

Calibration History of the Eppley PSP # 15680F3 Pyranometer

This page shows the calibration history of the PSP 15680F3. The responsivity used to transform the irradiance voltage data into Wm^{-2} is a running average of the calibration responsivities obtained over the years. This reduces the variation of the responsivities associated with the random uncertainty of a given calibration (See Figs 1 & 2). The rate of change of the pyranometer responsivity is related to exposure to UV radiation. The responsivity values used are in the comprehensive format files or the site files. The responsivities measured during specific calibrations are listed in Table 1.

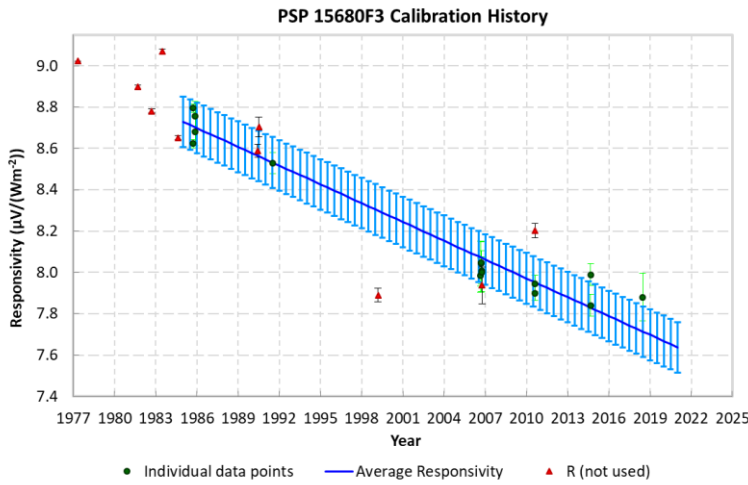


Figure 1: All calibration data plotted against time with long-term trend

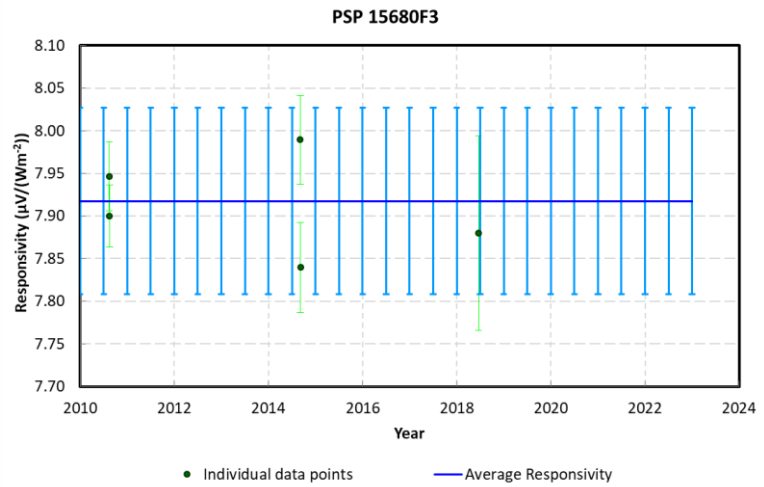


Figure 2: Calibration trend over the past 10 years

Information provided in the Table 1 are:

- Date of calibration
- Responsivity value
- Uncertainty at the 95% level of confidence
- Average SZA over which the calibration value was obtained
- Average temperature during the calibration
- Type of calibration and instruments used
- Location of calibration
- Notes

Table 1: Calibration information for PSP 15680F3 P7

	Calibration Date	Responsivity ($\mu V/Wm^{-2}$)	Uncertainty ($\mu V/Wm^{-2}$)	Average SZA ($^{\circ}$)	Temperature (C)	Reference Instruments	Location	Notes
1	1977/04/25	9.0225		-		factory	Factory	
2	1981/09/10	8.8978	0.0100			PSP_13365F3 R=8.33	Vancouver, WA	
3	1982/09/16	8.7800	0.0100			PSP_13365F3 R=8.33	Vancouver, WA	
4	1983/06/26	9.0700	0.0100			PSP_13192F3 R=7.750	Vancouver, WA	
5	1984/08/14	8.6524	0.0100			PSP_13365F3 R=8.25	Portland, OR	

6	1985/09/18	8.7953	0.0200			PSP_13365F3 R=8.25	Eugene, OR	
7	1985/09/19	8.6238	0.0200			PSP_13365F3 R=8.25	Eugene, OR	
8	1985/11/11	8.7572	0.0700			PSP_13365F3 R=8.25	Eugene, OR	
9	1985/11/11	8.6823	0.0700			PSP_17853F3 R=7.89	Eugene, OR	
10	1990/06/01	8.5880	0.0300			ACR	NREL/SRRL	
11	1990/07/01	8.7030	0.0470			ACR	NREL/SRRL	
12	1991/07/01	8.5304	0.0510			PSP_17853F3 R=7.47	Eugene, OR	
13	1999/03/07	7.8900	0.0320			NIP_18948E6 R=8.069, PSP_17158F3 R=8.101	Eugene, OR	
14	2006/09/01	7.9848	0.0824	45.05	25.32	NIP_18948E6 R=8.069, Schenk_1315 R=14.89	Eugene, OR	
15	2006/09/05	8.0430	0.1084	44.97	26.15	NIP_18948E6 R=8.069, Schenk_1315 R=14.89	Eugene, OR	
16	2006/09/08	8.0458	0.1024	44.89	24.37	NIP_18948E6 R=8.069, Schenk_1315 R=14.89	Eugene, OR	
17	2006/09/22	8.0064	0.0993	45.22	23.30	NIP_18948E6 R=8.069, Schenk_1315 R=14.89	Eugene, OR	
18	2006/09/29	8.0004	0.0760	46.76	24.17	NIP_18948E6 R=8.069, Schenk_1315 R=14.89	Eugene, OR	
19	2006/10/07	7.9367	0.0882	50.30	19.76	NIP_18948E6 R=8.069, Schenk_1315 R=14.89	Eugene, OR	
20	2010/08/13	7.9464	0.0407	44.93	33.74	ARC, Schenk_1315 R=14.89	Eugene, OR	
21	2010/08/16	7.9001	0.0367	44.56	23.08	ARC, Schenk_1315 R=14.89	Eugene, OR	
22	2014/09/04	7.9894	0.0523	44.96	27.22	ACR, Schenk_1315 R=14.89	Eugene, OR	

23	2014/09/05	7.8397	0.0530	45.08	24.25	ACR, Schenk_1315 R=14.89	Eugene, OR	
24	2018/06/19	7.8800	0.1145	45.12	26.46	ACR R=1.0002, CMP22_110265 R=8.9179	Eugene, OR	