

# Calibration History of the LICOR PY22981 Pyranometer

This page shows the calibration history of the LICOR PY22981. The responsivity used to transform the irradiance voltage data into  $Wm^{-2}$  is a running average of the responsivity 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.

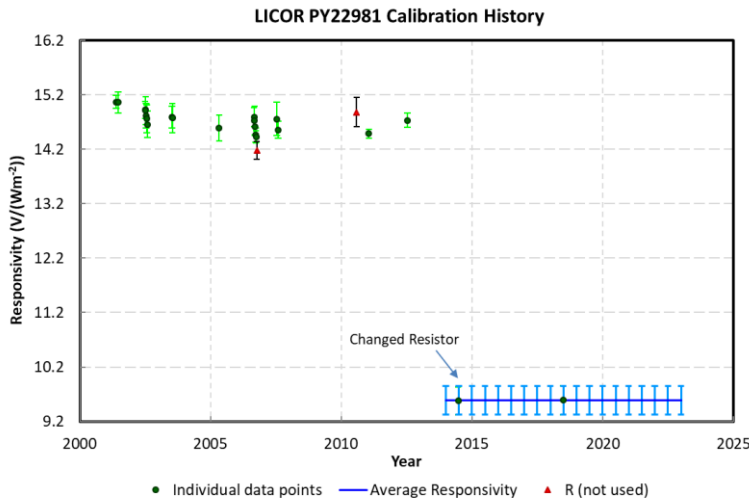


Figure 1: All calibration data plotted against time with long-term trend

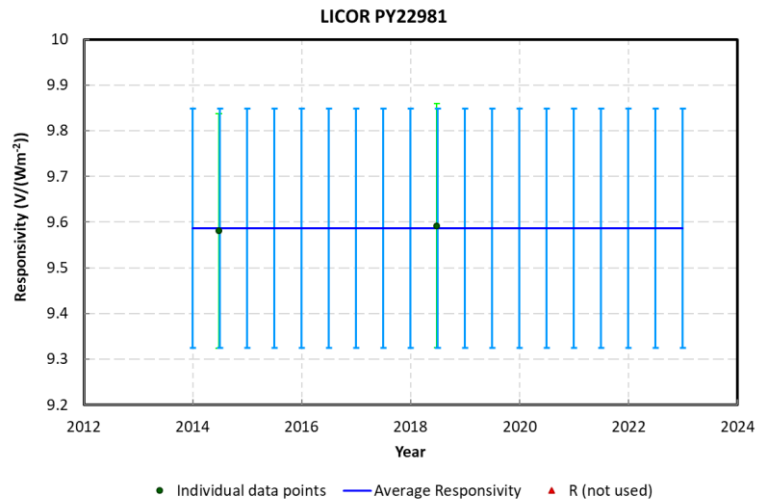


Figure 2: Calibration data plotted against time for 10 year trend

### 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 LICOR PY22981**

	Calibration Date	Responsivity ( $\mu V/Wm^{-2}$ )	Uncertainty ( $\mu V/Wm^{-2}$ )	Average SZA ( $^{\circ}$ )	Temperature (C)	Reference Instruments	Location	Notes
1	2001/05/21	15.0701	0.1173	44.89	26.61	NIP_18948E6 R=8.1358, Schenk_1315 R=14.89	Eugene, OR	
2	2001/06/19	15.0627	0.1926	45.25	28.70	NIP_18948E6 R=8.1358, Schenk_1315 R=14.89	Eugene, OR	

3	2002/07/02	14.9229	0.1562	44.80	25.54	NIP_18948E6 R=8.1358, Schenk_1315 R=14.89	Eugene, OR	
4	2002/07/08	14.9131	0.2544	44.98	27.74	NIP_18948E6 R=8.1358, Schenk_1315 R=14.89	Eugene, OR	
5	2002/07/15	14.8191	0.2247	44.98	27.15	NIP_18948E6 R=8.1358, Schenk_1315 R=14.89	Eugene, OR	
6	2002/07/24	14.7598	0.2605	44.93	26.72	NIP_18948E6 R=8.1358, Schenk_1315 R=14.89	Eugene, OR	
7	2002/08/01	14.6587	0.2383	44.86	24.01	NIP_18948E6 R=8.1358, Schenk_1315 R=14.89	Eugene, OR	
8	2003/07/10	14.7888	0.1973	45.04	29.25	NIP_18948E6 R=8.1358, Schenk_1315 R=14.89	Eugene, OR	
9	2003/07/16	14.7734	0.2637	45.05	29.32	NIP_18948E6 R=8.1358, Schenk_1315 R=14.89	Eugene, OR	
10	2005/01/12	14.5862	0.2375	45.37	20.14	NIP_18948E6 R=8.1358, Schenk_1315 R=14.89	Eugene, OR	
11	2006/09/01	14.7930	0.1764	45.05	25.32	NIP_18948E6 R=8.1358, Schenk_1315 R=14.89	Eugene, OR	
12	2006/09/05	14.7302	0.2595	44.97	26.15	NIP_18948E6 R=8.1358, Schenk_1315 R=14.89	Eugene, OR	
13	2006/09/08	14.6221	0.1684	44.89	24.37	NIP5 (R ={8.13580}), S4 (R ={14.89})	Eugene, OR	
14	2006/09/22	14.4630	0.1323	45.22	23.30	NIP_18948E6 R=8.1358, Schenk_1315 R=14.89	Eugene, OR	
15	2006/09/29	14.4317	0.1118	46.76	24.17	NIP_18948E6 R=8.1358,	Eugene, OR	

						Schenk_1315 R=14.89		
16	2006/01/28	14.1810	0.1641	50.30	19.76	NIP_18948E6 R=8.1358, Schenk_1315 R=14.89	Eugene, OR	
17	2007/07/12	14.7590	0.3068	45.18	26.52	NIP_23928E6 R=8.26 Schenk_1315 R=14.89	Eugene, OR	
18	2007/07/31	14.5548	0.1569	45.15	25.29	NIP_18948E6 R=8.1358, Schenk_1315 R=14.89	Eugene, OR	
19	2010/08/03	14.8844	0.2703	45.13	26.23	PSP_13365F3 R=7.5651	Hermiston, OR	
20	2011/01/21	14.4854	0.0867	44.51	24.42	ACR, Schenk_1315 R=14.89	Eugene, OR	
21	2012/07/11	14.7322	0.1325	44.89	25.00	ACR, Schenk_1315 R=14.89	Eugene, OR	
22	2014/06/24	9.5808	0.2566	42.21	19.39	LiCor_PY35962 R=10.2595	Ashland, OR	changed resister?
23	2018/06/25	9.5922	0.2667	44.98	22.36	Reference_instru ment	Ashland, OR	