



ATLAS

WEATHERING SERVICES GROUP

Latitude 33° 54' North, Longitude 112° 08' West, Elevation 610 (m)

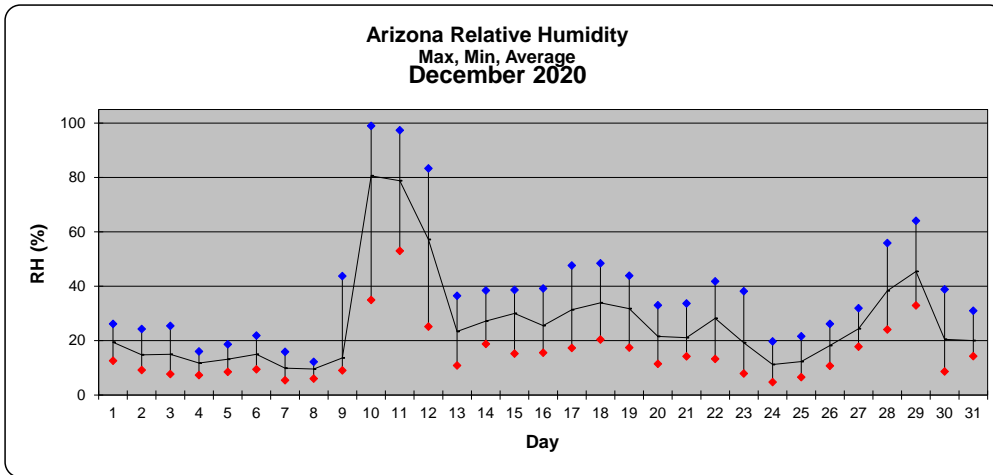
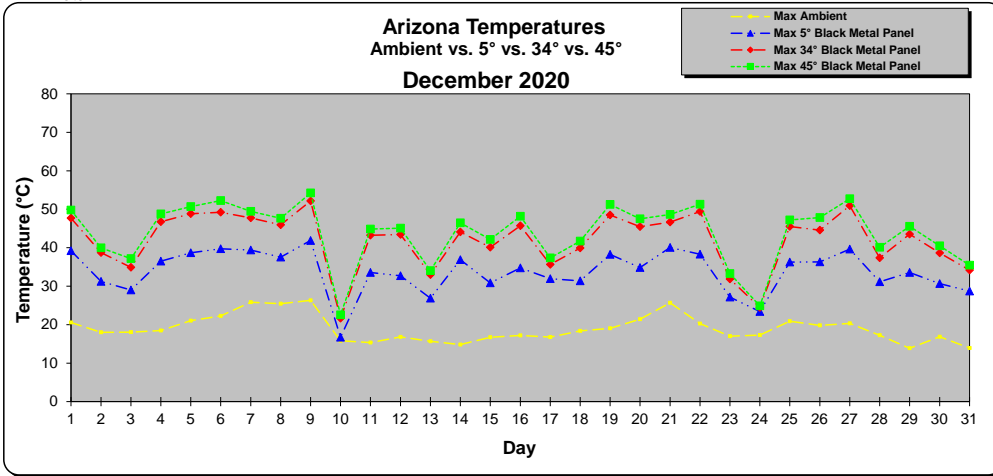


Weather Summary December 2020 Phoenix, Arizona

AWSG		Temperature Summary												Climate Summary					
Month	Ambient Temperature			Black Metal Panel Temperature (ASTM G179) (° C)									Relative Humidity			Wind Speed		Wind Direction	Rainfall
December	(° C)			5°			34°			45°			(%)			m/sec		360°/70° = N	(mm)
Day	Max	Min	Avg.	Max	Min	Avg.	Max	Min	Avg.	Max	Min	Avg.	Max	Min	Avg.	Max	Avg.	Avg	Total
1	21	8	14	39	6	16	48	6	18	50	6	19	26	13	19	8.5	2.2	39°	0.0
2	18	10	13	31	8	15	39	8	16	40	8	16	24	9	15	14.5	5.0	25°	0.0
3	18	8	12	29	6	13	35	6	15	37	6	15	25	8	15	13.1	4.1	14°	0.0
4	18	7	12	36	3	13	47	4	16	49	4	16	16	7	12	10.1	2.6	40°	0.0
5	21	7	13	39	3	15	49	3	17	51	3	18	19	9	13	6.7	1.6	42°	0.0
6	22	7	14	40	3	16	49	3	19	52	4	20	22	10	15	6.7	1.8	66°	0.0
7	26	12	18	39	10	19	48	10	21	49	10	21	16	5	10	11.5	3.8	51°	0.0
8	25	15	19	38	13	20	46	13	22	48	13	22	12	6	10	9.9	3.2	42°	0.0
9	26	15	19	42	11	20	52	11	22	54	11	23	44	9	14	11.6	2.8	31°	0.0
10	16	9	11	17	7	11	22	7	11	23	8	11	99	35	81	9.1	1.5	24°	16.0
11	15	8	11	34	6	13	43	6	14	45	6	14	97	53	79	3.9	1.1	43°	0.0
12	17	6	11	33	5	13	43	5	16	45	5	16	83	25	57	14.9	2.5	20°	0.0
13	16	2	9	27	-3	10	33	-2	11	34	-2	12	37	11	23	10.8	2.9	19°	0.0
14	15	5	10	37	2	12	44	3	14	46	3	15	39	19	27	10.8	2.2	4°	0.0
15	17	6	10	31	3	11	40	4	13	42	4	14	39	15	30	13.7	3.6	17°	0.0
16	17	6	10	35	4	12	46	4	15	48	5	15	39	16	26	9.9	2.7	40°	0.0
17	17	6	11	32	3	11	36	3	12	37	4	12	48	17	31	6.4	1.5	34°	0.0
18	18	5	11	31	3	12	40	3	14	42	3	14	48	20	34	11.2	2.5	28°	0.0
19	19	7	11	38	5	13	49	5	15	51	5	16	44	17	32	11.7	2.7	29°	0.0
20	21	8	14	35	5	15	45	5	18	48	5	19	33	11	22	8.4	2.1	27°	0.0
21	26	11	17	40	9	18	47	10	20	49	10	21	34	14	21	10.8	2.7	34°	0.0
22	20	8	13	38	5	14	49	5	16	51	5	17	42	13	28	5.4	1.7	55°	0.0
23	17	6	11	27	4	11	32	4	13	33	4	13	38	8	19	15.1	3.7	25°	0.0
24	17	7	10	23	5	10	24	6	10	25	6	10	20	5	11	17.4	4.8	27°	0.0
25	21	9	14	36	5	14	46	6	16	47	6	16	22	7	12	9.5	2.5	29°	0.0
26	20	8	13	36	5	15	45	6	17	48	6	18	26	11	18	7.0	1.9	38°	0.0
27	20	8	14	40	5	15	51	6	17	53	6	18	32	18	24	6.5	1.8	22°	0.0
28	17	5	12	31	2	12	37	3	14	40	3	14	56	24	38	11.4	1.8	352°	0.0
29	14	4	8	34	1	10	44	2	11	46	2	12	64	33	45	9.1	2.1	4°	0.0
30	17	5	10	31	2	12	39	2	14	41	2	14	39	9	20	10.9	3.1	9°	0.0
31	14	4	9	29	1	10	34	1	11	35	2	11	31	14	20	11.7	1.8	19°	0.0
Monthly Avg.	19	7	12	34	5	14	42	5	15	44	5	16	39	15	27	10.3	2.6	40°	
Monthly Total																			16.0
YTD [†] Avg.	30	16	23	52	14	27	55	14	27	56	14	28	42	16	28	9.1	2.1	103°	
YTD [†] Total																			221.0

[†] Year To Date

Note:



Latitude 25° 34' North, Longitude 80° 28' West, Elevation 2 (m)

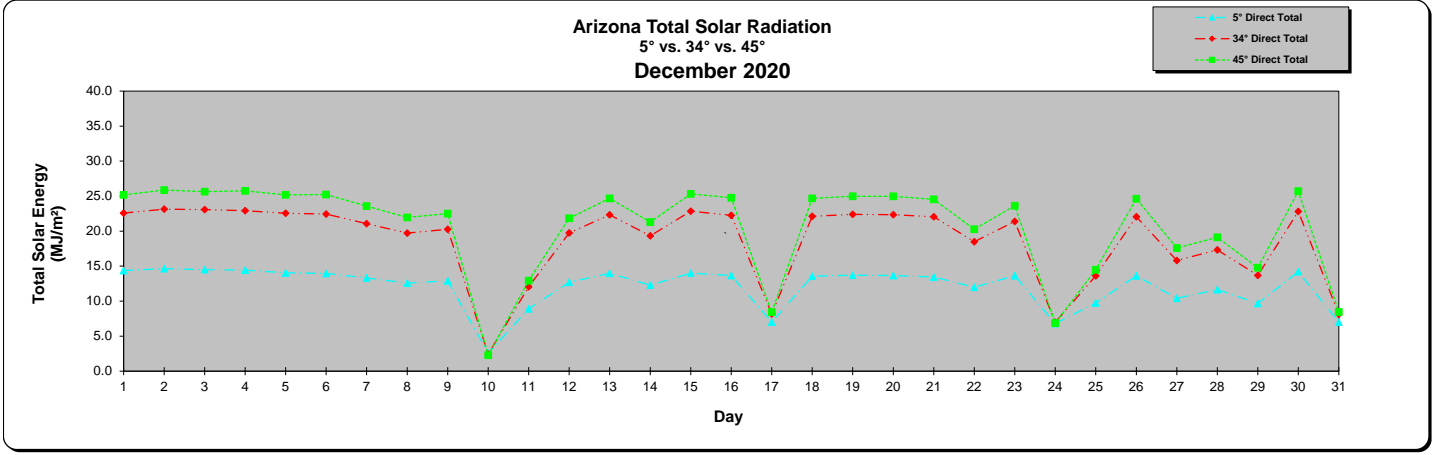
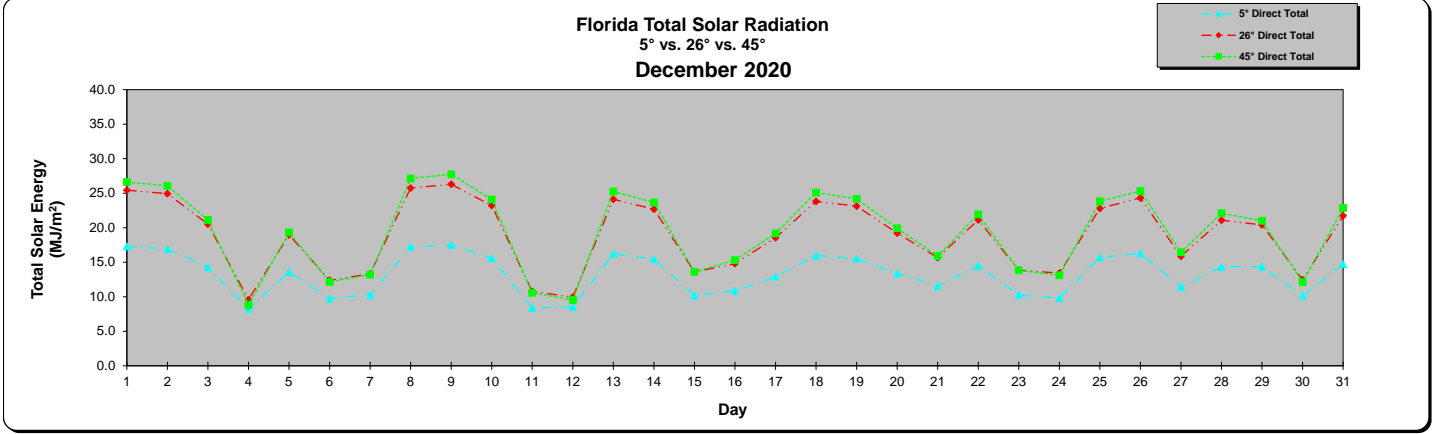
Miami, Florida

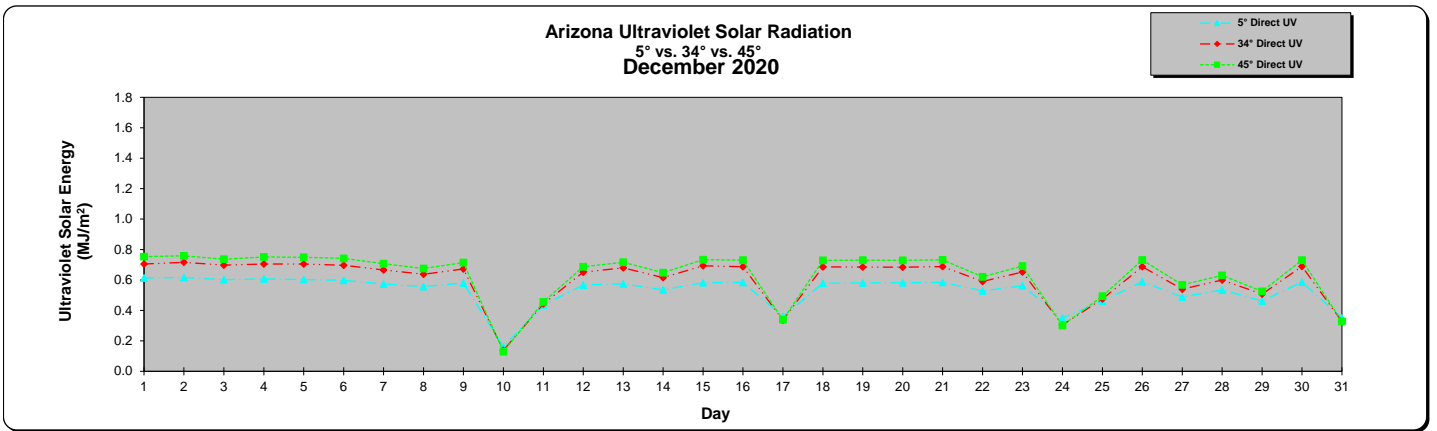
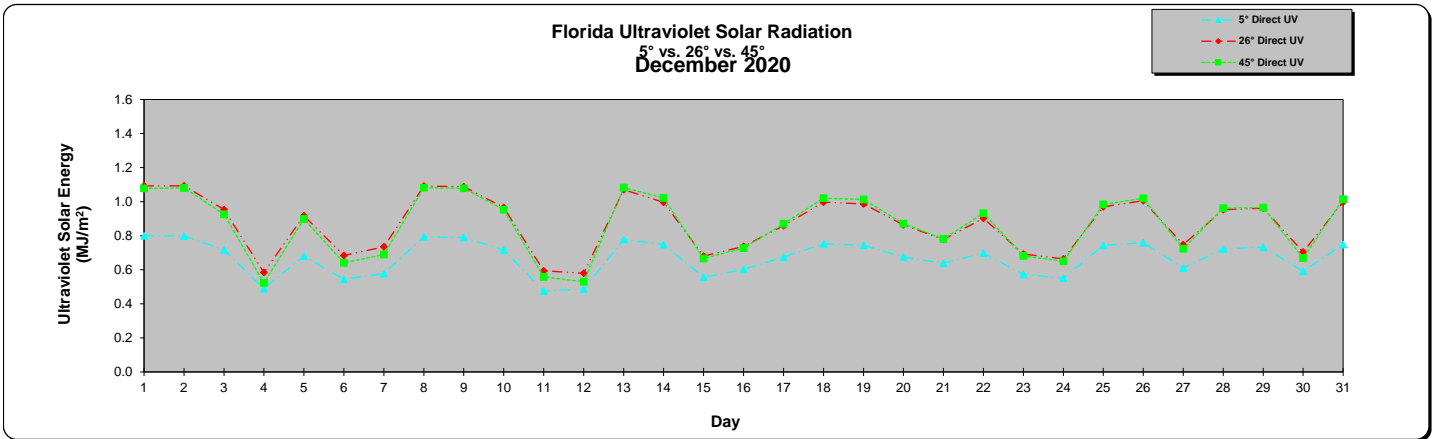
Latitude 33° 54' North, Longitude 112° 08' West, Elevation 610 (m)

Solar Radiation Summary												
Month	Total Solar Radiation (MJ/m ²)						Ultraviolet Solar Radiation (MJ/m ²)					
	Direct			Underglass			Direct			Underglass		
December	5°	26°	45°	5°	26°	45°	5°	26°	45°	5°	26°	45°
1	17.3	25.4	26.6	13.6	20.3	23.4	0.80	1.09	1.08	0.51	0.70	0.75
2	16.9	24.9	26.1	13.3	19.9	22.9	0.80	1.09	1.08	0.49	0.69	0.76
3	14.3	20.5	21.1	10.9	16.2	18.7	0.72	0.95	0.93	0.44	0.60	0.65
4	8.3	9.6	8.8	6.3	7.5	7.7	0.49	0.58	0.52	0.30	0.36	0.37
5	13.6	19.0	19.3	10.3	15.1	17.2	0.68	0.92	0.90	0.43	0.58	0.63
6	9.7	12.4	12.2	7.4	9.9	10.8	0.54	0.68	0.64	0.34	0.43	0.45
7	10.3	13.3	13.2	8.3	10.7	11.9	0.58	0.73	0.69	0.36	0.46	0.48
8	17.2	25.7	27.1	14.0	20.6	24.2	0.79	1.09	1.08	0.51	0.71	0.76
9	17.5	26.3	27.7	14.1	20.9	24.6	0.79	1.09	1.08	0.50	0.71	0.76
10	15.6	23.2	24.1	12.4	18.4	21.7	0.72	0.97	0.95	0.45	0.62	0.67
11	8.4	10.8	10.6	7.0	8.7	9.5	0.48	0.59	0.56	0.29	0.37	0.39
12	8.5	9.9	9.5	6.5	7.8	8.6	0.49	0.58	0.53	0.30	0.36	0.37
13	16.2	24.1	25.3	12.6	19.3	22.7	0.78	1.07	1.08	0.48	0.68	0.76
14	15.5	22.7	23.7	12.2	18.1	21.3	0.75	1.00	1.02	0.46	0.65	0.72
15	10.2	13.6	13.6	8.2	10.8	12.1	0.56	0.68	0.67	0.34	0.43	0.47
16	10.9	14.8	15.3	8.6	11.7	13.4	0.60	0.74	0.73	0.36	0.47	0.51
17	12.9	18.6	19.2	10.0	14.8	17.4	0.67	0.86	0.87	0.41	0.55	0.61
18	16.0	23.8	25.1	13.1	19.0	22.4	0.75	1.00	1.02	0.47	0.64	0.71
19	15.6	23.1	24.2	12.5	18.3	21.5	0.74	0.99	1.01	0.46	0.64	0.71
20	13.4	19.2	19.9	10.8	15.2	17.6	0.67	0.86	0.87	0.41	0.55	0.61
21	11.6	15.7	15.9	9.1	12.4	14.1	0.64	0.78	0.78	0.39	0.50	0.55
22	14.5	21.1	21.9	11.8	16.8	19.6	0.70	0.90	0.93	0.17	0.59	0.65
23	10.3	13.8	13.8	8.6	10.9	12.2	0.57	0.69	0.68	0.35	0.44	0.48
24	9.8	13.4	13.1	8.4	10.4	11.6	0.55	0.66	0.65	0.34	0.42	0.46
25	15.7	22.8	23.8	13.0	18.1	21.1	0.74	0.97	0.98	0.46	0.63	0.69
26	16.3	24.3	25.3	13.7	19.3	22.6	0.76	1.01	1.02	0.46	0.66	0.71
27	11.4	15.9	16.4	9.0	12.4	14.3	0.61	0.75	0.72	0.36	0.47	0.51
28	14.3	21.1	22.1	11.6	16.7	19.7	0.72	0.95	0.96	0.34	0.60	0.67
29	14.4	20.4	21.0	11.9	16.3	18.7	0.73	0.96	0.97	0.28	0.61	0.68
30	10.2	12.5	12.1	8.5	10.1	10.6	0.59	0.70	0.67	0.35	0.43	0.47
31	14.7	21.7	22.9	12.0	18.0	20.2	0.75	1.00	1.01	0.44	0.62	0.71
Monthly Total	411.2	583.8	601.1	329.6	464.5	534.2	20.77	26.95	26.69	12.26	17.17	18.89
YTD ¹ Total	6085.5	6927.9	6500.7	5142.6	5512.9	5083.7	311.02	337.66	296.87	243.45	229.42	178.00

Solar Radiation Summary													EMMAQUA™	
Month	Total Solar Radiation (MJ/m ²)						Ultraviolet Solar Radiation (MJ/m ²)						Total	UV
	Direct			Underglass			Direct			Underglass				
December	5°	34°	45°	5°	34°	45°	5°	34°	45°	5°	34°	45°		
1	14.4	22.6	25.2	11.2	19.9	22.8	0.61	0.71	0.75	0.42	0.55	0.55	182	3.81
2	14.7	23.1	25.9	11.4	20.4	23.3	0.62	0.72	0.76	0.42	0.56	0.56	0	0.00
3	14.5	23.1	25.7	11.3	20.2	23.1	0.60	0.70	0.74	0.41	0.55	0.55	0	0.00
4	14.4	22.9	25.8	11.3	20.1	23.2	0.61	0.71	0.75	0.41	0.55	0.55	165	3.56
5	14.1	22.6	25.2	11.0	19.7	22.7	0.60	0.71	0.75	0.41	0.55	0.55	183	3.77
6	14.0	22.4	25.2	10.9	19.7	22.6	0.60	0.70	0.74	0.41	0.54	0.54	179	3.66
7	13.3	21.1	23.6	10.5	18.6	21.2	0.57	0.67	0.71	0.39	0.51	0.51	0	0.00
8	12.6	19.7	22.0	10.0	17.5	19.7	0.56	0.64	0.68	0.38	0.49	0.49	142	3.02
9	12.9	20.3	22.5	10.3	18.0	20.5	0.58	0.67	0.71	0.39	0.52	0.52	112	2.70
10	2.6	2.4	2.3	2.2	2.1	2.0	0.16	0.14	0.13	0.11	0.10	0.09	0	0.00
11	8.9	12.1	12.9	6.8	10.6	11.6	0.44	0.44	0.46	0.29	0.34	0.33	24	0.55
12	12.7	19.8	21.9	10.1	17.4	19.9	0.57	0.65	0.69	0.39	0.51	0.51	0	0.00
13	14.0	22.3	24.7	11.0	19.7	22.3	0.58	0.68	0.72	0.40	0.53	0.54	0	0.00
14	12.3	19.3	21.3	9.6	16.8	19.4	0.54	0.62	0.65	0.37	0.48	0.48	131	2.71
15	14.0	22.9	25.3	10.9	19.9	22.9	0.58	0.69	0.73	0.40	0.54	0.55	0	0.00
16	13.7	22.3	24.8	10.7	19.5	22.4	0.58	0.69	0.73	0.40	0.53	0.54	135	3.00
17	7.0	8.2	8.4	5.9	7.2	7.5	0.36	0.34	0.34	0.25	0.25	0.24	0	0.00
18	13.6	22.1	24.7	10.6	19.4	22.2	0.58	0.69	0.73	0.40	0.53	0.54	180	3.68
19	13.7	22.4	25.0	10.7	19.6	22.5	0.58	0.69	0.73	0.40	0.54	0.54	125	2.83
20	13.7	22.4	25.0	10.6	19.5	22.5	0.58	0.68	0.73	0.40	0.53	0.53	133	3.03
21	13.5	22.1	24.6	10.5	19.3	22.1	0.58	0.69	0.73	0.40	0.53	0.54	155	3.55
22	12.0	18.5	20.3	9.4	16.0	18.4	0.53	0.59	0.62	0.36	0.45	0.45	0	0.00
23	13.6	21.4	23.6	10.7	18.8	21.5	0.56	0.65	0.69	0.39	0.51	0.51	0	0.00
24	6.8	7.0	6.9	5.7	6.1	6.2	0.35	0.30	0.30	0.24	0.23	0.21	0	0.00
25	9.8	13.6	14.5	7.7	11.7	13.1	0.46	0.48	0.49	0.31	0.36	0.36	0	0.00
26	13.6	22.1	24.6	10.7	19.2	22.3	0.59	0.69	0.73	0.40	0.53	0.54	179	3.55
27	10.4	15.8	17.6	8.3	14.1	15.9	0.49	0.54	0.57	0.33	0.42	0.42	48	0.81
28	11.6	17.3	19.1	9.4	15.3	17.4	0.54	0.60	0.63	0.37	0.46	0.46	0	0.00
29	9.7	13.7	14.8	7.8	12.2	13.6	0.46	0.51	0.53	0.32	0.39	0.39	0	0.00
30	14.2	22.8	25.7	11.0	20.1	23.1	0.59	0.69	0.73	0.40	0.54	0.55	0	0.00
31	7.0	8.1	8.5	5.8	7.1	7.5	0.35	0.33	0.33	0.24	0.25	0.23	0	0.00
Monthly Total	373.1	576.1	637.2	293.8	505.2	575.0	16.39	18.56	19.56	11.19	14.33	14.34	2072	44.24
YTD ¹ Total	7709.3	8512.2	8422.8	6485.6	7260.1	7409.1	365.25	348.65	351.40	252.62	262.02	240.98	43829.04	1312.51

¹ Year To Date
Note: Total Solar Radiation - (290-3000 nm) Ultraviolet Solar Radiation - (295-385 nm).

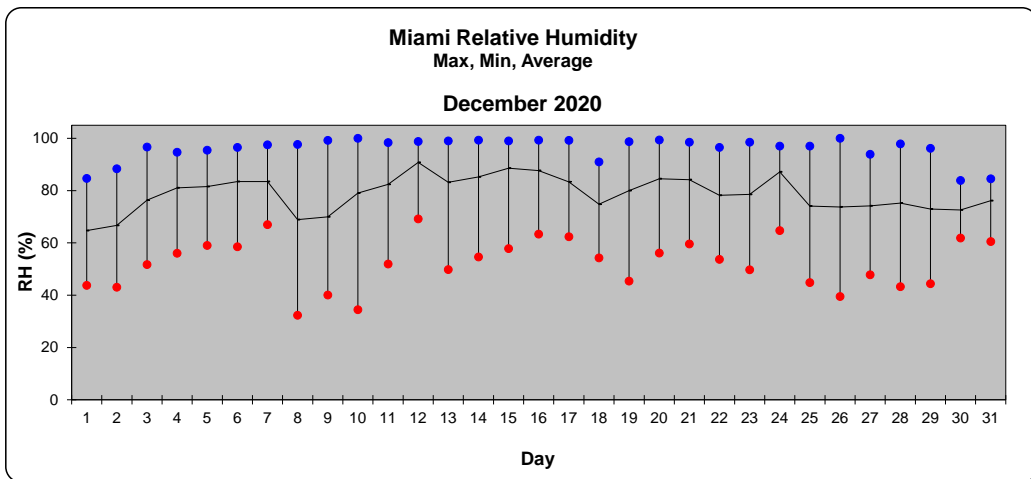
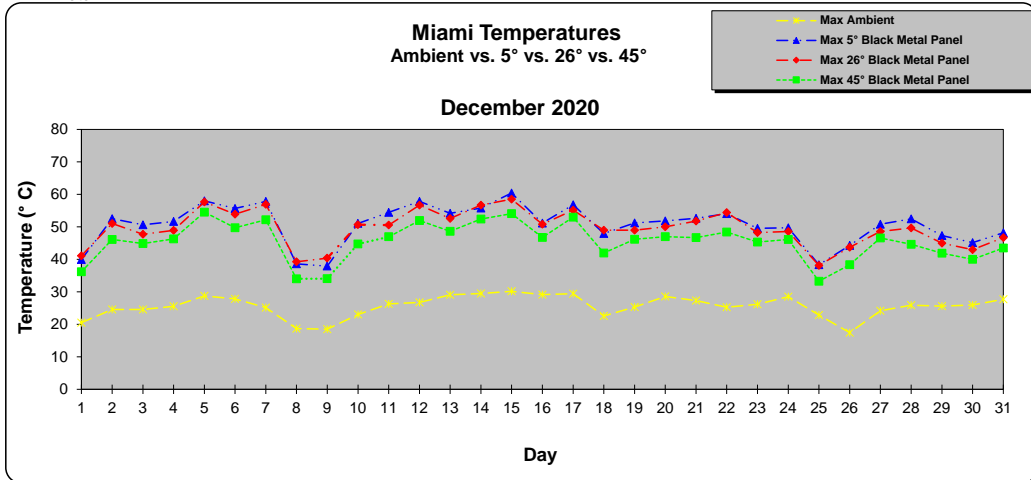




Latitude 25° 34' North, Longitude 80° 28' West, Elevation 2 (m)

Month	Temperature Summary												Climate Summary						
	Ambient Temperature			Black Metal Panel Temperature (ASTM G179) (° C)									Relative Humidity			Wind Speed		Wind Direction	Rainfall
December	(° C)			5 °			26 °			45 °			(%)			m/sec		360°/0°=N	(mm)
Day	Max	Min	Avg.	Max	Min	Avg.	Max	Min	Avg.	Max	Min	Avg.	Max	Min	Avg.	Max	Avg.	Avg	Total
1	21	11	16	40	9	20	41	8	20	36	8	18	85	44	65	19.0	0.7	282°	0.0
2	25	11	17	53	8	22	51	8	21	46	7	19	88	43	67	17.2	0.3	132°	0.0
3	25	11	18	51	9	21	48	9	21	45	8	19	97	52	76	21.2	0.0	86°	0.0
4	26	15	20	52	13	21	49	12	21	46	12	21	95	56	81	14.7	0.0	117°	0.0
5	29	17	22	58	16	26	58	16	26	55	15	25	96	59	82	12.9	0.0	187°	0.0
6	28	19	23	56	16	27	54	16	26	50	16	26	97	59	83	9.7	0.0	163°	0.0
7	25	16	21	58	13	24	57	13	24	52	13	23	98	67	83	29.1	0.3	241°	23.1
8	19	7	14	39	5	18	39	5	18	34	5	16	98	32	69	19.4	0.0	261°	0.0
9	19	5	12	38	3	16	40	3	16	34	3	13	99	40	70	18.3	0.0	271°	0.0
10	23	4	13	51	2	19	51	2	19	45	2	17	100	34	79	11.1	0.0	163°	0.0
11	26	10	18	54	8	20	51	8	20	47	8	20	98	52	82	14.4	0.0	128°	3.3
12	27	18	21	58	16	24	57	16	23	52	15	23	99	69	91	14.0	0.0	123°	5.3
13	29	16	21	54	14	27	53	14	26	49	14	24	99	50	83	13.3	0.0	90°	0.0
14	30	15	22	56	14	27	57	14	27	52	13	25	99	55	85	14.7	0.0	168°	0.0
15	30	19	23	60	17	26	59	17	26	54	17	25	99	58	89	10.4	0.0	178°	0.0
16	29	18	22	51	17	26	51	16	25	47	16	24	99	63	88	16.2	0.0	126°	0.0
17	29	17	23	57	16	27	55	16	26	53	15	25	99	62	83	17.6	0.0	219°	0.3
18	23	12	17	48	10	22	49	10	22	42	10	20	91	54	75	14.0	1.0	169°	0.0
19	25	11	17	51	9	23	49	8	22	46	8	20	99	45	80	16.5	0.0	100°	0.0
20	29	14	21	52	13	25	50	13	25	47	12	24	99	56	85	14.7	0.0	133°	0.0
21	27	14	21	53	10	24	52	10	24	47	10	23	99	60	84	16.2	0.0	201°	0.0
22	25	14	18	54	10	22	54	10	22	48	10	20	97	54	78	15.8	0.0	115°	0.3
23	26	15	20	50	11	23	48	11	23	45	11	22	99	50	79	20.5	0.0	101°	1.5
24	29	20	24	50	20	26	49	20	26	46	19	25	97	65	87	19.0	0.3	147°	3.6
25	23	6	14	38	4	17	38	4	18	33	4	16	97	45	74	22.6	0.0	253°	0.5
26	17	5	11	44	3	16	44	3	16	38	2	14	100	40	74	12.6	0.0	200°	0.0
27	24	10	16	51	8	19	49	8	19	47	7	17	94	48	74	17.2	0.0	148°	0.0
28	26	13	20	52	11	24	50	11	23	45	10	21	98	43	75	20.1	0.0	81°	0.0
29	26	15	20	47	10	24	45	10	23	42	10	22	96	44	73	23.0	0.0	90°	0.3
30	26	21	23	45	19	25	43	19	24	40	18	24	84	62	73	27.7	5.4	92°	0.0
31	28	22	24	48	20	28	47	20	27	44	20	26	85	61	76	22.7	3.9	114°	0.0
Monthly Avg.	26	13	19	51	11	23	49	11	23	45	11	21	96	52	79	17.3	0.4	157°	
Monthly Total																			38.1
YTD [†] Avg.	30	20	25	53	19	28	54	19	28	53	19	28	93	53	77	19.7	0.4	193°	
YTD [†] Total																			1933.7

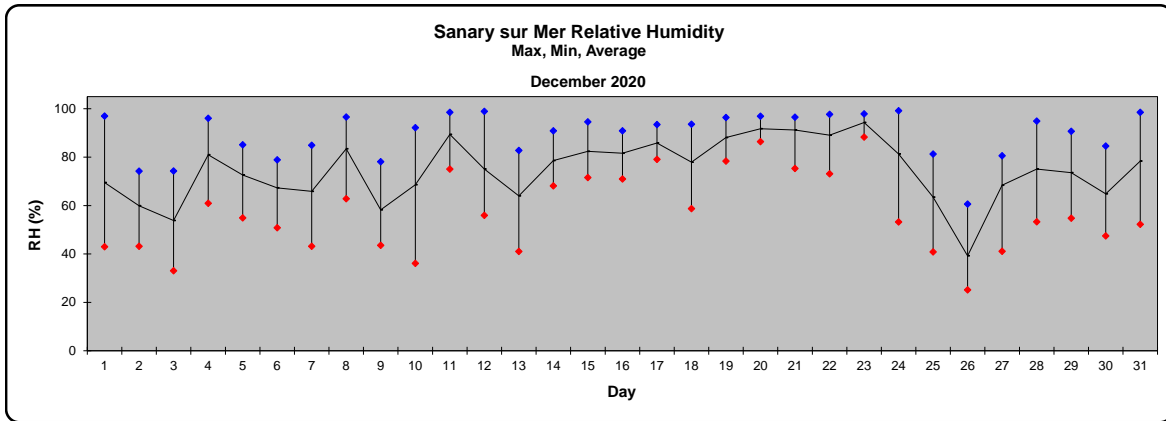
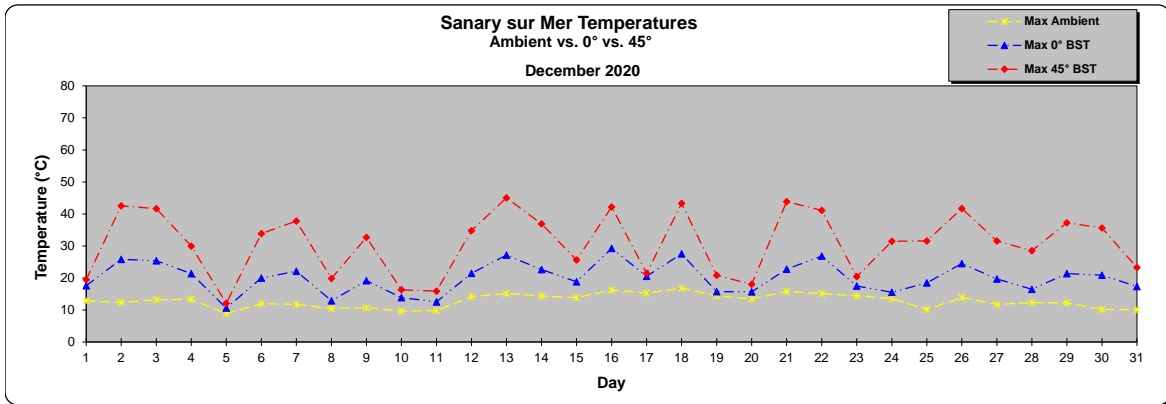
[†] Year To Date
Note:



AWSG		Temperature Summary																		Climate Summary								
Month	Ambient Temperature			Black Standard Temperature BST (°C)						Black Panel Temperature BPT (°C)						Black Metal Panel Temperature (ASTM G179) (°C)						Relative Humidity			Wind Speed		Wind Direction	Rainfall
December	°C			0°			45°			0°			45°			0°			45°			%			(m/s)		360°/0°=N	(mm)
Day	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Avg	Avg	Total
1	13	5	8	18	3	7	19	3	8	18	3	7	18	*	6	18	3	7	21	3	8	97	43	70	8.1	1.1	309°	0.0
2	12	4	7	26	0	8	43	1	12	25	0	8	39	*	9	28	0	8	43	0	12	74	43	60	3.3	0.5	87°	0.0
3	13	2	7	25	0	8	42	0	12	24	-1	8	38	*	8	26	-1	8	42	-1	11	74	33	54	5.1	0.7	28°	0.0
4	13	6	10	21	3	10	30	4	11	21	3	10	28	*	9	24	3	10	34	3	11	96	61	81	9.9	1.1	41°	5.3
5	9	4	7	11	1	5	12	2	6	12	1	6	11	*	4	12	1	6	12	1	6	85	55	73	3.4	0.4	36°	0.0
6	12	4	7	20	1	7	34	2	11	18	1	7	27	*	7	20	1	7	34	1	11	79	51	67	5.3	0.9	316°	0.0
7	12	4	8	22	1	8	38	2	12	21	1	8	32	*	8	24	1	8	39	1	11	85	43	66	4.1	0.7	60°	0.0
8	11	6	8	13	3	7	20	4	8	16	4	7	21	*	6	16	3	8	24	3	8	97	63	83	5.0	0.6	358°	6.6
9	11	3	6	19	0	6	33	1	10	18	0	6	26	*	7	20	0	6	33	0	9	78	44	58	5.9	0.9	301°	0.0
10	10	0	5	14	-3	4	16	-1	6	14	-3	4	14	*	3	15	-3	4	16	-3	4	92	36	69	4.1	0.3	26°	0.5
11	10	5	8	13	2	7	16	3	9	13	2	7	13	*	5	13	1	8	16	2	8	99	75	89	3.9	0.8	46°	11.2
12	14	8	11	21	6	11	35	7	15	21	6	11	29	*	11	22	6	11	35	6	14	99	56	75	9.3	1.3	293°	0.0
13	15	4	10	27	1	10	45	2	16	26	1	10	42	*	12	28	1	10	45	1	14	83	41	64	6.4	0.8	31°	0.0
14	14	6	11	23	4	11	37	5	13	22	4	11	33	*	9	24	4	11	36	4	12	91	68	79	5.5	1.2	72°	0.0
15	14	10	12	19	9	12	26	10	13	19	9	12	23	*	9	20	9	12	25	10	12	95	72	82	8.0	2.2	82°	2.3
16	16	11	13	29	8	12	42	9	15	28	8	13	37	*	12	29	9	13	41	9	14	91	71	82	5.7	1.7	84°	0.0
17	15	12	14	21	11	14	21	12	15	21	11	14	21	*	11	21	11	14	22	11	14	94	79	86	5.3	1.0	79°	0.0
18	17	11	13	28	8	14	43	9	18	26	7	14	40	*	15	28	7	14	43	8	17	94	59	78	5.2	1.1	84°	0.0
19	14	12	13	16	10	12	21	11	13	16	10	12	19	*	11	19	10	13	21	10	13	96	78	88	6.7	1.5	83°	2.5
20	13	10	12	16	8	12	18	9	13	16	8	12	16	*	9	18	8	12	18	8	13	97	86	92	5.0	0.8	76°	3.6
21	16	9	11	23	6	11	44	8	14	30	6	12	39	*	11	33	6	12	45	7	13	97	75	91	3.2	0.5	24°	0.3
22	15	8	11	27	6	12	41	7	17	26	6	12	38	*	12	27	6	12	41	6	16	98	73	89	3.3	0.5	53°	0.0
23	14	10	12	18	9	12	20	10	13	18	9	12	18	*	10	19	9	13	21	9	13	98	88	94	3.3	0.8	74°	1.0
24	14	8	11	16	6	11	31	7	14	19	6	11	26	*	11	20	6	11	31	6	13	99	53	81	5.7	0.8	279°	2.0
25	10	4	7	18	3	8	32	4	12	17	3	8	26	*	8	19	2	7	32	3	10	81	41	63	8.8	1.4	280°	0.0
26	14	2	8	25	-1	8	42	1	12	24	-1	8	36	*	9	25	-2	7	41	-1	11	61	25	39	7.6	0.8	24°	0.0
27	12	1	6	20	-2	6	32	-1	8	19	-3	6	26	*	5	22	-3	6	34	-2	7	81	41	68	7.5	0.9	49°	0.0
28	12	6	9	16	6	9	29	7	11	16	5	9	22	*	7	18	6	9	27	6	10	95	53	75	7.4	1.4	271°	15.2
29	12	6	8	21	3	8	37	4	13	22	3	8	34	*	10	24	3	9	39	3	12	91	55	74	6.7	0.8	324°	0.5
30	10	3	6	21	0	6	36	1	10	20	-1	6	*	*	22	-1	6	36	0	9	85	47	65	7.5	1.0	300°	0.0	
31	10	2	6	17	0	5	23	1	6	19	0	5	25	*	2	21	-1	5	31	0	6	99	52	78	4.6	0.5	21°	6.9
Monthly Avg.	13	6	9	20	4	9	31	5	12	20	4	9	27	*	9	22	3	9	31	4	11	90	57	75	5.8	0.9	135°	
Monthly Total																												57.9
YTD [†] Avg.	21	12	16	39	10	20	45	11	21	36	10	19	40	9	19	40	10	19	45	10	21	85	44	65	5.9	1.1	170°	
YTD [†] Total																												394.0

[†] Year To Date

Note: *No data available



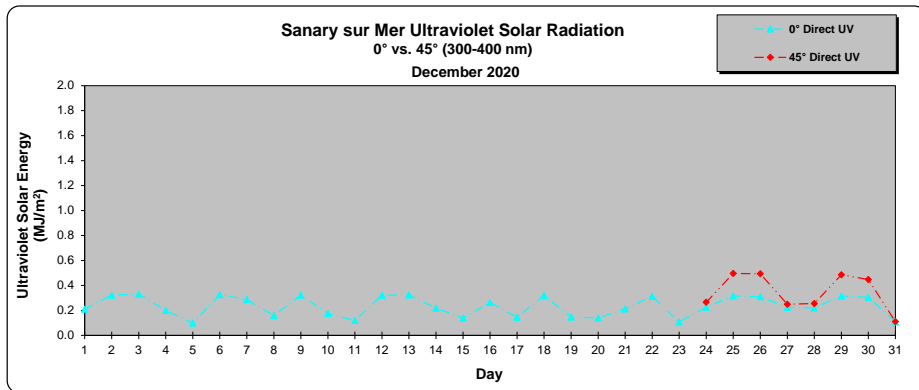
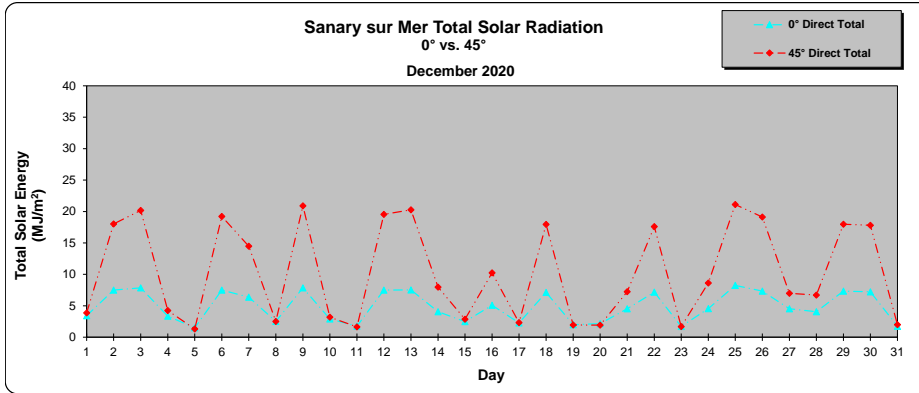
Solar Radiation Summary
December 2020
Sanary sur Mer, France

Latitude 43° 08' North, Longitude 05° 49' East, Elevation 110 (m)

Month	Solar Radiation Summary					
	Total Solar Radiation (MJ/m ²)		Ultraviolet Solar Radiation (MJ/m ²)			
	Direct		295-385 nm		300-400 nm	
Day	0°	45°	0°	45°	0°	45°
1	3.4	3.9	*	*	0.21	*
2	7.5	18.0	*	*	0.32	*
3	7.8	20.2	*	*	0.33	*
4	3.4	4.2	*	*	0.20	*
5	1.5	1.3	*	*	0.10	*
6	7.5	19.2	*	*	0.33	*
7	6.4	14.5	*	*	0.29	*
8	2.5	2.5	*	*	0.16	*
9	7.9	20.9	*	*	0.32	*
10	2.9	3.2	*	*	0.18	*
11	1.8	1.6	*	*	0.12	*
12	7.5	19.6	*	*	0.32	*
13	7.5	20.3	*	*	0.32	*
14	4.1	8.0	*	*	0.22	*
15	2.5	2.9	*	*	0.14	*
16	5.1	10.2	*	*	0.26	*
17	2.3	2.3	*	*	0.15	*
18	7.1	18.0	*	*	0.32	*
19	2.0	1.9	*	*	0.15	*
20	2.1	1.9	*	*	0.14	*
21	4.5	7.2	*	*	0.21	*
22	7.2	17.6	*	*	0.31	*
23	1.7	1.7	*	*	0.11	*
24	4.5	8.6	0.17	0.20	0.23	0.27
25	8.2	21.1	0.24	0.38	0.32	0.50
26	7.3	19.1	0.24	0.38	0.31	0.49
27	4.5	7.0	0.17	0.19	0.23	0.25
28	4.0	6.7	0.17	0.19	0.22	0.26
29	7.3	18.0	0.24	0.37	0.32	0.49
30	7.2	17.8	0.23	0.34	0.31	0.45
31	1.7	2.0	0.08	0.08	0.11	0.11
Monthly Total	151.1	321.4	1.54	2.13	7.23	2.80
YTD¹ Total	5799.6	6927.3	86.52	94.49	304.81	311.47

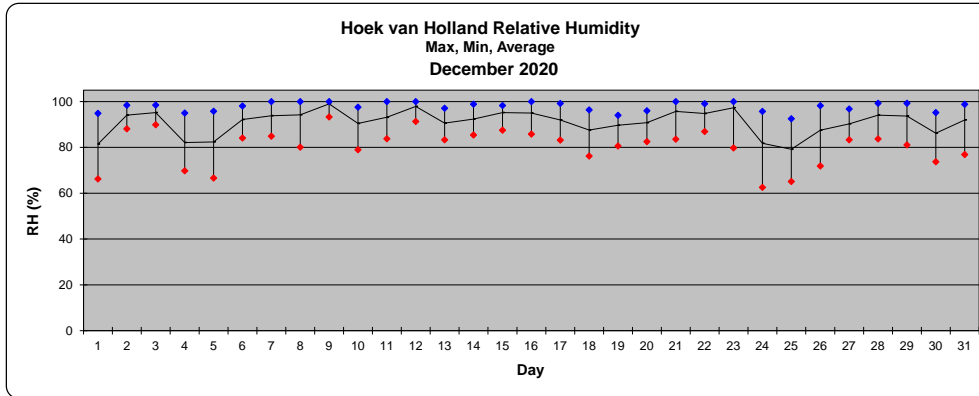
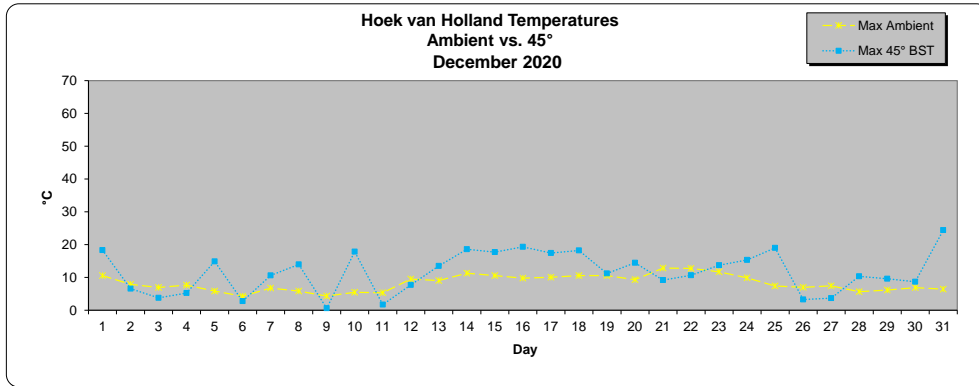
¹ Year To Date Total Solar Radiation - (290-3000 nm) Ultraviolet Solar Radiation - (295-385 nm) or (300-400 nm).

Note: * No data available



Month	Temperature Summary						Climate Summary						
	Ambient Temperature			Black Metal Panel Temperature (ASTM G179) (°C)			Relative Humidity			Wind Speed		Wind Direction	Rainfall
December	°C			45 °			%			(m/s)		360°/0° = N	(mm)
Day	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Avg	Avg	Total
1	11	8	9	18	-3	6	95	66	82	16.8	7.0	330°	3.6
2	8	3	6	7	-4	2	98	88	94	5.8	2.2	108°	0.3
3	7	6	6	4	2	2	99	90	95	10.1	4.8	152°	6.1
4	8	4	6	5	-2	2	95	70	82	17.2	6.4	135°	5.3
5	6	1	4	15	-6	0	96	67	82	8.8	2.8	122°	0.0
6	4	-1	2	3	-8	-3	98	84	92	4.7	1.4	32°	0.0
7	7	2	5	11	-2	2	100	85	94	7.7	3.4	188°	5.6
8	6	1	3	14	-6	0	100	80	94	5.6	1.4	89°	0.0
9	4	0	2	1	-4	-2	100	93	99	9.4	4.0	143°	0.5
10	5	2	3	18	-4	1	98	79	91	8.6	2.6	112°	0.0
11	5	2	3	2	-4	-1	100	84	93	8.4	2.9	103°	2.3
12	10	5	8	8	2	4	100	91	98	7.6	2.2	188°	1.8
13	9	6	8	14	1	4	97	83	91	11.8	4.1	179°	1.3
14	11	7	9	19	3	7	99	85	92	11.1	6.3	152°	1.8
15	11	7	9	18	2	6	98	88	95	8.4	4.1	162°	0.0
16	10	5	8	19	1	5	100	86	95	8.0	3.3	132°	0.3
17	10	8	9	17	3	6	99	83	92	9.2	5.0	172°	3.3
18	11	7	9	18	2	6	96	76	88	10.9	6.3	151°	0.0
19	11	7	9	11	2	5	94	81	90	11.8	5.5	148°	0.3
20	9	7	8	14	2	5	96	83	91	9.5	5.3	165°	0.0
21	13	6	8	9	1	4	100	84	96	14.3	5.5	154°	19.8
22	13	9	10	11	5	7	99	87	95	15.3	5.1	203°	2.5
23	12	9	11	14	5	7	100	80	97	10.5	3.4	158°	10.9
24	10	4	7	15	0	3	96	63	82	14.0	5.5	330°	5.8
25	7	3	5	19	-4	2	93	65	79	10.7	3.3	332°	1.5
26	7	5	6	3	0	2	98	72	88	17.0	6.4	200°	2.5
27	7	4	6	4	-1	2	97	83	90	22.2	9.5	168°	10.2
28	6	2	4	10	-4	0	99	84	94	7.7	2.8	119°	0.3
29	6	3	4	10	-3	0	99	81	94	8.1	2.5	187°	9.9
30	7	4	5	9	-1	1	95	74	86	10.2	4.1	220°	9.4
31	6	1	3	24	-6	1	99	77	92	7.7	2.0	138°	3.3
Monthly Avg.	8	4	6	12	-1	3	98	80	91	10.6	4.2	167°	
Monthly Total													108.5
YTD [†] Ava.	15	9	12	29	4	12	93	61	79	10.4	4.2	170°	
YTD [†] Total													879.8

[†] Year To Date For Pollution (SO2, Nox, O3) visit www.lml.rivm.nl
Note: = 5 year average



North Sea Corrosion Test Centre

Solar Radiation Summary

December 2020

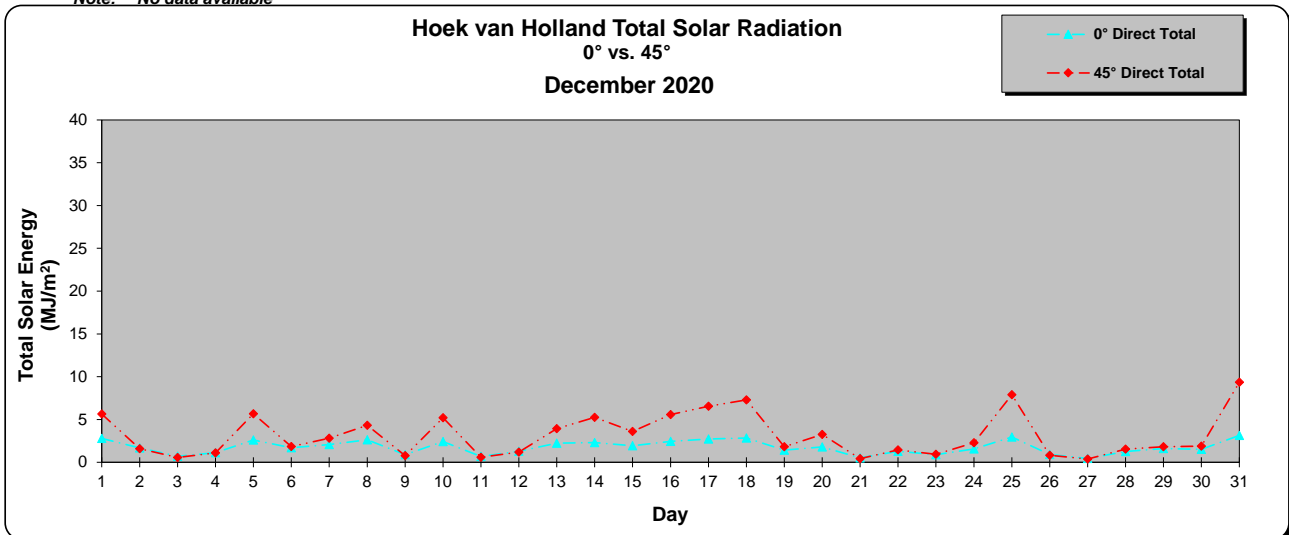
Hoek van Holland, The Netherlands

Latitude 51° 57' North, Longitude 04° 10' East Elevation 6 (m)

AWSG	Solar Radiation Summary	
Month	Total Solar Radiation (MJ/m ²)	
December	Direct	
Day	0°	45°
1	2.8	5.6
2	1.7	1.6
3	0.7	0.6
4	1.1	1.1
5	2.6	5.7
6	1.7	1.8
7	2.1	2.8
8	2.6	4.3
9	0.9	0.8
10	2.4	5.2
11	0.7	0.6
12	1.3	1.2
13	2.2	3.9
14	2.3	5.3
15	1.9	3.6
16	2.4	5.6
17	2.7	6.5
18	2.8	7.3
19	1.4	1.8
20	1.8	3.2
21	0.5	0.4
22	1.3	1.4
23	0.9	0.9
24	1.6	2.3
25	3.0	7.9
26	0.9	0.8
27	0.4	0.4
28	1.3	1.5
29	1.6	1.8
30	1.5	1.9
31	3.1	9.4
Monthly Total	54.3	97.3
YTD[†] Total	4115.1	5017.8

[†] Year To Date Total Solar Radiation - (290-3000nm)

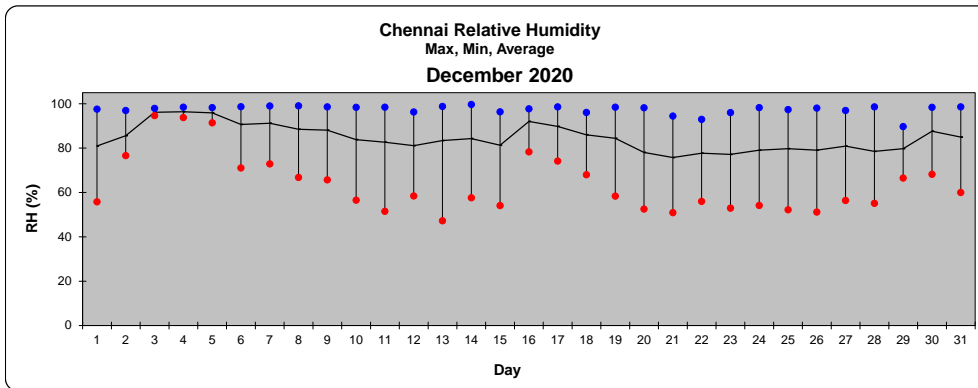
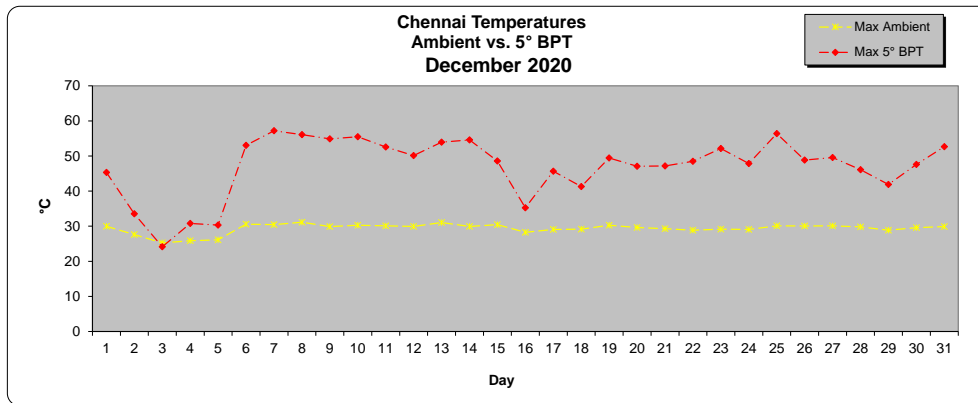
Note: * No data available



AWSG	Temperature Summary						Climate Summary						
	Ambient Temperature			Black Metal Panel Temperature (ASTM G179) (°C)			Relative Humidity			Wind Speed		Wind Direction	Rainfall
Month	° C			5 °			%			(m/s)		360°/70° = N	(mm)
December	° C			5 °			%			(m/s)		360°/70° = N	(mm)
Day	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Avg	Avg	Total
1	30	22	26	45	20	27	98	56	81	6.1	1.4	342°	0.0
2	28	23	26	34	22	25	97	77	86	7.7	1.7	329°	16.5
3	25	25	25	24	23	24	98	95	96	3.2	1.3	0°	8.1
4	26	25	25	31	23	25	99	94	96	4.3	1.3	3°	7.6
5	26	24	25	30	23	25	98	91	96	4.0	1.1	340°	13.2
6	31	25	27	53	23	29	99	71	91	6.7	1.1	33°	19.1
7	30	24	27	57	23	29	99	73	91	5.4	0.9	28°	20.8
8	31	24	27	56	23	30	99	67	89	5.8	1.0	28°	14.2
9	30	24	26	55	22	28	99	66	88	4.9	0.9	20°	7.1
10	30	22	25	55	20	28	98	57	84	3.5	0.8	343°	0.0
11	30	22	25	53	20	28	99	52	83	5.4	0.9	343°	0.0
12	30	22	25	50	19	28	96	58	81	3.2	0.8	350°	0.0
13	31	22	25	54	20	28	99	47	83	3.2	0.7	2°	0.0
14	30	22	25	55	19	27	100	58	84	4.0	0.7	336°	0.0
15	30	22	26	49	19	28	96	54	81	4.8	1.1	353°	0.0
16	28	25	26	35	23	26	98	78	92	4.0	1.0	359°	11.2
17	29	24	26	46	22	27	99	74	90	3.7	1.0	8°	13.2
18	29	24	26	41	22	27	96	68	86	7.2	1.4	353°	0.0
19	30	23	26	49	21	28	99	58	84	5.7	1.1	2°	0.0
20	30	22	26	47	19	27	98	53	78	2.7	1.1	359°	0.0
21	29	21	25	47	18	26	95	51	76	6.4	1.1	349°	0.0
22	29	20	24	49	17	26	93	56	78	4.8	0.9	351°	0.0
23	29	21	25	52	18	27	96	53	77	3.9	0.9	8°	0.0
24	29	20	24	48	18	26	98	54	79	5.4	0.9	348°	0.0
25	30	21	25	56	18	27	97	52	80	4.2	0.9	356°	0.0
26	30	20	25	49	18	27	98	51	79	4.3	1.0	338°	0.0
27	30	22	25	50	19	27	97	56	81	6.3	1.2	343°	0.0
28	30	21	25	46	18	27	99	55	79	5.2	1.2	350°	0.0
29	29	24	26	42	23	27	90	67	80	6.3	1.3	353°	0.0
30	30	24	26	48	22	27	98	68	88	4.6	1.2	354°	3.6
31	30	24	26	53	20	28	99	60	85	7.6	1.2	22°	4.1
Monthly Avg.	29	23	26	47	20	27	97	64	85	5.0	1.1	229°	
Monthly Total													138.7
YTD [†] Avg.	32	22	26	58	22	32	93	48	76	5.1	0.9	180°	
YTD [†] Total													1092.3

[†] Year To Date

Note: * Data Unavailable





ATLAS

WEATHERING SERVICES GROUP



Solar Radiation Summary December 2020 Chennai, India

Latitude 12° 35' North, Longitude 79° 48' East Elevation 45 (m)

AWSG Solar Radiation Summary			
Month	Total Solar Radiation (MJ/m ²)	Ultraviolet Solar Radiation (MJ/m ²)	
		295-385 nm	300-400 nm
December	Direct	5°	5°
Day	5°	5°	
1	12.9	0.70	0.78
2	3.8	0.27	0.30
3	0.0	0.00	0.00
4	3.8	0.28	0.31
5	3.4	0.26	0.29
6	14.9	0.83	0.92
7	12.0	0.74	0.82
8	17.2	0.94	1.05
9	11.7	0.69	0.77
10	17.74	0.89	0.99
11	18.6	0.89	0.99
12	16.6	0.81	0.90
13	17.9	0.87	0.97
14	16.0	0.77	0.86
15	16.0	0.81	0.91
16	4.7	0.32	0.36
17	8.3	0.52	0.58
18	11.1	0.62	0.70
19	16.4	0.82	0.91
20	15.7	0.75	0.84
21	16.1	0.77	0.86
22	16.2	0.80	0.90
23	18.0	0.88	0.98
24	18.7	0.89	1.00
25	18.7	0.89	0.99
26	17.3	0.83	0.92
27	19.4	0.93	1.04
28	17.8	0.88	0.98
29	8.3	0.48	0.54
30	8.8	0.50	0.56
31	14.5	0.77	0.86
Monthly Total	412.3	21.36	23.84
YTD¹ Total	6724.6	303.19	338.45

¹ Year To Date Total Solar Radiation - (290-3000nm)

Note:

