to 1400 nm in the SWIR region. Also, IR irradiance out to 3000 nm must be quantified.

To meet these requirements, OLI provides a specially configured spectroradiometer system based on the proven OL 750D double-monochromator, with accessories designed to collect the light according to the methods and geometric constraints specified for each photobiological hazard defined in the IEC 62471 standard. The modularity of the system allows the user to quickly change setups between the various field-of-view acceptance angles, in both radiance and irradiance modes. NIST-Traceable standards of spectral irradiance and radiance are provided to enable the user to calibrate the system on-site, with full traceability.

The OL IS-670I Integrating Sphere is employed for irradiance collection. When measuring radiance at the source, an OL 600 Telescope is employed. Its multiple apertures and interchangeable lenses provide means to image the source at the required FOV and distance. A CCD camera provides an on-screen view for alignment and image capture to document the measurement spot location.

Once the lighting product is aligned with the appropriate collection optics, the OL 750D proceeds to scan the spectral range of the particular measurement. Gratings, filters, and detectors are automatically selected as the scan progresses. The bandpass changes are automatic as well.



**OPTRONIC**<sup>®</sup>  
LABORATORIES

**Application Note: A23 Jan 2022**

As part of our policy of continuous product improvement, we reserve the right to change specifications at any time.