

Table 5.18(d) Banded weather data: Edinburgh

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	10.24	0	0	0	0	0	0	0	0	0	0
2	9.13	0	0	0	0	0	0	0	0	0	0
3	8.37	0	0	0	0	0	0	0	0	0	0
4	7.99	0	8	8	8	13	12	11	10	2	3
5	8.04	12	52	32	46	76	57	74	57	30	45
6	8.49	36	100	25	77	101	97	119	102	67	88
7	9.33	67	151	0	75	100	132	143	143	102	132
8	10.49	96	201	0	101	77	160	143	179	125	174
9	11.90	123	249	0	126	41	183	124	207	134	210
10	13.46	143	290	0	147	0	147	90	226	129	237
11	15.06	156	319	0	161	0	161	48	233	111	252
12	16.60	161	329	0	166	0	166	0	166	81	250
13	17.96	156	319	0	161	0	161	0	161	44	231
14	19.07	143	290	0	147	0	147	0	147	1	200
15	19.83	123	249	0	126	0	126	0	126	0	126
16	20.21	97	201	0	102	0	102	0	102	0	102
17	20.16	67	151	0	76	0	76	0	76	0	76
18	19.71	37	101	25	78	0	50	0	50	0	50
19	18.87	13	53	33	46	0	25	0	25	0	25
20	17.71	0	9	8	8	0	4	0	4	0	4
21	16.30	0	0	0	0	0	0	0	0	0	0
22	14.74	0	0	0	0	0	0	0	0	0	0
23	13.14	0	0	0	0	0	0	0	0	0	0
24	11.60	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	10.24	0	0	0	0	0	0	0	0	0	14.42
2	9.13	0	0	0	0	0	0	0	0	0	28.42
3	8.37	0	0	0	0	0	0	0	0	0	41.74
4	7.99	0	4	0	4	0	4	0	4	1.39	54.36
5	8.04	0	25	0	25	0	25	0	25	8.69	66.44
6	8.49	0	49	0	49	0	49	0	49	16.69	78.31
7	9.33	1	105	0	75	0	75	0	75	25.04	90.44
8	10.49	34	149	0	101	0	101	0	101	33.36	103.46
9	11.90	66	190	0	126	0	126	0	126	41.21	118.17
10	13.46	92	226	1	199	0	147	0	147	47.93	135.58
11	15.06	109	251	44	231	0	161	0	161	52.64	156.42
12	16.60	115	260	81	250	0	225	0	166	54.38	180.00
13	17.96	109	251	111	252	48	233	0	161	52.66	203.59
14	19.07	92	226	129	237	90	226	0	147	47.96	224.44
15	19.83	66	190	134	210	124	207	41	183	41.25	241.86
16	20.21	34	149	125	174	143	179	77	161	33.42	256.59
17	20.16	1	106	102	133	143	144	100	132	25.1	269.61
18	19.71	0	50	67	88	119	102	102	98	16.77	281.75
19	18.87	0	25	30	45	75	57	76	57	8.79	293.62
20	17.71	0	4	2	3	12	11	14	13	1.51	305.71
21	16.30	0	0	0	0	0	0	0	0	0	318.32
22	14.74	0	0	0	0	0	0	0	0	0	331.63
23	13.14	0	0	0	0	0	0	0	0	0	345.61
24	11.60	0	0	0	0	0	0	0	0	0	360.00

Dirfac = 0.23; Diffac = 1.21; Maximum dry-bulb = 20.24 °C; Minimum dry-bulb = 7.96 °C; Adaptive comfort range = 21.4–25.4 °C

Table continues

Table 5.18(d) Banded weather data: Edinburgh — *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	9.96	0	0	0	0	0	0	0	0	0	0
2	9.80	0	0	0	0	0	0	0	0	0	0
3	9.96	0	0	0	0	0	0	0	0	0	0
4	10.42	3	24	21	22	35	35	28	28	5	7
5	11.16	17	65	36	55	79	66	76	65	28	53
6	12.12	40	110	27	84	98	102	112	106	60	93
7	13.23	67	157	4	111	93	134	128	143	88	133
8	14.43	93	205	0	103	71	162	126	176	107	171
9	15.63	116	251	0	126	39	185	109	204	114	205
10	16.75	134	291	0	146	3	202	79	224	109	232
11	17.71	145	319	0	160	0	160	42	233	93	248
12	18.45	149	330	0	165	0	165	0	165	67	247
13	18.91	145	319	0	160	0	160	0	160	34	230
14	19.07	134	291	0	146	0	146	0	146	0	146
15	18.91	116	251	0	126	0	126	0	126	0	126
16	18.45	93	205	0	103	0	103	0	103	0	103
17	17.71	67	157	4	111	0	78	0	78	0	78
18	16.75	40	110	27	84	0	54	0	54	0	54
19	15.63	17	65	36	55	0	31	0	31	0	31
20	14.43	3	24	21	22	0	11	0	11	0	11
21	13.23	0	0	0	0	0	0	0	0	0	0
22	12.12	0	0	0	0	0	0	0	0	0	0
23	11.16	0	0	0	0	0	0	0	0	0	0
24	10.42	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	9.96	0	0	0	0	0	0	0	0	0	13.94
2	9.80	0	0	0	0	0	0	0	0	0	27.51
3	9.96	0	0	0	0	0	0	0	0	0	40.48
4	10.42	0	11	0	11	0	11	0	11	4.17	52.81
5	11.16	0	31	0	31	0	31	0	31	11.34	64.67
6	12.12	0	54	0	54	0	54	0	54	19.24	76.36
7	13.23	0	78	0	78	0	78	0	78	27.55	88.32
8	14.43	25	150	0	103	0	103	0	103	35.9	101.20
9	15.63	53	189	0	126	0	126	0	126	43.85	115.89
10	16.75	75	223	0	146	0	146	0	146	50.75	133.52
11	17.71	90	247	34	230	0	160	0	160	55.67	155.10
12	18.45	95	256	67	247	0	227	0	165	57.49	180.00
13	18.91	90	247	93	248	42	233	0	160	55.67	204.90
14	19.07	75	223	109	232	79	224	3	202	50.75	226.48
15	18.91	53	189	114	205	109	204	39	185	43.85	244.11
16	18.45	25	150	107	171	126	176	71	162	35.9	258.79
17	17.71	0	78	88	133	128	143	93	134	27.55	271.68
18	16.75	0	54	60	92	112	106	98	102	19.24	283.64
19	15.63	0	31	28	53	76	65	79	66	11.34	295.33
20	14.43	0	11	5	7	28	28	35	35	4.17	307.18
21	13.23	0	0	0	0	0	0	0	0	0	319.52
22	12.12	0	0	0	0	0	0	0	0	0	332.49
23	11.16	0	0	0	0	0	0	0	0	0	346.06
24	10.42	0	0	0	0	0	0	0	0	0	360.00

Dirfac = 0.20; Diffac = 1.14; Maximum dry-bulb = 19.07 °C; Minimum dry-bulb = 9.80 °C; Adaptive comfort range = 21.4–25.4 °C

Table continues

Table 5.18(d) Banded weather data: Edinburgh — *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	13.11	0	0	0	0	0	0	0	0	0	0
2	12.59	0	0	0	0	0	0	0	0	0	0
3	12.38	0	0	0	0	0	0	0	0	0	0
4	12.50	0	7	8	6	14	10	11	8	2	2
5	12.92	15	48	41	44	96	58	94	57	38	43
6	13.64	45	93	31	73	128	97	151	103	85	86
7	14.58	84	141	0	72	127	130	182	143	130	130
8	15.70	122	188	0	98	98	154	182	176	160	171
9	16.92	156	233	0	122	51	173	158	201	172	205
10	18.15	182	271	0	142	0	142	116	216	166	230
11	19.31	199	298	0	156	0	156	61	219	143	242
12	20.31	204	308	0	161	0	161	0	161	105	238
13	21.10	199	298	0	156	0	156	0	156	57	217
14	21.62	182	271	0	142	0	142	0	142	2	184
15	21.83	156	232	0	122	0	122	0	122	0	122
16	21.71	122	188	0	98	0	98	0	98	0	98
17	21.29	84	140	0	72	0	72	0	72	0	72
18	20.57	45	93	30	73	0	47	0	47	0	47
19	19.63	15	47	41	44	0	23	0	23	0	23
20	18.51	0	6	7	5	0	3	0	3	0	3
21	17.29	0	0	0	0	0	0	0	0	0	0
22	16.06	0	0	0	0	0	0	0	0	0	0
23	14.90	0	0	0	0	0	0	0	0	0	0
24	13.90	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	13.11	0	0	0	0	0	0	0	0	0	14.45
2	12.59	0	0	0	0	0	0	0	0	0	28.48
3	12.38	0	0	0	0	0	0	0	0	0	41.84
4	12.50	0	3	0	3	0	3	0	3	1.16	54.49
5	12.92	0	23	0	23	0	23	0	23	8.46	66.59
6	13.64	0	47	0	47	0	47	0	47	16.45	78.49
7	14.58	2	98	0	72	0	72	0	72	24.79	90.65
8	15.70	44	141	0	98	0	98	0	98	33.1	103.68
9	16.92	86	182	0	122	0	122	0	122	40.91	118.41
10	18.15	119	217	2	185	0	142	0	142	47.6	135.81
11	19.31	141	242	57	217	0	156	0	156	52.28	156.57
12	20.31	149	250	105	238	0	208	0	161	53.98	180.00
13	21.10	141	241	143	242	61	219	0	156	52.26	203.42
14	21.62	119	217	166	230	116	216	0	142	47.57	224.17
15	21.83	86	182	172	205	158	201	51	172	40.87	241.55
16	21.71	45	140	160	171	182	176	97	154	33.04	256.27
17	21.29	2	98	130	130	182	143	127	129	24.72	269.29
18	20.57	0	47	85	86	150	102	128	97	16.36	281.44
19	19.63	0	23	38	43	94	57	95	57	8.36	293.34
20	18.51	0	3	2	2	10	7	12	9	1.04	305.45
21	17.29	0	0	0	0	0	0	0	0	0	318.10
22	16.06	0	0	0	0	0	0	0	0	0	331.47
23	14.90	0	0	0	0	0	0	0	0	0	345.52
24	13.90	0	0	0	0	0	0	0	0	0	360.00

Dirfac = 0.29; Diffac = 1.14; Maximum dry-bulb = 21.83 °C; Minimum dry-bulb = 12.38 °C; Adaptive comfort range = 22.4–26.4 °C

Table continues

Table 5.18(d) Banded weather data: Edinburgh — *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	15.82	0	0	0	0	0	0	0	0	0	0
2	16.03	0	0	0	0	0	0	0	0	0	0
3	16.50	0	0	0	0	0	0	0	0	0	0
4	17.21	0	0	0	0	0	0	0	0	0	0
5	18.09	0	5	2	3	7	7	7	7	3	4
6	19.10	12	54	8	41	57	53	73	57	46	51
7	20.16	35	104	0	51	69	91	110	102	86	96
8	21.20	61	153	0	76	55	122	120	139	115	138
9	22.15	85	198	0	99	25	145	108	167	128	173
10	22.95	103	235	0	118	0	118	80	186	126	199
11	23.54	115	261	0	130	0	130	43	193	111	212
12	23.88	119	270	0	135	0	135	0	135	85	211
13	23.95	115	260	0	130	0	130	0	130	51	195
14	23.74	103	235	0	117	0	117	0	117	13	167
15	23.27	85	197	0	98	0	98	0	98	0	98
16	22.57	61	152	0	76	0	76	0	76	0	76
17	21.68	34	103	0	51	0	51	0	51	0	51
18	20.67	11	53	8	40	0	25	0	25	0	25
19	19.61	0	4	2	2	0	2	0	2	0	2
20	18.57	0	0	0	0	0	0	0	0	0	0
21	17.62	0	0	0	0	0	0	0	0	0	0
22	16.82	0	0	0	0	0	0	0	0	0	0
23	16.23	0	0	0	0	0	0	0	0	0	0
24	15.89	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	15.82	0	0	0	0	0	0	0	0	0	15.89
2	16.03	0	0	0	0	0	0	0	0	0	31.17
3	16.50	0	0	0	0	0	0	0	0	0	45.51
4	17.21	0	0	0	0	0	0	0	0	0	58.87
5	18.09	0	2	0	2	0	2	0	2	0.88	71.51
6	19.10	0	26	0	26	0	26	0	26	9.06	83.81
7	20.16	12	77	0	51	0	51	0	51	17.43	96.27
8	21.20	42	119	0	76	0	76	0	76	25.59	109.47
9	22.15	73	158	0	99	0	99	0	99	33.07	124.05
10	22.95	98	191	12	167	0	118	0	118	39.26	140.65
11	23.54	114	213	50	195	0	130	0	130	43.44	159.51
12	23.88	120	221	85	211	0	187	0	135	44.92	180.00
13	23.95	114	213	111	212	43	193	0	130	43.41	200.48
14	23.74	98	191	126	198	80	186	0	117	39.2	219.33
15	23.27	73	158	128	172	108	167	25	144	32.99	235.90
16	22.57	43	118	115	137	120	139	55	121	25.49	250.46
17	21.68	12	76	86	95	109	101	69	91	17.31	263.64
18	20.67	0	25	46	50	72	57	57	53	8.92	276.09
19	19.61	0	2	3	3	6	6	5	6	0.71	288.38
20	18.57	0	0	0	0	0	0	0	0	0	301.01
21	17.62	0	0	0	0	0	0	0	0	0	314.38
22	16.82	0	0	0	0	0	0	0	0	0	328.74
23	16.23	0	0	0	0	0	0	0	0	0	344.06
24	15.89	0	0	0	0	0	0	0	0	0	360.00

Dirfac = 0.20; Diffac = 1.20; Maximum dry-bulb = 23.96 °C; Minimum dry-bulb = 15.81 °C; Adaptive comfort range = 23.2–27.2 °C

Table continues

Table 5.18(d) Banded weather data: Edinburgh — *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	11.54	0	0	0	0	0	0	0	0	0	0
2	11.55	0	0	0	0	0	0	0	0	0	0
3	11.80	0	0	0	0	0	0	0	0	0	0
4	12.25	0	0	0	0	0	0	0	0	0	0
5	12.90	0	0	0	0	0	0	0	0	0	0
6	13.68	0	1	0	0	1	1	2	1	1	1
7	14.54	17	50	0	24	61	51	112	63	96	59
8	15.43	50	96	0	49	57	81	154	106	161	107
9	16.29	86	138	0	71	19	100	154	134	199	146
10	17.06	116	171	0	90	0	90	119	148	205	170
11	17.68	135	193	0	102	0	102	64	149	186	181
12	18.12	141	201	0	106	0	106	0	106	147	176
13	18.34	134	193	0	101	0	101	0	101	95	157
14	18.32	115	171	0	89	0	89	0	89	37	127
15	18.08	86	137	0	71	0	71	0	71	0	71
16	17.62	50	95	0	48	0	48	0	48	0	48
17	16.98	17	49	0	24	0	24	0	24	0	24
18	16.20	0	0	0	0	0	0	0	0	0	0
19	15.34	0	0	0	0	0	0	0	0	0	0
20	14.44	0	0	0	0	0	0	0	0	0	0
21	13.58	0	0	0	0	0	0	0	0	0	0
22	12.82	0	0	0	0	0	0	0	0	0	0
23	12.19	0	0	0	0	0	0	0	0	0	0
24	11.76	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	11.54	0	0	0	0	0	0	0	0	0	17.87
2	11.55	0	0	0	0	0	0	0	0	0	34.79
3	11.80	0	0	0	0	0	0	0	0	0	50.26
4	12.25	0	0	0	0	0	0	0	0	0	64.34
5	12.90	0	0	0	0	0	0	0	0	0	77.39
6	13.68	0	0	0	0	0	0	0	0	0.12	89.92
7	14.54	25	41	0	24	0	24	0	24	8.44	102.44
8	15.43	73	85	0	49	0	49	0	49	16.36	115.50
9	16.29	127	127	0	71	0	71	0	71	23.41	129.60
10	17.06	171	162	37	127	0	90	0	90	29.08	145.10
11	17.68	199	184	95	157	0	102	0	102	32.81	162.07
12	18.12	208	192	147	176	0	137	0	106	34.1	180.00
13	18.34	199	184	186	181	64	149	0	101	32.77	197.93
14	18.32	171	161	205	170	119	148	0	89	29.02	214.88
15	18.08	127	127	199	145	154	134	19	99	23.33	230.36
16	17.62	73	85	160	107	153	105	57	81	16.25	244.43
17	16.98	25	41	96	59	111	62	61	50	8.31	257.47
18	16.20	0	0	0	0	0	0	0	0	0	269.97
19	15.34	0	0	0	0	0	0	0	0	0	282.48
20	14.44	0	0	0	0	0	0	0	0	0	295.52
21	13.58	0	0	0	0	0	0	0	0	0	309.60
22	12.82	0	0	0	0	0	0	0	0	0	325.09
23	12.19	0	0	0	0	0	0	0	0	0	342.05
24	11.76	0	0	0	0	0	0	0	0	0	360.00

Dirfac = 0.32; Diffac = 1.18; Maximum dry-bulb = 18.36 °C; Minimum dry-bulb = 11.52 °C; Adaptive comfort range = 21.7–25.7 °C