

**December 2011**

**Global Solar Radiation on a Horizontal Surface**  
**Hourly Integrated and Daily Totals**  
**Instrument: Eppley PSP**  
**Watt-Hours per Square Meter**

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily
1	0	0	0	0	0	0	0	22	283 ?	379 ?	457	498	509	458	356	206	54	0	0	0	0	0	0	0	3222 ?
2	0	0	0	0	0	0	0	20	286 ?	392 ?	439	496	504	456	350	202	48	0	0	0	0	0	0	0	3194 ?
3	0	0	0	0	0	0	0	18	142	258	381	359	438	351	205	122	34	3	0	0	0	0	0	0	2311
4	0	0	0	0	0	0	0	20	76	165	347	493	322	323	361	198	41	0	0	0	0	0	0	0	2346
5	0	0	0	0	0	0	0	14	75	143	302	182	238	193	95	52	17	2	0	0	0	0	0	0	1314
6	0	0	0	0	0	0	0	4	27	36	39 ?	39 ?	64	71	41	40	10	2	0	0	0	0	0	0	374 ?
7	0	0	0	0	0	0	0	1	14	32 ?	44 ?	51	54 ?	49 ?	71 ?	?	3	1	0	0	0	0	0	0	320 ?
8	0	0	0	0	0	0	0	5	32	87	124	141	169	203	205	203	76	0	0	0	0	0	0	0	1244
9	0	0	0	0	0	0	0	9	164	324	404	479	493	438	323	192	42	0	0	0	0	0	0	0	2869
10	0	0	0	0	0	0	0	3	12	40	113	164	224	356	359	202	60	1	0	0	0	0	0	0	1533
11	0	0	0	0	0	0	0	12	256 ?	320 ?	476	483	499	454	353	205	58	0	0	0	0	0	0	0	3116 ?
12	0	0	0	0	0	0	0	24	144	274	395	444	447	314	251	152	61	2	0	0	0	0	0	0	2507
13	0	0	0	0	0	0	0	5	35	61	158	134	146	292	306	153	40	4	0	0	0	0	0	0	1335
14	0	0	0	0	0	0	0	8	18	66	265	440	414	309	241	114	36	0	0	0	0	0	0	0	1910
15	0	0	0	0	0	0	0	10	59	184	338	363	140	208	58	30	11	0	0	0	0	0	0	0	1402
16	0	0	0	0	0	0	0	5	43	50	75	39 ?	77	72	77	27 ?	14	2	0	0	0	0	0	0	481 ?
17	0	0	0	0	0	0	0	2	14	47	96	141	307	410	374	195	59	3	0	0	0	0	0	0	1649
18	0	0	0	0	0	0	0	3	25	169	373	471	488	445	348	209	62	2	0	0	0	0	0	0	2595
19	0	0	0	0	0	0	0	10	175	290	375	441	471	209	96	100	19	2	0	0	0	0	0	0	2188
20	0	0	0	0	0	0	0	6	38	60	136	175	148	77	39	78	29	3	0	0	0	0	0	0	789
21	0	0	0	0	0	0	0	0	13	31	42 ?	44 ?	67	77 ?	59 ?	44	9	3	0	0	0	0	0	0	389 ?
22	0	0	0	0	0	0	0	5	42	111	209	190	375	298	116	93	19	1	0	0	0	0	0	0	1458
23	0	0	0	0	0	0	0	2	6 ?	30 ?	57	53	56	44	57	37	12	2	0	0	0	0	0	0	355 ?
24	0	0	0	0	0	0	0	8	57	96	219	181	346	368	280	151	55	2	0	0	0	0	0	0	1763
25	0	0	0	0	0	0	0	4	31	170 ?	381	371	386	429	302	218	72	4	0	0	0	0	0	0	2368
26	0	0	0	0	0	0	0	7	53	168	336	444	472	399	345	151	29	1	0	0	0	0	0	0	2404
27	0	0	0	0	0	0	0	6	27	47	57 ?	107	185	113	181	113	16	2	0	0	0	0	0	0	854
28	0	0	0	0	0	0	0	6	28	74	164	205	486	457	366	226	73	5	0	0	0	0	0	0	2091
29	0	0	0	0	0	0	0	7	38	74	129	214	456	258	181	213	70	6	0	0	0	0	0	0	1647
30	0	0	0	0	0	0	0	4	37	127	369	454	478	431	328	214	72	4	0	0	0	0	0	0	2516
31	0	0	0	0	0	0	0	6	69	172	110	93	145	231	257	162	74	4	0	0	0	0	0	0	1323
Avg	0	0	0	0	0	0	0	8	75	144	239	271	310	284	225	143	41	2	0	0	0	0	0	0	1738
S D	0	0	0	0	0	0	0	6	80	110	146	171	166	142	122	67	24	2	0	0	0	0	0	0	879
S/A	0	0	0	0	0	0	0	0.77	1.07	0.76	0.61	0.63	0.54	0.5	0.54	0.47	0.57	0.82	0	0	0	0	0	0	0.51
Min	0	0	0	0	0	0	0	0	6	30	39	39	54	44	39	27	3	0	0	0	0	0	0	0	320
Max	0	0	0	0	0	0	0	24	286	392	476	498	509	458	374	226	76	6	0	0	0	0	0	0	3222
n	0	0	0	0	0	0	0	183	343	330	339	358	363	363	359	355	370	41	0	0	0	0	0	0	3404

Daylight Data Recovery: 0.0% missing; 0.0% untested; 4.8% exceed the 15% QC threshold -- 3574 total daylight measurements.

Instrument: Eppley PSP Serial Number: 25821F3 Calibration Factor: 9.020 μV/W/m<sup>2</sup> Calibration Date: 05/1998

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

December 2011

Direct Normal Solar Radiation  
 Hourly Integrated and Daily Totals  
 Instrument: Eppley NIP  
 Watt-Hours per Square Meter

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily	
1	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
2	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
3	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
4	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
5	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
6	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
7	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
8	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
9	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
10	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
11	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
12	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
13	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
14	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
15	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
16	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
17	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
18	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
19	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
20	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
21	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
22	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
23	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
24	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
25	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
26	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
27	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
28	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
29	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
30	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
31	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	0	0	*	
Avg	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0	0	0	0	N/A	*
SD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S/A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0	0	0	0	N/A	
Max	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0	0	0	0	N/A	
n	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Daylight Data Recovery: 99.8% missing; 0.0% untested; 0.2% exceed the 15% QC threshold -- 3574 total daylight measurements.

Instrument: Eppley NIP Serial Number: 17664E6 Calibration Factor: 8.480 μV/W/m² Calibration Date: 05/1998

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

December 2011

Diffuse Solar Radiation (Shadow Band) on a Horizontal Surface  
 Hourly Integrated and Daily Totals  
 Instrument: Eppley PSP  
 Watt-Hours per Square Meter

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily	
1	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
2	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
3	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
4	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
5	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
6	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
7	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
8	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
9	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
10	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
11	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
12	0	0	0	0	0	0	0	?	?	?	?	?	204	?	?	?	?	?	0	0	0	0	0	0	?	
13	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
14	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
15	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
16	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	38	?	0	0	0	0	0	?	
17	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
18	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
19	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
20	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
21	0	0	0	0	0	0	0	?	?	?	?	?	?	?	19	?	?	?	0	0	0	0	0	0	?	
22	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
23	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
24	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
25	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
26	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
27	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
28	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
29	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
30	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
31	0	0	0	0	0	0	0	?	?	?	?	?	?	?	?	?	?	?	0	0	0	0	0	0	?	
Avg	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	204	N/A	19	N/A	38	N/A	0	0	0	0	0	0	N/A	?
SD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
S/A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Min	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	204	N/A	19	N/A	38	N/A	0	0	0	0	0	0	N/A	
Max	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	204	N/A	19	N/A	38	N/A	0	0	0	0	0	0	N/A	
n	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	3	0	0	0	0	0	0	0	0	

Daylight Data Recovery: 0.0% missing; 0.0% untested; 99.7% exceed the 15% QC threshold -- 3574 total daylight measurements.

Instrument: Eppley PSP Serial Number: 17860F3 Calibration Factor: 7.010  $\mu\text{V}/\text{W}/\text{m}^2$  Calibration Date: 05/1998

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (\*) are not used in monthly statistics.