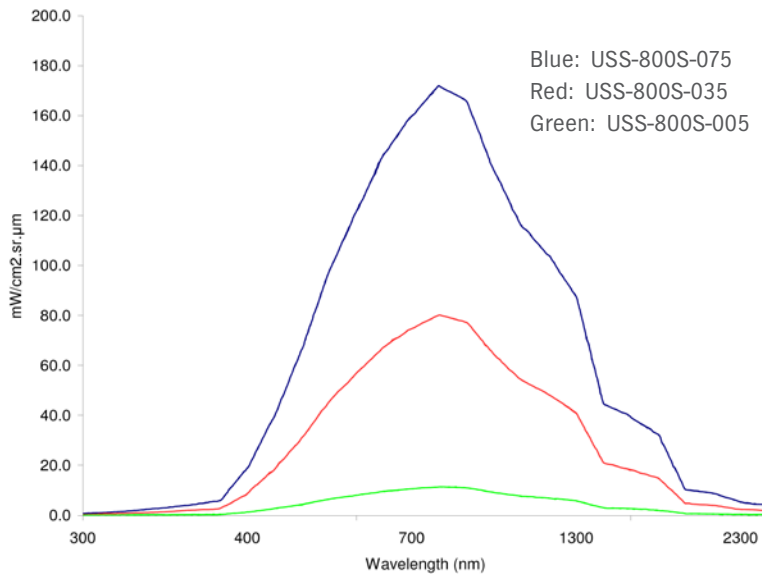


# USS-800S UNIFORM SOURCE SYSTEMS

Exceptional uniform radiance for the test and calibration of imaging and non-imaging devices

## SPECTRAL RADIANCE PLOT



## ACCURATE

The USS-800S systems are sensor calibration systems designed to provide stepped exceptional luminance output values of 70500, 31000 or 3000 cd/m<sup>2</sup> depending on the system configuration, for imaging and non-imaging systems. A built-in photopic response photodetector monitors the source luminance. Each system provides calibrations that are traceable to the National Institute of Standards and Technology (NIST).

The 8-inch Uniform Source systems center on an 8-inch diameter integrating sphere with a 2-inch exit port suitable for portable imaging systems and arrays. The sphere is coated with highly reflective Spectrafect® coated interior that provides a better than 98% uniformity. Both durable and highly stable over time, Spectrafect coating ensures the consistent integration of light over the lifetime of your sphere.

## FEATURES:

- Stepped radiance output of 70500, 31000 or 3000 cd/m<sup>2</sup>
- Spectrafect interior provides >98% radiance uniformity
- Simple design
- Radiometric and photometric calibration reports
- NIST traceable luminance calibration
- Backed by an ISO 9000:2001 registered quality management system

## BEST FOR CALIBRATING:

- Imaging radiometers
- Cameras
- Telespectroradiometers
- Small-area remote sensing devices
- Displays

## FLEXIBLE DESIGN

The USS-800S systems yield high returns on investment by facilitating system modifications, upgrades and enhancements. A broad choice of light sources allow users to swap lamps in order to choose the appropriate configuration to meet their radiance performance requirement. Spectrafect coated port accessories allow users to reduce the port size of their sphere to match their applications.

## EASY-TO-USE

A durable port framed exit port allow for the repetitious mounting of devices under test. The USS-800 systems are operated through a control chassis that features a regulated DC constant current power supply and an SC 6000 radiometer/controller that provides accurate monitoring and control of the exit port luminance. Digital readout of the source output is displayed on an LCD display located on the front panel of the SC 6000. Ethernet ports are included for optional computer interface.



USS-800S

# Specifications

## Model and Description

USS-800S 8-inch Stepped Uniform Source System

### System Includes

8-inch Uniform Source Sphere USS-800-SF  
 Internal Halogen Lamp Supply IHLS-100-005, 035, 075  
 Preset Power Supply LPS-100-0042, 0307, 0625  
 Photopic Detector SDA-050-P-RTA-CX  
 Radiometer/Photometer SC 6000  
 Luminance calibration SCC-LU

## USS-800S-005

AS-02710-100  
 AS-02465-000  
 AS-02631-005  
 AS-02600-042  
 AS-02522-301  
 AS-02702-000  
 SCC-LU

## USS-800S-035

AS-02710-200  
 AS-02465-000  
 AS-02631-035  
 AS-02600-307  
 AS-02522-301  
 AS-02702-000  
 SCC-LU

## USS-800S-075

AS-02710-300  
 AS-02465-000  
 AS-02631-075  
 AS-02600-625  
 AS-02522-301  
 AS-02702-000  
 SCC-LU

## System Properties and Performance

### System Specifications

	USS-800S-005	USS-800S-035	USS-800S-075
Sphere Diameter	8 in (20 cm)	8 in (20 cm)	8 in (20 cm)
Exit Port Diameter	2 in (5 cm)	2 in (5 cm)	2 in (5 cm)
Sphere Coating Reflectance	98%	98%	98%
Luminance Range (cd/m <sup>2</sup> )	3000	31000	70500
Luminance Range (ft-L)	850	9200	20600
Illuminance Range (lux)	9400	97000	220000
Peak Radiance (mW/cm <sup>2</sup> -sr- $\mu$ m at 0.9 $\mu$ m)	11	77	166
Luminance Uniformity*	>98%	>98%	>98%

\* Applies at maximum radiance, uniformity may vary at lower radiance levels.

### Detector

Active Area	5.7 mm <sup>2</sup>
Range	Visible
f1'	4%
Connector	BNC

### VI Filter Silicon Photodiode

### Radiometer/Photometer

Power Requirements	110./220 VAC, 50/60 Hz
Current Dynamic Range	1 pA – 1 mA
Voltage Dynamic Range	10 mVdc – 50 Vdc-
Computer Interface	Ethernet

### SC 6000

### Lamp Assemblies

Power	IHLS-100-005	IHLS-100-035	IHLS-100-075
Color temperature	Qty 1, 5 W 3000K	Qty 1, 35 W 3000K	Qty 1, 75 W 3000K

### Power Supplies

Power Requirements	LPS-100-0042	LPS-100-0307	LPS-100-0625
Current Stability	110./220 VAC, 50/60 Hz	110./220 VAC, 50/60 Hz	110./220 VAC, 50/60 Hz
Current Rise Time	0.42 A +/- 0.1%	3.07 A +/- 0.1%	6.25 A +/- 0.1%
Weight	20 s	20 s	20 s
Dimension (W x D x H)	6.5 lbs (2.9 kg)	6.5 lbs (2.9 kg)	6.5 lbs (2.9 kg)
	8.3 x 10.5 x 3.5 in (21.1x 26.7 x 8.9 cm)	8.3 x 10.5 x 3.5 in (21.1x 26.7 x 8.9 cm)	8.3 x 10.5 x 3.5 in (21.1x 26.7 x 8.9 cm)
Compliance	CE	CE	CE

### Recommended Computer Requirements

Operating System	Windows 98® 2nd Edition, Windows 2000® PE or later
Drives	CD-ROM Drive
Ports	TCP/IP

### Optional Calibrations

Standard Spectral Radiance Calibrations	USC-SR (300-2400 nm)
Radiance Calibration	SCC-RA
Exit Port Luminance Uniformity Mapping	USC-PM
Illuminance Calibration	SCC-IL
Custom Spectral Radiance Calibrations Optional	