Biospherical Instruments Inc.

CALIBRATION CERTIFICATE

| Calibration Date | 2/17/2015 | | | | |
|---------------------------------|---------------|---|----|----|--------|
| Model Number | QSR2200 | | | | |
| Serial Number | 20286 | | | | |
| Operator | TPC | | | | |
| Standard Lamp | V-033(3/7/12) | | | | |
| Probe Excitation Voltage Range: | | 6 | to | 18 | VDC(+) |
| Output Polarity: | Positive | | | | |

Probe Conditions at Calibration(in air):

| Calibration Voltage: | 6 | VDC(+) |
|----------------------|-----|--------|
| Probe Current: | 4.0 | mA |

Probe Output Voltage:

| Probe Illuminated | 98.0 | mV |
|--------------------|------|----|
| Probe Dark | 1.0 | mV |
| Probe Net Response | 97.0 | mV |
| RG780 | 1.0 | mV |
| | | |

Corrected Lamp Output:

Output In Air (same condition as calibration):

| 9.342E+15 | _quanta/cm ² sec |
|-----------|-----------------------------|
| 155.13384 | uE/m ² sec |

Calibration Scale Factor:

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

Dry: <u>1.0380E-17</u> V/(quanta/cm²sec) <u>6.2509E-04</u> V/(uE/m²sec)

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. The collector should be cleaned frequently with alcohol.

4. Calibration was performed with customer cable, when available.