

Job No.: R12829

Calibration Date: 01/11/17

Model Number: QSP2300

Serial Number: 70281

Operator: TPC

Standard Lamp: 91453(7/20/16)

Operating Voltage Range: 6 to 15 VDC (+)

Note: The QSP2300 output is a voltage that is proportional to the log of the incident irradiance.  
To calculate irradiance, use this formula:

$$\text{Irradiance} = \text{Calibration factor} * (10^{\wedge} \text{Light Signal Voltage} - 10^{\wedge} \text{Dark Voltage})$$

Dry Calibration Factor: 3.01E+12 quanta/cm<sup>2</sup>·sec per volt 5.00E-06 μEinsteins/cm<sup>2</sup>·sec per volt

Wet Calibration Factor: 5.32E+12 quanta/cm<sup>2</sup>·sec per volt 8.83E-06 μEinsteins/cm<sup>2</sup>·sec per volt

#### Sensor Test Data and Results<sup>2)</sup>

Sensor Supply Current (Dark): 3.5 mA

Supply Voltage: 6 Volts

Lamp Integrated PAR Irradiance: 8.38E+15 quanta/cm<sup>2</sup>·sec 0.01391 μEinsteins/cm<sup>2</sup>·sec

Immersion Coefficient: 0.566

Nominal Filter OD	Expected Transmission	Calibrated Trans.	Sensor Voltage	Expected Voltage	Voltage % Error	Measured Trans.	Transmission Error (%)	Test Irrad. (quanta/cm <sup>2</sup> ·sec)
No Filter	100%	100.00%	3.445	3.445	0%	100.00%	0.0	8.38E+15
0.3	50%	36.10%	3.004	3.002	0%	36.22%	-0.3	3.03E+15
0.5	32%	27.60%	2.892	2.886	0%	27.96%	-1.3	2.34E+15
1	10%	9.27%	2.421	2.412	0%	9.43%	-1.7	7.90E+14
2	1%	1.11%	1.540	1.490	3%	1.21%	-8.2	1.01E+14
3	0.10%	0.05%	0.342	0.172	50%	0.04%	27.1	3.61E+12
RG780	0.00%	0.00%	0.013	0.012	6%	0.00%	-100.0	9.15E+10

Dark Before: 0.012 Volts  
Light - No Filter Hldr.: 3.445 Volts  
Dark After - NFH: 0.012 Volts  
Average Dark: 0.0122 Volts

#### Notes:

1. Annual calibration is recommended.

2) This section is for internal use and for more advanced analysis.