

**Calibration Date:** 02/20/13  
**Model Number:** QSP2300  
**Serial Number:** 70172  
**Operator:** TPC  
**Standard Lamp:** V-030(3/7/12)

**Job No.:** R11579

**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:**

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

**Dry Calibration Factor:** 3.60E+12 quanta/cm<sup>2</sup>·sec per volt      5.99E-06 μEinsteins/cm<sup>2</sup>·sec per volt  
**Wet Calibration Factor:** 6.36E+12 quanta/cm<sup>2</sup>·sec per volt      1.06E-05 μEinsteins/cm<sup>2</sup>·sec per volt

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

Sensor Supply Current (Dark): 3.4 mA  
 Supply Voltage: 6 Volts  
 Lamp Integrated PAR Irradiance: 9.83E+15 quanta/cm<sup>2</sup>·sec      0.01632 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%	3.436	3.436	0%	100.00%	0.0	9.83E+15
0.3	50%	36.10%	2.992	2.993	0%	35.98%	0.3	3.54E+15
0.5	32%	27.60%	2.882	2.877	0%	27.92%	-1.1	2.74E+15
1	10%	9.27%	2.415	2.403	0%	9.49%	-2.3	9.33E+14
2	1%	1.11%	1.496	1.481	1%	1.11%	-0.2	1.09E+14
3	0.10%	0.05%	0.355	0.163	54%	0.05%	17.2	4.56E+12
RG780	0.00%	0.00%	0.010	0.010	0%	0.00%	-100.0	8.23E+10

Dark Before: 0.010 Volts  
 Light - No Filter Hldr.: 3.436 Volts  
 Dark After - NFH: 0.010 Volts  
 Average Dark: 0.0098 Volts

**Notes:**

1. Annual calibration is recommended.
- 2) This section is for internal use and for more advanced analysis.