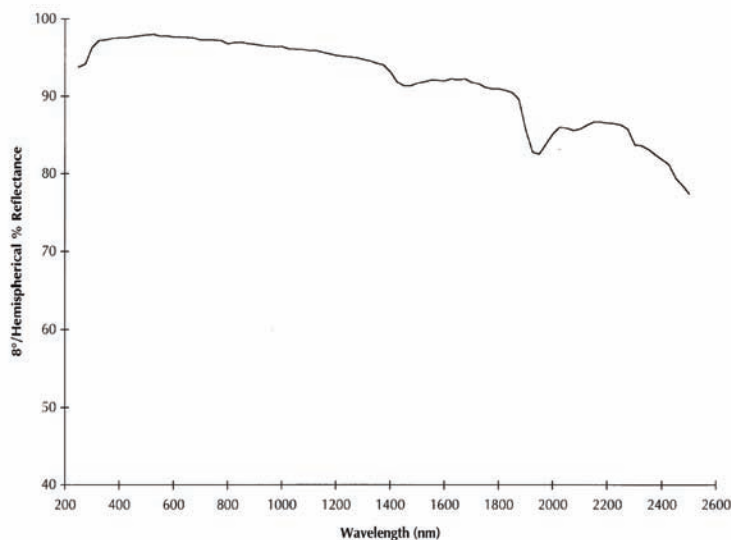


# LARGE PLMS PHOTOPIC LIGHT MEASUREMENT SYSTEMS

An accurate, flexible, and easy-to-use system for measuring total luminous flux lamps

## SPRECTRAFLECT® REFLECTANCE COATING



## ACCURATE

The Large PLMS integrating sphere photometers feature Spectrafect® coated 40, 65, or 76-inch diameter lamp measurement spheres. Spectrafect combines 98% reflectance with nearly perfect Lambertian diffusion. Both durable and highly stable over time, this coating ensures optimal integration of light over the lifetime of your sphere.

A cosine receiver with an integrated photometer collects the average sphere wall radiance. The CIE recommended geometry reduces errors associated with directional lamps. The lamp standards of total luminous flux provide NIST traceable results with every measurement. An optional auxiliary lamp corrects device under test (DUT) absorption differentials for added precision.

## FEATURES:

- NIST Traceable Calibrated Total Luminous Flux Lamp Standard
- Adjustable Lamp Mount
- Absorption Correction Port
- Temperature Probe Port
- Base up/Base Down Configuration
- Variety of baffles to match the test lamp
- Spectrafect® Interior
- CIE Recommended Geometry for Total Luminous Flux
- Backed by an ISO 9001:2000 Registered Quality Management System

## BEST FOR MEASURING:

- Indoor and Outdoor Lamps
- Specialty Lamps
- Automotive Lamps
- Architectural Lighting

## FLEXIBLE DESIGN

The PLMS series is quickly expanded or upgraded with a variety of interchangeable light measurement accessories including lamps, filters, detectors, and port reducers. The lamp mount allows for base up, base down, and horizontal lamp positioning. Exchangeable baffles give optimal detector screening efficiency. The base port design allows for an additional cable feed-through for assembled fixtures and an external port permits unobstructed mounting of board-mounted or heat-sinked devices for forward and partial flux measurements.

## EASY-TO-USE

The systems are built on specially designed rails to ensure the smooth opening and closing of the sphere. The lamp mount is a telescopic design so a quick twist adjusts the position of the lamp. The quick connect internal and external electrical contacts allow for effortless substitution between DUT's as well as the ability to interchange a variety of components.



# Specifications

| System Model Numbers                           | 40 in. (1.02 m)        | 65 in. (1.6 m)        | 76 in. (2 m)        |
|--|------------------------|-----------------------|---------------------|
| Photopic Light Measurement Systems, PLMS Large | AS-02479-100           | AS-02480-100          | AS-02481-100        |
| <b>System Includes</b>                         | <b>40 in. (1.02 m)</b> | <b>65 in. (1.6 m)</b> | <b>76 in. (2 m)</b> |
| Light Measurement Sphere                       | AS-02479-000           | AS-02480-000          | AS-02481-000        |
| CL-1400, Luminous Flux Standard                | AS-01342-000           | AS-01342-000          | AS-01342-000        |
| Min Screw Lamp Socket Assembly                 | AS-02236-000           | AS-02236-000          | AS-02236-000        |
| LPS-150-0268, Lamp Power Supply                | AS-02656-268           | AS-02656-268          | AS-02656-268        |
| SDA-P, CE, Photopic Detector                   | AS-02522-001           | AS-02522-001          | AS-02522-001        |
| SC-5500 System Control Radiometer/Photometer   | AS-01636-100           | AS-01636-100          | AS-01636-100        |

## System Properties and Performance

| Sphere Diameter                | 40 in. (1.02 m)                                 | 65 in. (1.6 m)                                   | 76 in. (2 m)                                     |
|--------------------------------|---|--|--|
| Sphere Coating Reflectance     | 98%   | 98%  | 98%  |
| Radiometric Range              | 1500W (max)                                     | 4000W (max)                                      | 5000W (max)                                      |
| Photometric Range              | 10 lm - 30000 lm                                | 20 lm - 70000 lm                                 | 30 lm - 100 klm                                  |
| Max recommended lamp dimension | 4 x 4 in(10 x 10 cm)                            | 7 x 7 in(18 x 18 cm)                             | 8 x 8 in(21 x 21 cm)                             |
| Maximum Tubular Lamp Length    | 24 in (60 cm)                                   | 34 in (86 cm)                                    | 52 in (1.3 m)                                    |
| Sphere Weight                  | 187 lbs (84.7 kg)                               | 600 Lbs (272 kg)                                 | 800 lbs (363 kg)                                 |
| Sphere Dimension (W x D x H)   | 48.9 x 42.3 x 68.5 in<br>(1.24 x 1.07 x 1.74 m) | 112.6 x 78.4 x 84.1 in<br>(2.86 x 1.99 x 2.13 m) | 116.9 x 88.2 x 91.4 in<br>(2.97 x 2.24 x 2.32 m) |

| Detector    | VA Filter Silicon Photodiode |
|-------------|------------------------------|
| Active Area | 5.7 mm <sup>2</sup>          |
| Range       | Visible                      |
| f1'         | 4%                           |
| Connector   | Triax                        |

| Radiometer/Photometer | SC-5500                                  |
|-----------------------|--|
| Power Requirements    | 110/220 VAC, 50/60 Hz                    |
| Current Dynamic Range | 1pA - 1mA                                |
| Voltage Dynamic Range | 10mVdc - 50Vdc-                          |
| Computer Interface    | IEEE-488 and RS-232C                     |
| Weight 14 lbs         | (4.75kg)                                 |
| Dimension W x D x H   | 16.5 x 16 x 5<br>(41.9 x 40.6 x 12.7 cm) |

| Lamp Standard             |                              |
|---------------------------|------------------------------|
| Power                     | 75 W                         |
| Approximate Luminous Flux | 1400 lm                      |
| Rated Life                | 2000 hrs                     |
| Calibration               | Total Luminous Flux (lumens) |

| Power Supply          | LPS 150-0268                                  |
|-----------------------|---|
| Power Requirements    | 110/220 VAC, 50/60 Hz                         |
| Current Stability     | +/- 0.01%                                     |
| Current Rise Time     | 20 +/- 5 seconds                              |
| Regulated Current     | 2.679 A +/- 0.1%                              |
| Weight                | 6.5 lbs (2.9 kg)                              |
| Dimension (W x D x H) | 8.3 x 10.5 x 3.5 in<br>(21.1 x 26.7 x 8.9 cm) |
| Compliance            | CE  |

| Optional Accessories                         |              |
|--|--------------|
| AUX-35 Lamp Assembly                         | AS-02639-000 |
| LPS-100-0307, Preset Power Supply 3.07 A 35W | AS-02600-307 |
| Preset LPS Mounting Kit                      | AS-02482-000 |
| CLFS-1400, Calibrated Luminous Flux Set      | AS-01344-000 |
| CSFS-1400, Spectrally Calibrated Lamp Set    | AS-01343-000 |
| PA-200-050MM, 50mm Precision Aperture        | AS-02487-050 |
| DAS-1100 Diode Array Spectrometer            | AS-01682-100 |
| DAS-2100 Diode Array Spectrometer            | AS-01684-100 |

