

Table 5.18(n) Banded weather data: Swindon

Hour	Dry-bulb / °C	Incident solar irradiation / W·m ⁻²									
		Horizontal		N		NE		E		SE	
		Direct	Diffuse	Direct	Diffuse	Direct	Diffuse	Direct	Diffuse	Direct	Diffuse
May											
1	13.34	0	0	0	0	0	0	0	0	0	0
2	12.28	0	0	0	0	0	0	0	0	0	0
3	11.41	0	0	0	0	0	0	0	0	0	0
4	10.79	0	0	0	0	0	0	0	0	0	0
5	10.46	15	35	53	36	121	51	118	51	46	35
6	10.44	56	80	45	66	169	94	194	99	105	80
7	10.74	113	128	8	90	177	129	243	144	166	126
8	11.34	170	177	0	97	142	154	245	178	205	168
9	12.19	220	223	0	124	83	171	213	203	218	204
10	13.23	260	264	0	146	13	180	156	217	208	230
11	14.40	285	294	0	163	0	163	82	217	175	242
12	15.62	294	306	0	169	0	169	0	169	124	236
13	16.80	285	294	0	163	0	163	0	163	59	211
14	17.86	260	264	0	147	0	147	0	147	0	147
15	18.73	221	223	0	124	0	124	0	124	0	124
16	19.35	170	177	0	98	0	98	0	98	0	98
17	19.68	114	128	8	90	0	70	0	70	0	70
18	19.70	56	81	45	67	0	42	0	42	0	42
19	19.40	16	35	53	37	0	18	0	18	0	18
20	18.80	0	0	0	0	0	0	0	0	0	0
21	17.95	0	0	0	0	0	0	0	0	0	0
22	16.91	0	0	0	0	0	0	0	0	0	0
23	15.74	0	0	0	0	0	0	0	0	0	0
24	14.52	0	0	0	0	0	0	0	0	0	0

Hour	Dry-bulb / °C	Incident solar irradiation / W·m ⁻²								Altitude	Azimuth
		S		SW		W		NW			
		Direct	Diffuse	Direct	Diffuse	Direct	Diffuse	Direct	Diffuse		
1	13.34	0	0	0	0	0	0	0	0	0	14.74
2	12.28	0	0	0	0	0	0	0	0	0	28.90
3	11.41	0	0	0	0	0	0	0	0	0	42.12
4	10.79	0	0	0	0	0	0	0	0	0	54.36
5	10.46	0	17	0	17	0	17	0	17	6.75	65.85
6	10.44	0	42	0	42	0	42	0	42	15.66	76.95
7	10.74	0	70	0	70	0	70	0	70	24.98	88.21
8	11.34	45	131	0	97	0	97	0	97	34.35	100.31
9	12.19	96	174	0	124	0	124	0	124	43.33	114.27
10	13.23	138	212	0	146	0	146	0	146	51.23	131.50
11	14.40	166	239	59	211	0	163	0	163	56.99	153.55
12	15.62	175	250	124	236	0	203	0	169	59.17	180.00
13	16.80	166	239	175	242	82	217	0	163	57	206.46
14	17.86	138	212	208	230	156	217	13	180	51.26	228.52
15	18.73	96	174	218	204	213	203	83	171	43.37	245.78
16	19.35	44	131	205	169	245	178	142	154	34.4	259.74
17	19.68	0	70	166	126	243	144	177	129	25.04	271.85
18	19.70	0	42	105	80	194	100	170	94	15.74	283.11
19	19.40	0	18	46	35	118	51	121	52	6.84	294.23
20	18.80	0	0	0	0	0	0	0	0	0	305.71
21	17.95	0	0	0	0	0	0	0	0	0	317.95
22	16.91	0	0	0	0	0	0	0	0	0	331.16
23	15.74	0	0	0	0	0	0	0	0	0	345.29
24	14.52	0	0	0	0	0	0	0	0	0	360.00

Dirfac = 0.39; Diffac = 1.03; Maximum dry-bulb = 19.73 °C; Minimum dry-bulb = 10.41 °C; Adaptive comfort range = 21.6–25.6 °C

Table continues

Table 5.18(n) Banded weather data: Swindon — *continued*

Hour	Dry-bulb /°C	Incident solar irradiation / W·m ⁻²									
		Horizontal		N		NE		E		SE	
		Direct	Diffuse	Direct	Diffuse	Direct	Diffuse	Direct	Diffuse	Direct	Diffuse
June											
1	10.64	0	0	0	0	0	0	0	0	0	0
2	9.94	0	0	0	0	0	0	0	0	0	0
3	9.65	0	0	0	0	0	0	0	0	0	0
4	9.78	1	6	19	6	31	9	25	7	4	2
5	10.32	36	44	97	51	208	74	197	72	71	46
6	11.24	108	86	87	78	288	120	321	127	165	94
7	12.47	197	130	28	94	289	150	380	170	249	142
8	13.94	284	176	0	108	230	168	377	200	303	184
9	15.53	360	219	0	136	139	176	326	219	321	218
10	17.15	419	259	0	160	33	175	238	224	304	240
11	18.68	458	288	0	177	0	177	126	215	254	247
12	20.02	471	300	0	184	0	184	0	184	175	234
13	21.08	458	288	0	177	0	177	0	177	76	202
14	21.78	419	259	0	160	0	160	0	160	0	160
15	22.07	360	219	0	136	0	136	0	136	0	136
16	21.94	284	176	0	108	0	108	0	108	0	108
17	21.40	197	130	28	94	0	79	0	79	0	79
18	20.48	108	86	87	78	0	50	0	50	0	50
19	19.25	36	44	97	51	0	24	0	24	0	24
20	17.78	1	6	19	6	0	3	0	3	0	3
21	16.19	0	0	0	0	0	0	0	0	0	0
22	14.57	0	0	0	0	0	0	0	0	0	0
23	13.04	0	0	0	0	0	0	0	0	0	0
24	11.70	0	0	0	0	0	0	0	0	0	0

Hour	Dry-bulb /°C	Incident solar irradiation / W·m ⁻²								Altitude	Azimuth
		S		SW		W		NW			
		Direct	Diffuse	Direct	Diffuse	Direct	Diffuse	Direct	Diffuse		
1	10.64	0	0	0	0	0	0	0	0	0	14.18
2	9.94	0	0	0	0	0	0	0	0	0	27.85
3	9.65	0	0	0	0	0	0	0	0	0	40.68
4	9.78	0	3	0	3	0	3	0	3	1.27	52.63
5	10.32	0	24	0	24	0	24	0	24	9.26	63.89
6	11.24	0	50	0	50	0	50	0	50	18.05	74.79
7	12.47	0	79	0	79	0	79	0	79	27.31	85.84
8	13.94	51	128	0	108	0	108	0	108	36.69	97.73
9	15.53	128	173	0	136	0	136	0	136	45.78	111.52
10	17.15	192	213	0	160	0	160	0	160	53.91	128.85
11	18.68	233	242	76	202	0	177	0	177	59.95	151.69
12	20.02	248	253	175	234	0	184	0	184	62.28	180.00
13	21.08	233	242	254	247	126	215	0	177	59.95	208.31
14	21.78	192	213	304	240	238	224	33	175	53.91	231.15
15	22.07	128	173	321	218	326	219	139	176	45.78	248.47
16	21.94	51	128	303	184	377	200	230	168	36.69	262.27
17	21.40	0	79	249	142	380	170	289	150	27.3	274.16
18	20.48	0	50	165	94	321	127	288	120	18.05	285.21
19	19.25	0	24	71	46	197	72	208	74	9.26	296.11
20	17.78	0	3	4	2	25	7	31	9	1.26	307.37
21	16.19	0	0	0	0	0	0	0	0	0	319.32
22	14.57	0	0	0	0	0	0	0	0	0	332.15
23	13.04	0	0	0	0	0	0	0	0	0	345.82
24	11.70	0	0	0	0	0	0	0	0	0	360.00

Dirfac = 0.60; Diffac = 0.96; Maximum dry-bulb = 22.08 °C; Minimum dry-bulb = 9.64 °C; Adaptive comfort range = 22.1–26.1 °C

Table continues

Table 5.18(n) Banded weather data: Swindon — *continued*

Hour	Dry-bulb /°C	Incident solar irradiation / W·m ⁻²									
		Horizontal		N		NE		E		SE	
		Direct	Diffuse	Direct	Diffuse	Direct	Diffuse	Direct	Diffuse	Direct	Diffuse
July											
1	14.77	0	0	0	0	0	0	0	0	0	0
2	13.77	0	0	0	0	0	0	0	0	0	0
3	13.14	0	0	0	0	0	0	0	0	0	0
4	12.94	0	0	0	0	0	0	0	0	0	0
5	13.17	18	35	64	40	146	59	143	58	56	38
6	13.83	67	83	54	70	204	106	235	113	128	88
7	14.86	137	134	8	92	215	142	296	162	204	139
8	16.19	206	184	0	105	172	166	299	197	251	185
9	17.74	268	233	0	133	100	179	261	221	268	223
10	19.40	316	277	0	158	14	183	191	231	256	248
11	21.06	346	308	0	175	0	175	101	226	216	258
12	22.60	357	320	0	182	0	182	0	182	153	248
13	23.91	346	308	0	175	0	175	0	175	73	219
14	24.92	315	276	0	158	0	158	0	158	0	158
15	25.54	267	233	0	133	0	133	0	133	0	133
16	25.74	206	184	0	105	0	105	0	105	0	105
17	25.51	136	133	8	92	0	74	0	74	0	74
18	24.85	66	83	53	70	0	44	0	44	0	44
19	23.82	18	35	63	39	0	18	0	18	0	18
20	22.49	0	0	0	0	0	0	0	0	0	0
21	20.94	0	0	0	0	0	0	0	0	0	0
22	19.28	0	0	0	0	0	0	0	0	0	0
23	17.62	0	0	0	0	0	0	0	0	0	0
24	16.09	0	0	0	0	0	0	0	0	0	0

Hour	Dry-bulb /°C	Incident solar irradiation / W·m ⁻²								Altitude	Azimuth
		S		SW		W		NW			
		Direct	Diffuse	Direct	Diffuse	Direct	Diffuse	Direct	Diffuse		
1	14.77	0	0	0	0	0	0	0	0	0	14.78
2	13.77	0	0	0	0	0	0	0	0	0	28.97
3	13.14	0	0	0	0	0	0	0	0	0	42.23
4	12.94	0	0	0	0	0	0	0	0	0	54.50
5	13.17	0	18	0	18	0	18	0	18	6.53	66.02
6	13.83	0	45	0	45	0	45	0	45	15.44	77.15
7	14.86	0	75	0	75	0	75	0	75	24.75	88.44
8	16.19	56	137	0	105	0	105	0	105	34.1	100.57
9	17.74	119	184	0	133	0	133	0	133	43.05	114.55
10	19.40	171	226	0	158	0	158	0	158	50.92	131.79
11	21.06	205	255	73	219	0	175	0	175	56.62	153.75
12	22.60	216	266	153	248	0	205	0	182	58.77	180.00
13	23.91	205	255	216	258	101	226	0	175	56.61	206.24
14	24.92	171	225	256	248	191	231	14	183	50.89	228.18
15	25.54	119	184	269	222	261	220	100	179	43.01	245.40
16	25.74	56	137	251	185	299	197	172	165	34.05	259.37
17	25.51	0	74	204	139	296	161	215	142	24.68	271.50
18	24.85	0	44	128	87	235	113	203	105	15.36	282.78
19	23.82	0	18	56	38	142	58	145	59	6.43	293.91
20	22.49	0	0	0	0	0	0	0	0	0	305.42
21	20.94	0	0	0	0	0	0	0	0	0	317.70
22	19.28	0	0	0	0	0	0	0	0	0	330.97
23	17.62	0	0	0	0	0	0	0	0	0	345.19
24	16.09	0	0	0	0	0	0	0	0	0	360.00

Dirfac = 0.47; Diffac = 1.08; Maximum dry-bulb = 25.74 °C; Minimum dry-bulb = 12.94 °C; Adaptive comfort range = 23.3–27.3 °C

Table continues

Table 5.18(n) Banded weather data: Swindon — *continued*

Hour	Dry-bulb /°C	Incident solar irradiation / W·m ⁻²									
		Horizontal		N		NE		E		SE	
		Direct	Diffuse	Direct	Diffuse	Direct	Diffuse	Direct	Diffuse	Direct	Diffuse
August											
1	15.59	0	0	0	0	0	0	0	0	0	0
2	14.90	0	0	0	0	0	0	0	0	0	0
3	14.47	0	0	0	0	0	0	0	0	0	0
4	14.32	0	0	0	0	0	0	0	0	0	0
5	14.47	0	0	0	0	0	0	0	0	0	0
6	14.90	13	46	10	35	66	48	83	52	52	45
7	15.59	42	96	0	48	85	88	131	98	100	91
8	16.48	77	145	0	74	71	119	145	137	134	134
9	17.52	109	192	0	98	36	142	130	166	148	170
10	18.64	134	231	0	119	0	119	96	185	144	197
11	19.76	150	258	0	133	0	133	51	192	125	211
12	20.80	155	268	0	138	0	138	0	138	93	209
13	21.69	149	258	0	133	0	133	0	133	52	192
14	22.38	134	231	0	119	0	119	0	119	7	162
15	22.81	109	191	0	98	0	98	0	98	0	98
16	22.96	77	145	0	74	0	74	0	74	0	74
17	22.81	42	95	0	48	0	48	0	48	0	48
18	22.38	12	45	10	34	0	22	0	22	0	22
19	21.69	0	0	0	0	0	0	0	0	0	0
20	20.80	0	0	0	0	0	0	0	0	0	0
21	19.76	0	0	0	0	0	0	0	0	0	0
22	18.64	0	0	0	0	0	0	0	0	0	0
23	17.52	0	0	0	0	0	0	0	0	0	0
24	16.48	0	0	0	0	0	0	0	0	0	0

Hour	Dry-bulb /°C	Incident solar irradiation / W·m ⁻²								Altitude	Azimuth
		S		SW		W		NW			
		Direct	Diffuse	Direct	Diffuse	Direct	Diffuse	Direct	Diffuse		
1	15.59	0	0	0	0	0	0	0	0	0	16.49
2	14.90	0	0	0	0	0	0	0	0	0	32.12
3	14.47	0	0	0	0	0	0	0	0	0	46.43
4	14.32	0	0	0	0	0	0	0	0	0	59.45
5	14.47	0	0	0	0	0	0	0	0	0	71.50
6	14.90	0	22	0	22	0	22	0	22	8.51	83.08
7	15.59	11	70	0	48	0	48	0	48	17.89	94.76
8	16.48	45	113	0	74	0	74	0	74	27.1	107.22
9	17.52	79	153	0	98	0	98	0	98	35.65	121.30
10	18.64	107	187	7	162	0	119	0	119	42.89	137.92
11	19.76	125	211	52	192	0	133	0	133	47.9	157.72
12	20.80	131	220	93	209	0	185	0	138	49.71	180.00
13	21.69	125	211	125	211	51	192	0	133	47.87	202.27
14	22.38	107	187	144	196	96	184	0	119	42.84	222.04
15	22.81	79	153	148	170	130	165	36	142	35.58	238.65
16	22.96	45	112	134	134	145	136	70	118	27.01	252.70
17	22.81	11	70	100	91	131	98	84	87	17.78	265.15
18	22.38	0	22	52	44	83	51	66	47	8.38	276.81
19	21.69	0	0	0	0	0	0	0	0	0	288.38
20	20.80	0	0	0	0	0	0	0	0	0	300.42
21	19.76	0	0	0	0	0	0	0	0	0	313.44
22	18.64	0	0	0	0	0	0	0	0	0	327.78
23	17.52	0	0	0	0	0	0	0	0	0	343.45
24	16.48	0	0	0	0	0	0	0	0	0	360.00

Dirfac = 0.24; Diffac = 1.08; Maximum dry-bulb = 22.96 °C; Minimum dry-bulb = 14.32 °C; Adaptive comfort range = 22.8–26.8 °C

Table continues

Table 5.18(n) Banded weather data: Swindon — *continued*

Hour	Dry-bulb /°C	Incident solar irradiation / W·m ⁻²									
		Horizontal		N		NE		E		SE	
		Direct	Diffuse	Direct	Diffuse	Direct	Diffuse	Direct	Diffuse	Direct	Diffuse
September											
1	13.08	0	0	0	0	0	0	0	0	0	0
2	12.00	0	0	0	0	0	0	0	0	0	0
3	11.33	0	0	0	0	0	0	0	0	0	0
4	11.10	0	0	0	0	0	0	0	0	0	0
5	11.33	0	0	0	0	0	0	0	0	0	0
6	12.00	0	1	0	0	1	1	2	1	1	1
7	13.08	25	55	0	27	81	58	144	74	123	69
8	14.48	74	106	0	56	79	93	203	124	208	125
9	16.10	125	153	0	82	31	112	199	154	250	167
10	17.85	166	191	0	104	0	104	153	168	253	194
11	19.60	192	217	0	118	0	118	82	167	226	205
12	21.23	201	226	0	123	0	123	0	123	176	198
13	22.62	192	216	0	118	0	118	0	118	110	174
14	23.70	166	191	0	104	0	104	0	104	38	138
15	24.37	125	152	0	82	0	82	0	82	0	82
16	24.60	73	106	0	55	0	55	0	55	0	55
17	24.37	24	54	0	27	0	27	0	27	0	27
18	23.70	0	0	0	0	0	0	0	0	0	0
19	22.62	0	0	0	0	0	0	0	0	0	0
20	21.23	0	0	0	0	0	0	0	0	0	0
21	19.60	0	0	0	0	0	0	0	0	0	0
22	17.85	0	0	0	0	0	0	0	0	0	0
23	16.10	0	0	0	0	0	0	0	0	0	0
24	14.47	0	0	0	0	0	0	0	0	0	0
Hour	Dry-bulb /°C	Incident solar irradiation / W·m ⁻²								Altitude	Azimuth
		S		SW		W		NW			
		Direct	Diffuse	Direct	Diffuse	Direct	Diffuse	Direct	Diffuse		
1	13.08	0	0	0	0	0	0	0	0	0	18.93
2	12.00	0	0	0	0	0	0	0	0	0	36.45
3	11.33	0	0	0	0	0	0	0	0	0	51.98
4	11.10	0	0	0	0	0	0	0	0	0	65.68
5	11.33	0	0	0	0	0	0	0	0	0	78.11
6	12.00	0	0	0	0	0	0	0	0	0.12	89.91
7	13.08	30	46	0	27	0	27	0	27	9.45	101.71
8	14.48	91	96	0	56	0	56	0	56	18.37	114.14
9	16.10	155	143	0	82	0	82	0	82	26.41	127.86
10	17.85	206	182	37	138	0	104	0	104	32.97	143.42
11	19.60	238	208	110	174	0	118	0	118	37.35	161.00
12	21.23	249	217	176	198	0	151	0	123	38.89	180.00
13	22.62	238	208	226	205	82	167	0	118	37.32	198.99
14	23.70	206	182	253	194	152	168	0	104	32.91	216.56
15	24.37	155	143	250	167	199	154	31	111	26.33	232.09
16	24.60	91	95	208	124	202	123	79	92	18.26	245.78
17	24.37	30	45	123	68	143	73	80	58	9.32	258.19
18	23.70	0	0	0	0	0	0	0	0	0	269.97
19	22.62	0	0	0	0	0	0	0	0	0	281.75
20	21.23	0	0	0	0	0	0	0	0	0	294.17
21	19.60	0	0	0	0	0	0	0	0	0	307.86
22	17.85	0	0	0	0	0	0	0	0	0	323.40
23	16.10	0	0	0	0	0	0	0	0	0	340.98
24	14.47	0	0	0	0	0	0	0	0	0	360.00

Dirfac = 0.40; Diffac = 1.16; Maximum dry-bulb = 24.60 °C; Minimum dry-bulb = 11.10 °C; Adaptive comfort range = 22.6–26.6 °C