



Allunga Exposure Laboratory

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Tel: 61-7-4778-1697 Fax: 61-7-4422-0009 1209-1231 Flinders Hwy Brookhill Qld 4811

2014 Overview: Daily Weather Record

	Temperature (°C)				Relative Humidity %		Rain	Evap.	Wet *	Sun	Global Radiation (MJ/m²)		
	Ambient		Dew Point						Time	Shine	UV-R		
	Max	Min	9am	9pm	9am	9pm	mm	mm	Hours	Hours	Horiz	19°N	Horiz
January	30.3	23.0	20.8	21.4	70	63	193.7	210.0	264.4	235.1	658.2	641.2	34.4
February	30.5	24.0	19.6	20.8	72	70	615.5	147.3	258.2	211.7	608.6	600.6	33.2
March	30.3	23.0	19.2	20.0	70	63	174.2	209.8	252.0	208.4	640.8	629.4	33.9
April	29.6	22.4	19.0	20.5	72	66	214.2	174.6	234.8	248.3	554.8	625.7	29.1
May	28.1	18.6	16.6	17.5	64	57	10.2	187.8	227.6	258.0	516.7	613.8	24.9
June	25.4	16.7	14.0	15.1	66	57	74.6	131.0	202.7	225.8	476.2	562.2	21.8
July	25.2	12.5	10.5	10.5	66	58	5.8	158.2	200.1	297.6	523.4	629.7	24.5
August	26.2	15.0	11.1	13.1	65	62	49.6	204.2	242.0	290.8	588.3	676.7	28.7
September	27.9	17.4	11.1	14.8	64	59	5.4	217.6	206.0	310.0	696.1	726.9	34.2
October	29.4	19.7	15.7	17.4	61	59	2.4	294.2	230.7	339.9	796.5	757.6	39.4
November	31.1	23.4	18.5	19.8	60	58	24.9	297.6	265.2	329.8	821.6	722.8	41.4
December	32.9	25.3	22.0	22.1	61	61	42.4	308.6	240.2	319.2	830.2	717.0	41.7
Average	Temperature C°				Humidity		Rain	Evap.	Wet Hrs	Sun Hrs	Radiation		
	Max	Min	Dew	Point	am	pm	mm	mm			Horiz	19° N	UV-R
Average	28.9	20.1	16.5	17.7	65.9	61.1	117.7	211.7	235.3	272.9	642.6	658.6	32.3
Total							1412.9	2540.9	2823.9	3274.6	7711.3	7903.7	387.17

For Langleys divide MJ/m² by 0.0418 UV-R = UV-A + UV-B (290-385 nm)

UV data recorded at AEL with Kipp & Zonen CUV5 Pyranometer

Sunshine hours are calculated the total time direct solar irradiance exceeds 120 W/m²

(International Meteorological Organisation)

Wet Time hours: Duration each day exposed surfaces are wet. Condensation is primary source of moisture.

184,454 **189,058** **Total Langleys**
15,371 **15,755** **Average Langleys**
per month



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January 2014 Daily Weather Record: Townsville

Date	Temperature (°C)				Relative Humidity %		Rain	Evap.	Wet	Sun	Global Radiation (MJ/m²)			
	Ambient		Dew	Point					Time	Shine	UV-R			
	Max	Min	9am	9pm	9am	9pm	mm	mm	Hours	Hours	Horiz	19°N	Horiz	Remarks
1	31.5	24.6	21	21	64	59	0.0	10.2	10.1	8.5	26.8	26.6	1.41	Fine
2	31.6	22.3	20	21	59	59	0.0	8.8	11.5	10.9	26.7	26.4	1.40	Fine
3	31.3	22.9	21	22	63	59	0.0	9.6	9.4	7.8	21.8	21.7	1.17	Fine
4	28.7	22.9	19	20	72	89	0.2	7.8	10.7	8.3	19.7	20.0	1.04	Fine
5	30.9	22.5	20	21	67	59	3.2	3.0	11.0	10.7	27.7	27.1	1.40	Fine, O/N Shower
6	30.8	22.1	23	21	60	44	0.0	11.2	7.5	10.8	28.7	28.0	1.45	Fine
7	31.3	20.9	21	22	60	49	0.0	9.6	9.5	7.4	23.8	23.1	1.21	Fine, Lt. Cloud
8	30.2	22.9	21	20	59	52	0.2	6.8	7.7	3.5	14.3	14.0	0.81	Fine, Cloud
9	29.6	25.3	20	21	55	63	0.0	8.0	6.8	8.0	18.0	17.1	0.95	Fine, Lt Cloud
10	30.2	23.9	19	22	60	54	0.0	6.4	8.2	9.5	23.5	22.8	1.22	Fine
11	30.2	24.4	20	23	62	57	19.5	6.6	7.3	3.3	15.6	15.4	0.89	Fine, Rain
12	30.2	21.6	21	21	60	64	0.0	7.0	10.0	8.2	19.8	18.2	1.00	Fine, O/N Shower
13	30.8	20.3	21	21	58	57	0.0	6.4	7.2	10.9	26.5	25.4	1.34	Fine
14	31.2	21.3	22	22	63	59	0.0	7.6	8.0	10.7	26.1	25.0	1.28	Fine
15	30.5	20.6	24	23	61	73	0.0	10.6	3.3	11.2	26.3	25.2	1.32	Fine
16	31.7	20.7	21	22	66	70	0.0	7.2	1.4	11.5	24.7	23.5	1.25	Fine
17	30.6	22.6	21	21	65	57	0.0	7.4	7.0	11.1	25.1	23.8	1.26	Fine
18	31.3	23.2	21	21	64	55	0.0	8.0	4.0	10.8	26.4	24.8	1.30	Fine
19	33.1	22.9	21	22	56	53	0.0	9.2	5.2	9.9	25.8	24.3	1.25	Fine
20	30.2	25.9	21	22	63	93	0.0	9.0	5.4	2.1	10.9	10.6	0.64	Cloud, Storm
21	28.3	22.9	21	22	93	76	16.6	3.4	11.3	1.0	10.3	10.5	0.68	Overcast, Rain
22	30.0	23.3	20	21	76	69	1.8	4.2	6.1	3.5	19.2	18.3	1.04	Cloud, Shower
23	30.1	22.9	21	21	76	69	49.8	8.6	9.9	7.3	22.4	21.0	1.13	Fine, Rain
24	29.7	24.0	20	19	74	72	0.0	5.6	6.4	4.0	16.3	15.7	0.90	Cloud, Fine
25	26.8	22.2	21	22	96	80	21.4	7.2	10.1	1.0	10.8	11.2	0.68	Overcast, Rain
26	28.1	22.5	19	22	95	76	53.0	1.8	12.8	3.5	10.6	10.2	0.62	Showers, Fine
27	29.8	21.9	21	22	93	81	22.8	2.6	14.6	2.8	15.2	15.3	0.88	Cloud, Showers
28	30.0	24.1	21	22	94	72	5.0	1.8	8.0	5.7	22.1	21.6	1.18	Fine, Cloud, o/n shwr
29	30.2	25.4	21	21	75	78	0.2	2.6	7.3	10.3	22.5	24.5	1.21	Fine
30	30.2	24.7	21	21	81	69	0.0	6.0	10.4	10.0	25.2	24.2	1.23	Fine
31	30.4	24.3	20	21	73	66	0.0	5.8	16.3	10.9	25.4	25.6	1.25	Fine
Temperature C°				Humidity		Rain	Evap.	Radiation						
	Max	Min	Dew	Point	am	pm	mm	mm	Wet Hrs	HrsSun	Hrs	Horiz	19° N	UV-R
Avg.	30.3	23.0	20.8	21.4	69.8	65.6		6.8	8.5	7.6	21.2	20.7	1.11	
Total							193.7	210.0	264.4	235.1	658.2	641.2	34.40	

15,743 15,338 Total Langleys
508 495 Average Langleys

For Langleys divide MJ/m² by 0.0418 UV-R = UV-A + UV-B (290-385 nm)

UV data recorded at AEL with Kipp & Zonen CUV5 Pyranometer

Sunshine hours are calculated the total time direct solar irradiance exceeds 120 W/m²
(International Meteorological Organisation)

Wet Time hours: Duration each day exposed surfaces are wet. Condensation is primary source of moisture.



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February 2014 Daily Weather Record

Date	Temperature (°C)			Relative Humidity %		Rain	Evap.	Wet Time	Sun Shine	Global Radiation (MJ/m²)				Remarks
	Ambient	Dew	Point											
	Max	Min	9am	9pm	9am	9pm	mm	mm	Hours	Hours	Horiz	19°N	Horiz	
1	31.2	24.3	20	22	75	69	0.0	5.5	8.5	10.5	27.2	25.8	1.45	Fine
2	31.2	25.3	20	21	74	89	5.5	7.6	9.9	3.2	14.8	14.8	0.89	Fine, Cloud, Rain
3	31.3	24.9	21	21	66	62	0.0	6.4	7.4	3.0	16.6	15.5	0.96	Fine, Cloud, Rain
4	31.3	23.1	20	21	61	61	13.0	6.8	11.0	10.4	27.8	26.6	1.49	Fine, O/N Rain
5	31.5	24.3	21	21	62	58	2.5	6.4	9.3	7.7	20.8	21.4	1.19	Fine, Cloud, o/n Rain
6	32.3	22.5	20	21	64	68	18.0	6.6	10.1	0.8	14.3	14.3	0.89	Overcast, Rain
7	32.0	22.8	20	21	83	65	5.0	5.8	9.5	1.4	14.3	13.9	0.90	Overcast, Rain
8	32.3	24.2	18	22	64	65	2.0	7.0	7.7	8.2	23.3	23.0	1.32	Fine, Shower
9	30.9	24.6	20	22	83	86	0.0	6.0	8.1	3.8	19.2	18.4	1.03	Fine, Cloud, o/n Rain
10	28.9	25.3	20	19	78	70	32.0	0.0	11.3	10.6	26.7	25.5	1.43	Fine, O/N Rain
11	29.3	24.3	20	20	72	72	130.0	7.0	11.2	10.8	27.4	27.1	1.46	Fine, O/N Rain
12	31.7	23.6	18	20	61	65	86.0	5.2	9.2	11.7	29.0	28.3	1.50	Fine, O/N Rain
13	31.9	22.2	19	22	62	58	5.0	5.2	6.9	10.8	23.9	23.6	1.08	Fine
14	32.1	21.8	20	21	67	60	15.0	8.6	8.0	11.7	27.8	27.1	1.45	Fine, O/N Rain
15	28.7	23.7	20	18	63	58	5.5	0.0	6.5	11.9	26.8	26.5	1.37	Fine, O/N Rain
16	27.1	26.6	18	19	70	74	182.0	1.6	13.5	5.0	13.0	13.9	0.70	Fine, Rain
17	29.9	22.7	20	19	83	87	14.0	5.2	11.1	4.5	17.1	17.0	1.01	O/N Rain, Fine
18	28.2	24.0	22	23	94	86	5.0	5.2	10.4	3.5	15.0	14.8	0.85	Cloud, Rain
19	32.4	24.6	22	23	96	92	9.0	2.8	7.8	0.3	5.8	5.5	0.43	Cloud, Rain
20	29.9	25.5	21	22	86	78	23.0	5.4	10.6	9.7	25.0	24.8	1.39	Fine, Rain
21	30.5	25.9	22	22	85	82	1.5	5.4	9.6	7.5	22.8	21.7	1.27	Fine, Shower
22	30.7	24.5	19	20	78	69	0.0	6.6	5.3	8.2	27.1	26.4	1.45	Fine, Lt Cloud
23	31.3	24.1	19	21	75	74	0.0	7.6	9.0	7.1	18.4	18.3	1.04	Fine, Lt Cloud
24	30.5	23.3	18	21	67	67	0.0	6.0	7.9	7.7	22.2	22.8	1.20	Fine, Lt Cloud
25	31.4	22.8	18	21	61	67	0.0	7.4	8.8	7.6	23.1	24.1	1.25	Fine, Lt Cloud
26	28.5	22.7	19	21	62	64	21.5	7.6	10.9	12.0	25.8	25.8	1.38	Fine, Rain
27	28.5	24.4	19	20	69	62	30.0	0.0	10.3	11.0	26.0	26.1	1.40	Fine, Rain
28	28.4	23.2	16	18	57	56	10.0	2.4	8.4	11.1	27.2	27.6	1.40	Fine, Rain

Avge.	Temperature C°				Humidity		Rain	Evap.	Wet Hrs	Sun Hrs	Radiation		
	Max	Min	Dew	Point	am	pm	mm	mm			Horiz	19° N	UV-R
	30.5	24.0	19.6	20.8	72.1	70.1		5.3	9.2	7.6	21.7	21.5	1.18
Total							615.5	147.3	258.2	211.7	608.6	600.6	33.15

Per Month

14,557 **14,366** Total Langley's
502 **495** Average Langley's

For Langley's divide MJ/m² by 0.0418 UV-R = UV-A + UV-B (290-385 nm)

UV data recorded at AEL with Kipp & Zonen CUV5 Pyranometer

Sunshine hours are calculated the total time direct solar irradiance exceeds 120 W/m²

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March 2014 Daily Weather Record

Date	Temperature (°C)		Dew Point		Relative Humidity %		Rain	Evap.	Wet Time	Sun Shine	Global Radiation (MJ/m²)			Remarks
	Ambient	Min	9am	9pm	9am	9pm	mm	mm	Hours	Hours	Horiz	19°N	Horiz	
1	31.5	24.6	21	21	64	59	0.0	9.6	8.9	8.5	26.8	26.6	1.41	Fine
2	31.6	22.3	21	20	59	59	0.0	9.4	7.7	10.9	26.7	26.4	1.40	Fine
3	31.3	22.9	21	20	63	59	0.0	10.6	8.0	7.8	21.8	21.7	1.17	Fine, Lt Cloud
4	28.7	22.9	21	20	72	89	0.2	7.8	10.4	3.3	13.0	13.1	0.79	Cloud, Shower
5	30.9	22.5	22	20	67	59	3.2	3.0	6.5	10.7	27.7	27.1	1.40	Fine, O/N Shower
6	30.8	22.1	19	20	60	44	0.0	11.2	9.8	10.8	28.7	28.0	1.45	Fine
7	31.3	20.9	20	19	60	49	0.0	9.6	5.6	7.4	23.8	23.1	1.21	Fine, Lt Cloud
8	30.2	22.9	21	19	59	52	0.2	6.8	8.1	1.5	14.3	14.0	0.81	Cloud
9	29.6	25.3	17	18	55	63	0.0	8.0	8.4	2.0	16.1	15.9	0.95	Cloud
10	30.2	23.9	18	21	60	54	0.0	6.4	9.5	4.5	17.8	16.9	0.99	Fine, Cloud
11	30.2	24.4	19	21	62	57	0.0	6.6	6.1	2.2	15.6	15.4	0.89	Cloud
12	30.2	21.6	20	21	60	64	0.0	7.0	5.9	2.2	19.8	18.2	1.00	Cloud
13	30.8	20.3	18	20	58	57	0.0	6.4	8.8	10.9	26.5	25.4	1.34	Fine
14	31.2	21.3	17	21	63	59	0.0	7.6	9.0	10.7	26.1	25.0	1.28	Fine
15	30.5	20.6	17	16	61	43	0.0	10.6	5.4	11.2	26.3	25.2	1.32	Fine
16	31.7	20.7	17	16	66	55	0.0	7.2	5.5	11.5	24.7	23.5	1.25	Fine
17	30.6	22.6	18	20	65	57	0.0	7.4	7.3	11.1	25.1	23.8	1.26	Fine
18	31.3	23.2	18	21	64	55	0.0	8.0	8.3	10.8	26.4	24.8	1.30	Fine
19	33.1	22.9	16	18	56	53	0.0	9.2	9.1	9.9	25.8	24.3	1.25	Fine
20	30.2	25.9	20	23	63	93	0.0	9.0	10.2	0.8	10.9	10.6	0.64	Overcast
21	28.3	22.9	21	22	93	76	16.6	3.4	9.1	0.5	10.3	10.5	0.68	Overcast, Rain
22	30.0	23.3	18	19	76	69	1.8	4.2	7.4	3.7	19.2	18.3	1.04	Fine, Cloud
23	30.1	22.9	17	19	76	69	49.8	8.6	10.2	7.3	22.4	21.0	1.13	Fine, Rain
24	29.7	24.0	18	20	74	72	0.0	5.6	6.0	4.0	16.3	15.7	0.90	Fine, Cloud
25	26.8	22.2	20	22	96	80	21.4	7.2	9.7	1.0	10.8	11.2	0.68	Overcast, Rain
26	28.1	22.5	21	20	95	76	53.0	0.6	12.3	3.5	10.6	10.2	0.62	Fine, Cloud, Rain
27	29.8	21.9	20	20	93	81	22.8	2.6	11.6	2.8	15.2	15.3	0.88	Cloud, Rain
28	30.0	24.1	21	22	94	72	5.0	1.8	8.3	5.7	21.5	22.1	1.18	Fine, Cloud
29	30.2	25.4	20	21	75	78	0.2	2.6	7.5	10.3	22.6	24.2	1.15	Fine
30	30.2	24.7	20	21	81	69	0.0	6.0	6.2	10.0	23.7	25.2	1.23	Fine
31	30.4	24.3	18	19	73	66	0.0	5.8	5.2	10.9	24.4	26.5	1.25	Fine
Temperature C° Humidity Rain Evap. Radiation														
	Max	Min	Dew	Point	am	pm	mm	mm	Wet Hrs	Sun Hrs	Horiz	19° N	UV-R	
Avg.	30.3	23.0	19.2	20.0	70	63		6.8	8.1	6.7	20.7	20.3	1.09	
Total							174.2	209.8	252.0	208.4	640.8	629.4	33.86	



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April 2014 Daily Weather Record

Date	Temperature (°C)		Relative Humidity %		Rain	Evap.	Wet	Sun	Global Radiation (MJ/m²)				Remarks	
	Ambient	Dew Point					Time	Shine				UV-R		
	Max	Min	9am	9pm	9am	9pm	mm	mm	Hours	Hours	Horiz	19°N	Horiz	
1	30.4	23.4	19	20	70	56	0.0	7.0	6.3	10.5	23.2	26.2	1.25	Fine
2	30.1	22.0	20	21	70	65	0.0	8.8	8.0	9.7	22.3	25.2	1.20	Fine
3	30.2	21.0	20	20	63	59	0.0	7.0	5.5	9.6	23.5	26.5	1.22	Fine
4	31.0	22.1	20	18	68	62	0.0	6.4	6.4	11.0	21.8	24.7	1.16	Fine
5	29.9	24.4	18	21	88	64	0.0	8.0	7.4	6.6	21.3	24.1	1.15	Fine, Lt Cloud
6	30.3	24.0	20	20	68	59	1.6	5.6	8.3	8.8	21.6	24.3	1.11	Fine, Lt Cloud
7	30.8	21.7	20	21	68	60	0.0	4.0	5.9	9.9	21.7	24.4	1.15	Fine
8	30.7	23.0	20	21	66	57	0.0	7.4	7.0	10.4	21.8	24.6	1.15	Fine
9	30.2	23.0	19	20	61	58	0.4	9.2	8.1	10.8	22.4	25.3	1.20	Fine
10	30.2	21.3	19	19	68	59	0.0	6.8	3.3	10.2	21.6	24.4	1.13	Fine
11	30.4	25.0	20	23	75	85	0.0	7.8	9.6	2.9	12.6	13.9	0.73	Cloud, O/N Rain
12	28.1	23.1	21	23	94	87	30.4	6.4	12.5	1.5	8.2	9.3	0.58	Overcast, Rain
13	27.9	22.9	25	23	100	85	174.6	0.0	18.6	0.0	3.6	4.1	0.33	Overcast, Rain
14	29.9	22.9	21	22	81	77	5.6	2.4	10.8	10.9	20.7	23.4	1.08	Fine
15	29.2	23.4	19	22	75	73	0.0	6.4	9.2	8.9	23.0	25.9	1.13	Fine
16	28.9	23.8	19	21	78	73	0.0	6.2	9.4	10.3	20.6	23.2	1.07	Fine
17	29.8	23.3	17	19	69	63	0.0	5.8	7.6	10.8	21.9	24.7	1.10	Fine
18	29.1	22.5	17	21	71	67	0.0	6.6	8.2	10.3	20.8	23.5	1.02	Fine
19	28.9	23.0	18	21	63	58	0.0	4.6	5.1	9.4	21.5	24.3	1.05	Fine
20	28.9	20.6	18	20	58	52	0.0	6.0	6.0	11.0	21.4	24.2	1.05	Fine
21	28.7	19.9	18	18	65	53	0.0	6.8	4.6	6.6	16.1	18.2	0.80	Fine, Lt Cloud
22	28.5	22.3	19	20	68	64	0.0	7.4	6.7	7.5	8.1	9.1	0.54	Fine, Cloud
23	29.6	22.2	18	18	70	65	0.0	5.6	8.3	4.6	13.6	15.4	0.80	Fine, Cloud
24	28.3	23.1	17	21	79	74	0.0	2.6	8.5	0.8	9.6	10.8	0.59	Overcast
25	29.5	22.8	18	20	77	64	1.4	2.4	7.8	6.1	17.1	18.9	0.85	Fine, Lt Cloud, Shwr
26	30.1	22.5	17	21	71	72	0.2	6.4	8.3	6.9	16.7	18.8	0.83	Fine, Lt Cloud
27	29.8	22.3	19	21	70	73	0.0	4.6	7.9	9.7	18.0	20.4	0.89	Fine
28	29.0	20.6	19	20	62	58	0.0	5.4	7.2	11.1	20.1	22.7	0.97	Fine
29	29.8	19.1	19	19	63	60	0.0	6.0	5.9	10.6	20.7	23.3	0.98	Fine
30	29.8	20.5	17	21	66	64	0.0	5.0	6.4	10.9	19.3	21.8	0.95	Fine

	Temperature C°				Humidity		Rain mm	Evap. mm	Wet Hrs	Sun Hrs	Radiation		
	Max	Min	Dew	Point	am	pm					Horiz	19° N	UV-R
Avg.	29.6	22.4	19.0	20.5	71.5	65.5	7.1	5.8	7.8	8.3	18.5	20.9	0.97
Total							214.2	174.6	234.8	248.3	554.8	625.7	29.07

Per Month

For Langleys divide MJ/m² by 0.0418 UV-R = UV-A + UV-B (290-385 nm)

UV data recorded at AEL with Kipp & Zonen CUV5 Pyranometer

Sunshine hours are calculated the total time direct solar irradiance exceeds 120 W/m² (International Meteorological Organisation)

Wet Time hours: Duration each day exposed surfaces are wet. Condensation is primary source of moisture.

13,270 14,967 Total Langleys
442 499 Average Langleys



Allunga Exposure Laboratory

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May 2014 Daily Weather Record

Date	Temperature (°C)				Relative Humidity %		Rain	Evap.	Wet Time	Sun Shine	Global Radiation (MJ/m²)			
	Ambient		Dew	Point								UV-R		
	Max	Min	9am	9pm	9am	9pm	mm	mm	Hours	Hours	Horiz	19°N	Horiz	Remarks
1	29.5	21.3	19	21	77	66	0.0	5.0	8.8	10.8	19.4	22.9	0.97	Fine
2	29.2	22.7	20	21	74	68	0.0	5.6	9.0	10.5	19.3	22.8	0.96	Fine
3	27.6	21.3	9	7	30	24	0.0	8.6	0.0	10.3	19.4	23.2	0.94	Fine
4	25.4	16.9	12	10	30	25	0.0	9.8	0.0	10.9	19.4	23.4	0.94	Fine
5	26.1	12.4	14	12	48	34	0.0	5.8	3.8	10.9	19.5	23.4	0.94	Fine
6	26.9	13.2	16	12	53	35	0.0	6.2	3.6	11.1	19.5	23.4	0.94	Fine
7	27.1	14.9	16	15	58	51	0.0	5.8	6.9	10.9	19.1	22.9	0.93	Fine
8	28.1	16.4	17	16	60	52	0.0	6.6	8.8	10.9	18.4	22.3	0.91	Fine
9	27.1	16.6	17	17	60	55	0.0	6.0	8.2	10.7	19.0	22.9	0.92	Fine
10	28.8	18.8	18	19	64	58	0.0	6.4	9.2	10.7	18.9	22.7	0.93	Fine
11	29.1	17.7	18	19	63	53	0.0	6.8	7.5	9.9	15.1	18.7	0.74	Fine
12	29.1	19.7	17	19	60	58	0.0	7.4	5.6	9.0	17.1	20.8	0.84	Fine
13	28.0	21.2	17	20	66	62	0.8	6.8	9.4	3.3	10.1	11.5	0.57	Fine, Cloud, Shower
14	28.1	20.1	17	20	63	61	4.0	6.0	8.3	2.6	8.7	10.1	0.48	Fine, Cloud, Shower
15	28.9	19.9	17	20	63	63	0.0	5.2	6.6	6.5	18.2	21.8	0.87	Fine, Lt Cloud
16	29.3	19.8	17	19	60	59	0.0	5.8	6.0	9.7	15.6	18.9	0.78	Fine
17	28.6	21.9	17	18	62	48	1.0	7.4	5.7	8.0	19.4	23.1	0.92	Fine, Lt Cloud, Shwr
18	25.3	19.3	19	20	77	61	0.4	8.0	10.5	0.5	7.0	7.3	0.42	Fine, Lt Cloud, Shwr
19	28.2	18.9	17	19	65	58	3.0	2.8	9.4	6.8	11.7	14.3	0.62	Fine, Lt Cloud
20	28.3	18.9	16	19	63	70	0.0	5.4	10.6	7.0	16.4	19.9	0.81	Fine, Lt Cloud
21	28.3	17.0	18	15	71	49	0.0	6.0	5.1	8.8	17.5	21.2	0.86	Fine, Lt Cloud
22	28.4	17.7	17	16	67	63	0.0	5.6	8.1	9.9	18.5	22.7	0.89	Fine
23	27.7	21.0	17	21	73	79	1.0	5.8	9.3	2.2	12.6	14.3	0.67	Cloud, Shower
24	28.5	19.0	18	19	76	66	0.0	3.6	8.9	9.3	17.3	21.1	0.82	Fine
25	28.5	18.5	20	18	85	59	0.0	5.8	7.2	10.0	17.6	20.9	0.82	Fine
26	28.4	20.3	16	18	64	55	0.0	4.6	7.6	10.4	18.6	23.0	0.86	Fine
27	28.3	18.9	16	16	66	62	0.0	7.0	5.0	5.9	15.5	19.3	0.78	Fine, Cloud
28	28.4	19.0	16	18	69	67	0.0	6.4	7.7	10.1	17.3	19.6	0.70	Fine
29	28.5	17.7	13	18	70	56	0.0	5.0	8.0	9.6	21.6	24.4	0.84	Fine
30	28.7	17.2	17	19	67	52	0.0	6.0	10.3	7.6	18.7	20.4	0.77	Fine, Lt Cloud
31	27.2	17.2	18	20	76	95	0.0	4.6	12.5	3.2	10.3	10.7	0.51	Fine, Cloud
Temperature C°														
Humidity														
Rain														
Evap.														
Radiation														
Wet HrsSun Hrs														
Horiz														
19° N														
UV-R														
Avg.	28.1	18.6	16.6	17.5	64	57		6.1	7.3	8.3	16.7	19.8	0.80	
Total							10.2	187.8	227.6	258.0	516.7	613.8	24.94	

For Langleys divide MJ/m² by 0.0418 UV-R = UV-A + UV-B (290-385 nm)

UV data recorded at AEL with Kipp & Zonen CUV5 Pyranometer

Sunshine hours are calculated the total time direct solar irradiance exceeds 120 W/m²
(International Meteorological Organisation)

Wet Time hours: Duration each day exposed surfaces are wet. Condensation is primary source of moisture.



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June 2014 Daily Weather Record

Date	Temperature (°C)				Relative Humidity %		Rain	Evap.	Wet Time	Sun Shine	Global Radiation (MJ/m²)			Remarks
	Ambient		Dew Point								UV-R			
	Max	Min	9am	9pm	9am	9pm	mm	mm	Hours	Hours	Horiz	19°N	Horiz	
1	28.1	19.0	18	20	73	67	9.4	1.6	10.4	6.9	19.5	21.6	0.84	Fine, O/N Rain
2	28.8	21.3	18	20	75	74	0.0	4.0	9.7	6.8	18.5	20.3	0.76	Fine, Lt Cloud
3	28.3	19.4	18	19	78	71	0.0	4.4	9.8	10.3	18.9	20.8	0.77	Fine
4	28.6	17.9	17	20	72	61	0.0	5.4	8.6	9.8	21.2	23.4	0.95	Fine
5	29.1	19.7	15	17	67	55	0.0	6.0	6.2	7.1	15.9	17.7	0.69	Fine, Lt Cloud
6	28.8	19.0	17	17	62	48	0.0	6.8	8.5	8.9	19.7	22.0	0.88	Fine
7	25.7	18.8	18	17	61	44	4.5	7.4	8.2	2.4	9.8	9.4	0.48	Cloud, Shower
8	20.3	18.8	19	21	88	91	11.5	2.6	7.8	0.0	1.9	2.1	0.16	Overcast, Rain
9	19.7	16.5	17	17	72	91	7.2	1.8	11.3	0.0	1.9	2.2	0.16	Overcast, Rain
10	24.1	16.6	16	15	92	66	31.8	2.0	14.6	1.2	10.4	11.0	0.54	Overcast, Rain
11	26.8	18.3	14	17	58	56	0.0	3.0	3.8	10.0	17.0	21.6	0.83	Fine
12	26.9	16.6	14	17	65	60	0.0	4.6	9.1	10.4	20.7	22.9	0.90	Fine
13	26.9	20.3	15	18	74	72	0.0	5.2	7.5	4.6	12.9	14.4	0.66	Fine, Cloud
14	20.1	17.9	16	19	85	88	3.4	4.6	11.3	5.0	16.8	18.4	0.77	Fine, Cloud, Shower
15	21.4	18.0	15	16	62	49	4.4	3.0	4.7	1.4	10.1	10.8	0.55	Cloud, Shower
16	23.1	16.7	13	13	55	53	0.0	3.6	2.8	5.4	15.7	17.6	0.71	Fine, Cloud
17	19.4	16.3	15	17	75	77	0.6	3.4	9.1	8.2	17.1	20.4	0.75	Fine, Cloud, o/n shwr
18	24.6	13.9	12	14	58	61	1.0	2.4	5.4	8.7	15.9	18.9	0.71	Fine, Lt Cloud
19	25.9	14.5	12	14	62	50	0.0	5.2	6.8	10.2	17.8	22.3	0.81	Fine
20	26.7	13.8	13	15	74	62	0.0	4.0	7.2	8.5	17.2	20.5	0.79	Fine
21	26.3	15.0	14	15	76	57	0.0	4.0	6.5	10.1	17.0	21.5	0.79	Fine
22	26.2	15.5	14	14	81	57	0.0	4.4	7.3	10.2	18.0	21.4	0.81	Fine
23	25.6	15.1	14	14	80	58	0.0	4.0	6.4	10.4	17.2	20.7	0.77	Fine
24	27.4	14.6	15	14	86	46	0.0	4.0	8.8	9.4	17.5	22.2	0.81	Fine
25	27.0	15.0	5	7	59	52	0.0	5.0	0.0	10.5	17.5	22.6	0.80	Fine
26	25.0	14.4	9	11	51	57	0.0	5.2	0.0	10.5	17.4	23.3	0.80	Fine
27	25.9	12.2	11	12	62	59	0.0	4.6	5.7	8.1	19.3	24.0	0.84	Fine, O/N Shower
28	26.9	16.0	14	14	81	50	0.8	4.8	5.2	10.1	17.7	22.3	0.82	Fine
29	25.4	15.0	5	5	50	55	0.0	6.4	0.0	10.3	17.8	22.8	0.81	Fine
30	23.4	14.3	7	4	61	58	0.0	7.6	0.0	10.4	17.9	23.1	0.83	Fine

	Temperature C°				Humidity		Rain mm	Evap. mm	Wet Hrs	Sun Hrs	Radiation		
	Max	Min	Dew	Point	am	pm					Horiz	19° N	UV-R
Avg.	25.4	16.7	14.0	15.1	70	62		4.4	6.8	7.5	15.9	18.7	0.73
Total							74.6	131.0	202.7	225.8	476.2	562.2	21.79

Per Month

11,390 13,449 Total Langleys
380 448 Average Langleys

For Langleys divide MJ/m² by 0.0418 UV-R = UV-A + UV-B (290-385 nm)

UV data recorded at AEL with Kipp & Zonen CUV5 Pyranometer

Sunshine hours are calculated the total time direct solar irradiance exceeds 120 W/m²

(International Meteorological Organisation)

Wet Time hours: Duration each day exposed surfaces are wet. Condensation is primary source of moisture.



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July 2014 Daily Weather Record

Date	Temperature (°C)				Relative Humidity %		Rain	Evap.	Wet Time	Sun Shine	Global Radiation (MJ/m²)			Remarks
	Ambient		Dew Point		9am	9pm	mm	mm	Hours	Hours	Horiz	19°N	UV-R	
	Max	Min	9am	9pm									Horiz	
1	22.8	10.5	11	15	76	78	0.0	8.2	10.5	10.0	16.6	20.3	0.76	Fine
2	24.3	9.3	8	11	68	59	0.0	6.0	8.5	9.4	16.9	20.5	0.77	Fine
3	24.2	15.5	13	15	55	62	0.0	3.8	9.1	8.7	18.0	21.4	0.80	Fine
4	26.5	14.6	14	13	66	53	0.4	3.6	6.3	8.2	14.2	14.9	0.66	Fine, Lt Cloud
5	25.7	13.7	13	13	69	57	0.0	5.6	7.4	9.8	18.5	22.3	0.83	Fine
6	26.5	12.8	14	9	83	41	0.0	3.6	3.6	9.9	16.6	20.4	0.79	Fine
7	26.1	11.1	5	6	24	12	0.0	3.6	0.0	9.9	16.4	20.3	0.77	Fine
8	24.1	9.8	11	13	63	48	0.0	5.4	8.3	10.6	17.1	21.5	0.78	Fine
9	25.2	10.4	12	12	75	50	0.0	4.6	5.7	9.5	16.7	20.5	0.78	Fine
10	25.6	11.1	12	14	61	74	0.0	4.8	9.1	10.7	16.3	20.7	0.78	Fine
11	24.1	10.4	12	13	65	59	0.0	7.8	8.7	10.7	17.2	21.7	0.79	Fine
12	23.2	10.0	10	12	55	67	0.0	4.4	8.8	9.9	17.1	21.7	0.79	Fine
13	25.2	8.8	10	11	61	52	0.0	6.4	11.2	10.0	17.0	21.4	0.79	Fine
14	23.8	12.2	11	12	66	69	0.0	5.2	6.6	7.7	16.9	21.2	0.81	Fine, Lt Cloud, Fog
15	24.9	16.1	12	14	66	68	0.0	6.2	10.2	8.9	17.6	21.6	0.82	Fine
16	25.7	14.7	13	13	64	60	0.0	4.4	9.3	10.0	16.3	19.2	0.83	Fine
17	27.4	14.9	14	11	77	59	0.0	4.6	8.6	9.1	16.9	19.8	0.82	Fine
18	26.3	14.6	6	5	59	54	0.0	6.0	5.2	10.9	17.2	21.1	0.82	Fine
19	23.1	8.9	3	5	55	52	0.0	8.0	0.0	10.9	18.0	21.2	0.80	Fine
20	22.8	7.3	6	2	62	57	0.0	5.6	0.0	10.5	17.6	21.8	0.81	Fine
21	23.4	9.0	10	5	67	52	0.0	4.0	6.5	10.1	17.7	21.2	0.81	Fine
22	25.0	9.6	11	6	69	57	0.0	4.0	7.4	10.3	17.4	20.9	0.77	Fine
23	25.2	10.6	12	11	65	53	0.0	3.4	5.7	9.9	17.2	21.1	0.81	Fine
24	25.7	12.0	8	12	78	85	0.0	5.2	8.6	8.2	17.6	21.5	0.83	Fine, O/N Shower
25	25.9	18.8	13	14	79	58	5.4	2.6	5.8	8.5	13.1	15.2	0.65	Fine, Lt Cloud
26	26.5	17.0	14	13	66	64	0.0	6.0	7.7	6.8	17.0	19.5	0.83	Fine, Lt Cloud
27	26.4	16.5	11	13	71	58	0.0	5.6	9.3	10.0	14.8	16.6	0.75	Fine
28	25.8	14.9	9	12	69	64	0.0	3.2	5.2	10.1	16.4	19.4	0.79	Fine
29	26.3	13.6	8	10	61	52	0.0	6.0	6.8	9.7	18.4	20.8	0.87	Fine
30	26.3	14.3	9	7	67	56	0.0	6.4	0.0	9.0	17.7	20.5	0.86	Fine
31	26.0	14.3	10	4	75	56	0.0	4.0	0.0	9.7	16.6	19.6	0.78	Fine
Temperature C° Humidity Rain Evap. Radiation														
	Max	Min	Dew	Point	am	pm	mm	mm	Wet Hrs	Sun Hrs	Horiz	19° N	UV-R	
Avg.	25.2	12.5	10.5	10.5	66	58		5.1	6.5	9.6	16.9	20.3	0.79	
Total							5.8	158.2	200.1	297.6	523.4	629.7	24.53	

Per Month

12,520 15,063 Total Langleys
404 486 Average Langleys

For Langleys divide MJ/m² by 0.0418 UV-R = UV-A + UV-B (290-385 nm)

UV data recorded at AEL with Kipp & Zonen CUV5 Pyranometer

Sunshine hours are calculated the total time direct solar irradiance exceeds 120 W/m²

(International Meteorological Organisation)

Wet Time hours: Duration each day exposed surfaces are wet. Condensation is primary source of moisture.



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August 2014 Daily Weather Record

Date	Temperature (°C)				Relative Humidity %		Rain mm	Evap. mm	Wet Time Hours	Sun Shine Hours	Global Radiation (MJ/m²)			Remarks
	Ambient Max	Dew Min	Point 9am	9pm	9am	9pm					Horiz	19°N	UV-R Horiz	
1	26.9	14.0	11	14	75	55	0.0	4.0	8.7	10.3	18.8	22.7	0.87	Fine
2	28.4	15.1	12	14	69	60	0.0	5.0	9.5	10.2	18.2	22.1	0.90	Fine
3	26.0	19.1	14	15	63	58	0.0	6.8	6.6	10.5	17.9	21.7	0.85	Fine
4	26.1	19.2	13	15	56	50	0.0	7.8	6.9	9.3	17.8	21.2	0.86	Fine
5	27.6	17.0	12	14	59	56	0.0	7.6	4.8	9.2	18.2	21.8	0.90	Fine
6	26.7	17.3	13	15	55	56	0.0	8.6	7.0	9.4	20.6	24.1	0.97	Fine
7	27.0	17.3	14	15	55	56	0.0	8.0	8.2	8.6	19.0	22.2	0.92	Fine, Lt Cloud
8	26.5	12.9	12	11	54	50	0.0	7.6	5.9	10.3	18.0	21.1	0.87	Fine
9	24.8	14.5	11	8	55	49	0.0	8.0	6.1	7.8	20.0	23.7	0.95	Fine, Lt Cloud
10	26.5	14.7	10	6	56	49	0.0	6.6	0.0	4.6	10.8	13.2	0.56	Fine, Cloud
11	26.3	14.1	9	12	63	54	0.0	6.8	8.4	10.7	20.8	24.1	0.99	Fine
12	25.7	13.0	9	13	68	67	0.0	5.8	10.2	10.0	19.1	22.8	0.93	Fine
13	26.2	13.5	9	13	60	66	0.0	5.4	8.7	9.2	18.4	21.8	0.92	Fine
14	26.7	19.3	13	15	61	74	0.0	8.0	10.5	9.9	20.2	23.6	0.97	Fine
15	21.8	18.7	13	18	97	96	12.6	8.4	14.3	2.2	11.7	13.1	0.60	Cloud, Rain
16	26.6	19.0	15	18	93	92	37.0	2.0	15.6	1.1	5.4	4.8	0.37	Cloud, Rain
17	27.3	18.2	13	16	66	61	0.0	5.0	9.1	10.2	18.9	20.1	0.96	Fine
18	26.4	14.0	10	15	64	70	0.0	6.4	10.3	11.1	21.8	25.2	1.04	Fine
19	25.5	11.3	7	9	59	74	0.0	5.8	7.2	11.0	20.1	23.4	0.98	Fine
20	24.6	11.2	6	8	59	56	0.0	6.4	0.0	10.7	20.2	23.5	0.98	Fine
21	25.0	17.1	11	14	59	62	0.0	7.0	5.6	10.0	20.0	23.1	0.99	Fine
22	25.7	16.3	13	13	70	58	0.0	4.6	8.6	8.4	19.9	22.7	0.97	Fine
23	24.9	14.9	12	13	60	63	0.0	6.0	9.4	10.9	22.7	25.4	1.06	Fine
24	26.4	14.5	13	15	78	77	0.0	6.2	10.2	11.1	21.5	24.2	1.04	Fine
25	26.3	13.6	11	13	61	57	0.0	6.4	9.6	10.4	20.2	22.1	1.00	Fine
26	26.6	13.3	10	12	65	63	0.0	5.8	7.3	10.7	21.9	24.4	1.05	Fine
27	27.9	12.3	11	13	67	60	0.0	5.0	7.8	10.7	20.5	23.2	1.01	Fine
28	26.4	11.5	9	12	84	72	0.0	9.2	10.1	11.3	21.0	23.6	1.01	Fine
29	26.8	11.2	9	12	62	51	0.0	6.4	5.3	10.2	21.2	23.9	1.03	Fine
30	26.2	14.0	10	12	62	56	0.0	9.6	5.5	10.4	22.8	25.0	1.10	Fine
31	26.2	13.9	9	12	66	55	0.0	8.0	4.6	10.4	20.9	23.1	1.03	Fine
Temperature C°				Humidity		Rain	Evap.	Radiation						
	Max	Min	Dew	Point	am	pm	mm	mm	Wet Hrs	Sun Hrs	Horiz	19° N	UV-R	
Avg.	26.2	15.0	11.1	13.1	65	62		6.6	7.8	9.4	19.0	21.8	0.92	
Total							49.6	204.2	242.0	290.8	588.3	676.7	28.67	

Per Month

For Langleys divide MJ/m² by 0.0418 UV-R = UV-A + UV-B (290-385 nm)

UV data recorded at AEL with Kipp & Zonen CUV5 Pyranometer

Sunshine hours are calculated the total time direct solar irradiance exceeds 120 W/m²

(International Meteorological Organisation)

Wet Time hours: Duration each day exposed surfaces are wet. Condensation is primary source of moisture.

14,073 16,187 Total Langleys
454 522 Average Langleys



Allunga Exposure Laboratory

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September 2014 Daily Weather Record

Date	Temperature (°C)		Dew Point		Relative Humidity %		Rain	Evap.	Wet Time	Sun Shine	Global Radiation (MJ/m²)			Remarks
	Ambient	Min	9am	9pm	9am	9pm	mm	mm	Hours	Hours	Horiz	19°N	Horiz	
	Max													
1	25.6	12.9	11	14	75	71	0.0	7.6	10.5	11.0	22.0	24.1	1.05	Fine
2	27.6	13.4	11	13	64	66	0.0	6.4	9.6	11.4	21.2	23.5	1.06	Fine
3	29.2	14.1	13	15	70	61	0.0	6.0	10.0	11.2	21.2	23.4	1.06	Fine
4	25.7	12.0	10	15	58	52	0.0	7.8	9.4	10.6	22.0	24.1	1.06	Fine
5	26.3	12.6	11	14	56	65	0.0	6.2	8.2	10.5	21.5	23.6	1.07	Fine
6	25.8	13.9	11	14	56	53	0.0	6.4	8.8	10.1	21.4	23.3	1.07	Fine
7	26.7	21.1	12	17	56	55	0.0	7.4	5.3	10.5	22.1	24.1	1.09	Fine
8	26.4	18.4	12	15	63	58	0.0	5.6	6.3	10.0	23.4	24.8	1.10	Fine
9	26.5	18.9	12	17	66	65	0.0	5.0	7.1	11.3	22.4	23.7	1.08	Fine
10	26.9	19.2	11	16	67	50	0.0	6.4	6.8	11.1	22.1	23.3	1.09	Fine
11	27.3	16.1	11	15	66	60	0.0	6.2	7.5	10.8	23.6	25.2	1.15	Fine
12	27.7	17.0	11	14	67	60	0.0	7.8	5.9	10.6	22.3	23.8	1.13	Fine
13	27.6	19.7	12	15	60	54	0.0	5.4	4.4	10.8	23.1	24.7	1.15	Fine
14	27.1	16.2	10	15	56	53	0.0	8.8	8.2	10.5	26.2	27.2	1.24	Fine
15	27.9	15.3	8	13	56	59	0.0	7.8	7.0	10.7	15.1	17.3	0.72	Fine
16	27.9	17.2	11	14	62	64	0.0	8.0	5.6	10.6	23.1	23.7	1.17	Fine
17	30.2	15.0	10	13	59	55	0.0	6.4	6.1	10.6	21.6	22.6	1.10	Fine
18	32.5	13.2	7	14	64	57	0.0	7.6	9.9	11.5	22.9	23.9	1.16	Fine
19	27.7	15.3	11	15	63	59	0.0	7.2	8.2	10.7	31.3	32.8	1.56	Fine
20	28.0	15.9	11	15	61	61	0.0	7.2	8.7	9.1	24.2	25.0	1.19	Fine
21	28.0	21.0	12	14	64	55	0.0	7.2	5.0	9.2	23.7	24.1	1.16	Fine, O/N Rain
22	27.7	20.5	12	15	64	59	5.2	9.4	4.4	8.8	22.0	21.8	1.07	Fine
23	28.6	19.2	12	15	64	57	0.0	7.4	5.3	8.1	24.0	24.5	1.18	Fine
24	28.1	20.4	11	15	75	60	0.2	7.4	8.7	8.9	19.8	18.6	1.01	Fine
25	29.3	22.0	12	16	72	64	0.0	8.4	3.6	10.7	27.4	27.3	1.32	Fine
26	29.6	20.8	12	14	68	53	0.0	8.0	0.0	9.2	25.3	25.3	1.23	Fine
27	29.6	19.8	12	16	70	56	0.0	5.4	8.5	10.1	25.0	25.0	1.22	Fine
28	28.6	21.1	12	14	62	57	0.0	7.4	0.0	10.0	24.5	24.6	1.23	Fine
29	28.4	20.0	11	15	58	53	0.0	8.8	7.7	10.9	25.8	25.8	1.26	Fine
30	27.8	18.7	11	17	63	73	0.0	11.0	9.3	10.5	25.9	25.9	1.29	Fine

	Temperature C°				Humidity		Rain	Evap.	Radiation				
	Max	Min	Dew	Point	am	pm	mm	mm	Wet Hrs	Sun Hrs	Horiz	19° N	UV-R
Avge.	27.9	17.4	11.1	14.8	63.5	58.8	0.2	7.3	6.9	10.3	23.2	24.2	1.14
Total							5.4	217.6	206.0	310.0	696.1	726.9	34.25

Per Month

16,136 16,981 Total Langleys
538 566 Average Langleys

For Langleys divide MJ/m² by 0.0418 UV-R = UV-A + UV-B (290-385 nm)

UV data recorded at AEL with Kipp & Zonen CUV5 Pyranometer

Sunshine hours are calculated the total time direct solar irradiance exceeds 120 W/m²

(International Meteorological Organisation)

Wet Time hours: Duration each day exposed surfaces are wet. Condensation is primary source of moisture.



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October 2014 Daily Weather Record

Date	Temperature (°C)		Relative Humidity %		Rain		Evap.	Wet Time	Sun Shine	Global Radiation (MJ/m²)		UV-R		Remarks																																																												
	Ambient		Dew Point																																																																							
	Max	Min	9am	9pm	9am	9pm	mm	mm	Hours	Hours	Horiz	19°N	Horiz																																																													
1	28.5	16.1	12	17	61	58	0.0	9.2	8.7	11.1	26.7	26.4	1.31	Fine																																																												
2	27.7	15.8	14	18	56	67	0.0	8.4	10.3	11.5	24.5	24.4	1.23	Fine																																																												
3	28.6	20.5	15	18	55	52	0.0	8.4	7.6	10.7	27.5	27.1	1.31	Fine																																																												
4	28.8	20.9	15	18	61	55	0.0	9.4	6.9	10.8	26.3	25.9	1.29	Fine																																																												
5	28.4	20.4	16	19	65	52	0.4	9.6	7.4	11.0	26.6	25.9	1.28	Fine																																																												
6	28.3	18.1	14	17	59	55	0.0	9.2	7.7	11.6	27.7	27.0	1.34	Fine																																																												
7	28.3	17.8	13	18	57	55	0.0	8.0	9.5	11.6	25.7	25.0	1.30	Fine																																																												
8	29.8	21.0	14	17	62	61	0.0	8.6	4.9	11.3	26.3	25.5	1.30	Fine																																																												
9	29.7	18.7	14	18	66	62	0.0	8.0	8.8	10.7	25.6	24.8	1.27	Fine																																																												
10	29.1	22.5	18	17	64	57	0.0	9.8	9.0	10.6	26.2	25.3	1.30	Fine																																																												
11	29.5	22.8	16	15	55	60	0.0	9.2	6.2	10.3	25.2	23.9	1.25	Fine																																																												
12	28.5	22.2	16	15	71	53	0.8	8.0	5.9	9.3	24.8	23.4	1.23	Fine																																																												
13	29.8	22.5	15	16	60	59	0.0	8.6	6.3	7.3	25.8	24.3	1.25	Fine, Lt Cloud																																																												
14	32.9	22.4	16	17	70	54	0.0	7.6	7.0	10.7	19.9	19.9	1.05	Fine																																																												
15	31.0	19.9	15	16	66	59	0.0	10.0	5.8	11.3	27.9	26.9	1.36	Fine																																																												
16	29.1	15.8	15	17	69	65	0.0	11.6	10.5	11.7	25.6	24.4	1.24	Fine																																																												
17	29.5	15.7	14	18	55	56	0.0	9.4	8.2	11.3	25.7	24.3	1.26	Fine																																																												
18	30.7	17.7	16	17	58	56	0.0	12.0	9.6	11.8	26.5	25.1	1.31	Fine																																																												
19	29.7	19.9	17	18	60	58	0.0	11.4	7.3	11.4	26.5	25.1	1.31	Fine																																																												
20	29.9	19.9	17	18	62	55	0.0	13.8	8.9	11.4	27.3	25.6	1.34	Fine																																																												
21	29.3	20.3	17	19	59	59	0.0	12.0	8.1	11.2	27.7	26.0	1.34	Fine																																																												
22	29.0	19.2	17	18	74	59	1.2	10.6	7.5	6.7	13.1	12.9	0.72	Fine, Lt Cloud, Shwr																																																												
23	28.8	19.0	17	18	59	64	0.0	9.6	9.3	11.7	26.5	24.8	1.33	Fine																																																												
24	28.9	18.3	17	17	63	74	0.0	9.6	6.2	12.2	26.5	24.7	1.33	Fine																																																												
25	29.0	18.4	16	17	55	63	0.0	10.2	8.4	11.6	27.1	25.1	1.35	Fine																																																												
26	29.0	19.6	17	17	64	62	0.0	8.8	6.1	12.0	26.6	24.5	1.34	Fine																																																												
27	29.1	17.3	16	18	59	55	0.0	8.4	9.9	11.9	26.5	24.5	1.34	Fine																																																												
28	29.9	20.5	18	18	54	67	0.0	8.4	5.8	11.7	26.4	24.2	1.33	Fine																																																												
29	30.0	20.7	18	19	61	61	0.0	10.6	4.3	11.1	26.0	23.8	1.32	Fine																																																												
30	30.0	22.7	16	17	64	57	0.0	7.8	4.6	11.1	25.1	22.5	1.27	Fine																																																												
31	30.0	22.9	16	17	60	58	0.0	8.0	4.0	11.3	26.8	24.3	1.24	Fine																																																												
<table> <tr> <th colspan="4">Temperature C°</th><th colspan="2">Humidity</th><th>Rain</th><th>Evap.</th><th colspan="7">Radiation</th></tr> <tr> <th>Max</th><th>Min</th><th>Dew</th><th>Point</th><th>am</th><th>pm</th><th>mm</th><th>mm</th><th>Wet Hrs</th><th>Sun Hrs</th><th>Horiz</th><th>19° N</th><th>UV-R</th><th colspan="2"></th></tr> <tr> <td>29.4</td><td>19.7</td><td>15.7</td><td>17.4</td><td>61</td><td>59</td><td></td><td>9.5</td><td>7.4</td><td>11.0</td><td>25.7</td><td>24.4</td><td>1.27</td><td colspan="2"></td></tr> <tr> <td colspan="6">Total</td><td>2.4</td><td>294.2</td><td>230.7</td><td>339.9</td><td>796.5</td><td>757.6</td><td>39.45</td><td colspan="2"></td></tr> </table>															Temperature C°				Humidity		Rain	Evap.	Radiation							Max	Min	Dew	Point	am	pm	mm	mm	Wet Hrs	Sun Hrs	Horiz	19° N	UV-R			29.4	19.7	15.7	17.4	61	59		9.5	7.4	11.0	25.7	24.4	1.27			Total						2.4	294.2	230.7	339.9	796.5	757.6	39.45		
Temperature C°				Humidity		Rain	Evap.	Radiation																																																																		
Max	Min	Dew	Point	am	pm	mm	mm	Wet Hrs	Sun Hrs	Horiz	19° N	UV-R																																																														
29.4	19.7	15.7	17.4	61	59		9.5	7.4	11.0	25.7	24.4	1.27																																																														
Total						2.4	294.2	230.7	339.9	796.5	757.6	39.45																																																														

Per Month

19,052 18,122 Total Langley's
615 585 Average Langley's

For Langley's divide MJ/m² by 0.0418 UV-R = UV-A + UV-B (290-385 nm)

UV data recorded at AEL with Kipp & Zonen CUV5 Pyranometer

Sunshine hours are calculated the total time direct solar irradiance exceeds 120 W/m²
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Wet Time hours: Duration each day exposed surfaces are wet. Condensation is primary source of moisture.



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November 2014 Daily Weather Record

Date	Temperature (°C)				Relative Humidity %		Rain	Evap.	Wet Time	Sun Shine	Global Radiation (MJ/m²)			
	Ambient	Dew	Point									UV-R		
	Max	Min	9am	9pm	9am	9pm	mm	mm	Hours	Hours	Horiz	19°N	Horiz	Remarks
1	30.1	23.5	16	18	60	56	0.0	10.4	8.4	11.6	26.8	24.4	1.30	Fine
2	32.3	23.6	18	20	64	63	0.0	10.0	7.6	11.4	26.1	23.6	1.31	Fine
3	31.0	24.2	17	19	63	57	0.0	9.0	10.2	11.3	27.2	24.5	1.36	Fine
4	30.9	24.8	18	20	71	59	0.0	9.6	5.7	7.1	20.9	17.7	1.07	Fine, Lt Cloud
5	28.9	22.9	17	20	64	75	2.5	9.4	10.7	5.5	13.6	12.8	0.77	Fine, Cloud, o/n Rain
6	29.6	22.0	17	18	59	59	17.0	5.8	9.9	11.7	28.6	25.7	1.43	Fine
7	30.1	19.1	18	18	62	54	0.0	8.8	8.6	11.9	27.4	24.4	1.40	Fine
8	29.8	19.5	18	19	63	57	0.0	8.0	9.5	11.4	27.1	24.1	1.38	Fine
9	30.6	24.2	18	20	59	56	0.0	10.6	10.3	10.7	28.8	25.7	1.43	Fine
10	30.2	20.6	18	20	51	59	0.0	10.2	10.8	12.4	29.1	25.9	1.45	Fine
11	30.1	20.5	18	20	46	52	0.0	11.8	10.1	11.8	27.9	24.6	1.42	Fine
12	29.8	20.0	17	19	57	56	0.0	8.4	7.7	10.5	30.1	26.8	1.48	Fine
13	30.3	23.2	18	20	58	56	0.0	9.4	6.4	10.7	29.4	26.0	1.46	Fine
14	30.4	23.3	18	20	57	54	0.0	10.6	6.7	11.9	30.1	26.7	1.49	Fine
15	30.4	23.4	18	20	60	62	0.0	12.0	9.3	12.0	29.6	26.0	1.47	Fine
16	31.2	22.5	19	20	54	66	0.0	10.0	10.3	12.4	27.9	24.3	1.41	Fine
17	31.8	24.1	18	19	58	55	0.0	10.0	7.6	12.4	27.6	24.0	1.38	Fine
18	33.4	24.6	20	20	67	61	0.0	8.4	8.1	11.4	29.1	25.2	1.44	Fine
19	32.8	26.2	20	19	63	52	0.0	11.0	7.9	10.1	27.7	24.0	1.41	Fine
20	31.9	26.1	20	20	62	52	0.0	10.0	9.2	12.6	28.3	24.5	1.42	Fine
21	32.0	25.1	20	21	59	53	0.0	10.0	8.5	11.6	27.9	24.1	1.41	Fine
22	32.2	24.7	20	21	62	60	0.0	10.0	9.1	11.3	28.6	24.8	1.43	Fine
23	31.9	25.1	20	21	64	60	0.0	10.2	9.2	11.5	29.0	25.2	1.47	Fine
24	31.9	25.0	19	20	60	57	0.2	10.6	8.7	11.4	31.0	27.0	1.55	Fine
25	32.0	24.7	20	20	64	58	2.6	11.6	10.4	12.0	30.8	26.6	1.54	Fine, o/n Shower
26	31.4	25.1	20	19	78	64	1.6	9.6	4.3	3.6	15.6	14.2	0.85	Fine, Cloud, Rain
27	31.5	24.2	19	21	51	52	0.2	8.6	8.8	11.4	26.6	23.6	1.38	Fine
28	31.9	23.6	19	21	55	59	0.0	11.6	11.4	12.3	28.6	25.0	1.42	Fine
29	31.9	21.8	19	21	53	61	0.0	9.8	10.6	12.0	30.3	26.0	1.52	Fine
30	31.5	23.2	19	20	63	55	0.8	12.2	9.2	11.9	29.7	25.4	1.52	Fine

Avg.	Temperature C°				Humidity		Rain mm	Evap. mm	Wet Hrs	Sun Hrs	Radiation		
	Max	Min	Dew	Point	am	pm					Horiz	19° N	UV-R
Total	31.1	23.4	18.5	19.8	60	58	24.9	297.6	265.2	329.8	821.6	722.8	41.36

Per Month

19,653 **17,289** **Total Langleys**
655 **576** **Average Langleys**

For Langleys divide MJ/m² by 0.0418 UV-R = UV-A + UV-B (290-385 nm)

UV data recorded at AEL with Kipp & Zonen CUV5 Pyranometer

Sunshine hours are calculated the total time direct solar irradiance exceeds 120 W/m²

(International Meteorological Organisation)

Wet Time hours: Duration each day exposed surfaces are wet. Condensation is primary source of moisture.



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December 2014 Daily Weather Record

Date	Temperature (°C)		Relative Humidity %		Rain mm	Evap. mm	Wet Time Hours	Sun Shine Hours	Global Radiation (MJ/m²)		UV-R		Remarks
	Ambient Max	Dew Point Min	9am	9pm					Horiz	19°N	Horiz	19°N	
1	31.5	24.0	22	22	0.2	10.6	6.6	11.7	29.4	26.7	1.52	1.52	Fine, O/N Rain
2	31.7	24.3	22	22	0.6	12.4	11.3	12.3	28.9	25.5	1.46	1.46	Fine
3	32.0	24.2	22	22	0.0	11.0	9.0	11.8	30.5	26.4	1.51	1.51	Fine
4	31.7	25.2	23	23	0.0	10.4	8.3	10.7	26.7	23.2	1.38	1.38	Fine
5	32.8	23.6	22	24	0.0	12.6	10.1	12.2	29.5	25.7	1.49	1.49	Fine
6	32.1	26.3	22	24	0.0	10.8	4.0	3.2	12.4	11.0	0.74	0.74	Fine, Cloud
7	32.9	24.2	22	22	0.6	6.8	7.5	12.1	25.0	22.5	1.25	1.25	Fine, Shower
8	34.3	26.8	23	24	0.0	9.2	8.4	9.3	27.4	23.3	1.40	1.40	Fine
9	33.7	26.2	23	20	0.0	9.6	6.9	9.3	28.1	24.4	1.44	1.44	Fine
10	34.0	27.3	23	20	0.0	9.8	5.8	9.7	28.0	24.5	1.43	1.43	Fine
11	34.1	27.5	23	20	0.0	10.0	9.1	8.8	26.6	22.9	1.31	1.31	Fine
12	34.1	28.2	23	24	0.0	9.4	5.1	4.9	10.1	9.8	0.77	0.77	Fine, Cloud, o/n Rain
13	36.1	23.5	20	21	12.4	8.4	11.4	10.9	22.6	19.9	1.14	1.14	Fine
14	32.4	22.2	21	20	0.0	8.6	9.5	12.1	31.0	26.2	1.47	1.47	Fine, o/n Rain
15	32.1	23.9	22	22	25.0	8.6	10.8	10.6	30.5	25.7	1.46	1.46	Fine
16	32.7	25.4	22	23	0.0	8.6	8.7	11.9	30.4	25.6	1.48	1.48	Fine
17	33.5	25.6	22	23	0.0	8.4	10.0	12.6	28.6	24.2	1.42	1.42	Fine
18	32.0	26.1	20	22	0.0	10.0	9.2	11.6	27.9	23.5	1.39	1.39	Fine
19	32.2	25.0	21	20	0.0	9.2	6.3	9.6	25.8	22.0	1.28	1.28	Fine
20	32.7	25.8	23	23	1.4	8.2	5.6	8.7	23.2	19.3	1.11	1.11	Fine, Shower
21	32.5	23.6	21	22	1.8	9.8	9.8	7.7	28.1	24.1	1.40	1.40	Fine, Shower
22	32.5	25.0	20	21	0.0	12.0	7.5	11.6	29.7	25.9	1.43	1.43	Fine
23	32.2	23.3	21	19	0.2	11.0	10.4	12.3	30.0	25.0	1.48	1.48	Fine
24	32.2	24.1	22	24	0.0	10.6	9.8	12.0	30.2	25.2	1.47	1.47	Fine
25	32.0	23.6	22	24	0.0	11.6	5.9	12.4	29.8	25.0	1.45	1.45	Fine
26	32.8	25.0	22	24	0.0	11.0	6.7	12.1	31.1	26.3	1.53	1.53	Fine
27	32.9	25.3	22	24	0.2	10.4	7.1	11.6	28.3	24.2	1.43	1.43	Fine
28	33.3	27.1	23	23	0.0	11.0	4.3	12.0	30.4	26.6	1.49	1.49	Fine
29	33.3	27.5	23	21	0.0	11.2	5.5	11.2	30.7	27.1	1.50	1.50	Fine
30	34.2	26.6	22	19	0.0	11.8	9.6	10.4	28.1	25.0	1.47	1.47	Fine
31	34.4	26.9	22	22	0.0	5.6	0.0	1.9	11.1	10.3	0.60	0.60	Overcast

	Temperature C°				Humidity		Rain mm	Evap. mm	Wet Hrs	Sun Hrs	Radiation		
	Max	Min	Dew Point	Point	am	pm					Horiz	19° N	UV-R
Avge.	32.9	25.3	22.0	22.1	61.2	61.4		10.0	7.7	10.3	26.8	23.1	1.35
Total							42.4	308.6	240.2	319.2	830.2	717.0	41.71

Per Month

19,858 **17,150** **Total Langleys**
641 **553** **Average Langleys**

For Langleys divide MJ/m² by 0.0418 UV-R = UV-A + UV-B (290-385 nm)

UV data recorded at AEL with Kipp & Zonen CUV5 Pyranometer

Sunshine hours are calculated the total time direct solar irradiance exceeds 120 W/m²
(International Meteorological Organisation)

Wet Time hours: Duration each day exposed surfaces are wet. Condensation is primary source of moisture.