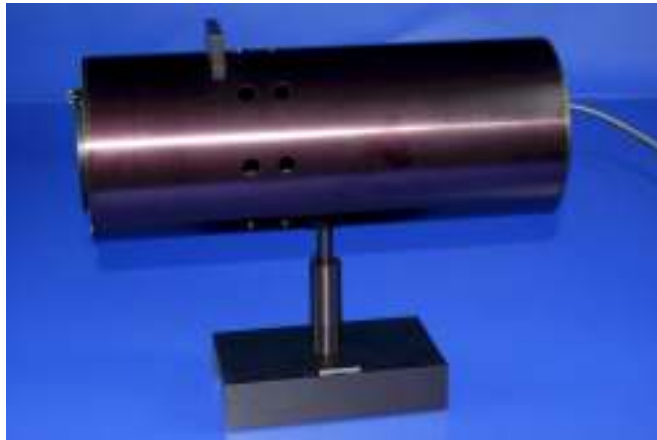


OL 345

Radiometric and Photometric Calibration Standard



GENERAL DESCRIPTION

The OL 345 Calibration Standard consists of a 45-watt tungsten-halogen lamp and a removable 2-inch diameter flashed-opal diffuser mounted in an air-cooled, machined, cylindrical housing. With the diffuser in place, the uniform, 15.5 cm² radiating source serves as a standard of spectral radiance over the wavelength range of 350 to 1100 nm and as a standard of luminance. When the diffuser is removed, the OL 345 serves as a standard of spectral irradiance from 250 to 2500 nm and as a standard of illuminance. The OL 345 can also be obtained with the source operating at a specified color temperature.

A filter holder is provided for inserting 2-inch square filters into the unit between the lamp and the diffuser. Spectral shaping filters for simulation of various types of CRT phosphor screens and for obtaining color temperatures up to 6000 K are available. Narrow band interference filters for obtaining discrete spectral radiances and irradiances are also available.

APPLICATION

The OL 345 is a rugged, versatile radiometric and photometric standard capable of accurately calibrating a large variety of light measuring instrumentation. When the 2-inch diameter opal diffuser is attached, the unit is ideal for calibrating such instrumentation as telephotometers, microphotometers, telespectroradiometers, etc. When the opal is removed, the absolute calibration of spectral irradiance and illumination measuring instrumentation is easily accomplished.

The ability to insert either narrow band interference filters or spectral shaping filters in the beam enables the calibration of various radiometers and photometers to be made quickly and accurately.

TYPE OF CALIBRATION

MODEL NO.

Uncalibrated.....	OL 345U
Spectral Irradiance (250-2500 nm) & Spectral Radiance (350-1100 nm).....	OL 345R
Illuminance, Luminance & Color Temperature	OL 345P
All of the above	OL 345RP

Contact Optronic Laboratories directly for information concerning calibrations with spectral shaping filters and interference filters. All calibrations are performed at 6.500 amps unless otherwise specified. Calibration at a specific color temperature is available as an option.

SPECIFICATIONS

Spectral Irradiance @ 650 nm	0.6 $\mu\text{W}/\text{cm}^2\text{nm}$ (typical)
Spectral Radiance @ 650nm	0.45 $\mu\text{W}/\text{sr cm}^2\text{nm}$ (typical)
Illuminance @ 6.500 amps	24 fc (typical)
Luminance @ 6.500 amps65 fL (typical)
Radiometric Accuracy	$\pm 2\%$ @ 650 nm
.....	$\pm 4\%$ @ 250 nm
Photometric Accuracy	$\pm 1\frac{1}{2}\%$
Stability	50 hrs. for $\pm 1\%$ change
Lamp Power.....	45 watts (6.500 amps)
Diameter	5 $\frac{1}{2}$ inches

**The OL 65A Programmable DC Current Source (see Bulletin 121)
is recommended to power the OL 345.**