

# Biospherical Instruments Inc.

## CALIBRATION CERTIFICATE

Calibration Date 11/04/15  
Model Number QSR2150A Firmware Version v 2.07  
Serial Number 50212  
Operator TPC  
Standard Lamp V-033(3/3/15)  
Sensor Operating Voltage Range: 6 to 15 VDC (+)  
Output Polarity: Positive

### Sensor Output Voltage:

|                     |              |    |
|---------------------|--------------|----|
| Sensor Illuminated  | <u>110.9</u> | mV |
| Sensor Dark         | <u>10.1</u>  | mV |
| Sensor Net Response | <u>100.8</u> | mV |
| RG780               | <u>10.2</u>  | mV |

### Corrected Lamp Output:

Output In Air (same condition as calibration):

1.559E-02  $\mu\text{E}/\text{cm}^2\text{sec}$   
9.391E+15 Quanta/ $\text{cm}^2\text{sec}$

### Calibration Scale Factor:

(To calculate irradiance, divide the net voltage reading in Volts by this value.)

6.465E+00 Volts/ $(\mu\text{E}/\text{cm}^2\text{sec})$

6.465E-04 Volts/ $(\mu\text{E}/\text{m}^2\text{sec})$

### Notes:

1. Annual calibration is recommended.
2. Calibration is performed using a Standard of Spectral Irradiance traceable to the National Institute of Standards and Technology (NIST).
3. To approximate the sensor's saturating irradiance, multiply the calibration factor by the sensor power supply voltage, minus one volt.
4. The collector should be cleaned frequently with alcohol.

Installed 9 March 2018 AMS