

รายการอ้างอิง

- EXELL, ROBERT H.B. : SOLAR RADIATION TABLES FOR ARCHITECTS IN THAILAND BY...AND RAVINDA KUMAR. BANGKOK AIT 1981
- EXELL, ROBERT H.B. : THE SOLAR RADIATION CLIMATE OF THAILAND. AIT RESEARCHREPORT NO. 115 BANGKOK AIT 1976
- EXELL, ROBERT H.B. AND HUQ, Md.M. (1978) : J.SCI SOC. THAILAND4, P.16-26 THE STATISTICAL DISTRIBUTION OF HOURLY SOLAR RADIATION IN THAILAND
- IES LIGHTING HANDBOOK : LIGHTING CALCULATION SECTION 9. FIFTH EDITION ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA, NEW YORK 1972
- EVANS, BENJAMIN H. : DAYLIGHT IN ARCHITECTURE. AIA. MCGRAW-HILL, NEW YORK
- BOYCE, P.R. : HUMAN FACTORS IN LIGHTING. MACMILLAN PUBLISHING CO.,LTD.NEW YORK 1981
- MOORE, FULLER : CONCEPTS AND PRACTISE OF ARCHITECTURAL DAYLIGHTING. VAN NOSTRAND REINHOLD COMPANY. NEW YORK 1985
- K.THARMARATNAM AND LIM, B.P. : ENVIRONMENTAL FACTORS IN THE DESIGN OF BUILDING FENESTRATION. APPLIED SCIENCE PUBLISHERS LTD., LONDON
- JUROVICS, S.A. : "SOLAR RADIATION DATA. NATURAL LIGHTING AND BUILDING ENERGY MINIMIZATION". ASHRAE TRANSACTIONS 1979, VOL.85 PART 2
- ABRAMS, DONALD W.P.E. : LOW ENERGY COOLING. VAN NOSTRAND REINHOLD NEW YORK 1986

DUFFEE, JOHN A. AND BECKMAN, WILLIAM A. : SOLAR ENERGY THERMAL
PROCESSA WILEY-INTERSCIENCE PUBLICATON. JOHN WILEY & SONS.
NEW YORK 1974

OBERDICK, W. A., AND BOONYATIKARNM, SOONTORN : ENERGY
PERFORMANCE OF FABRIC-ROOF STRUCTURES. ARCHITECTURAL
RESEARCH LABORATORY, ANN ARBOR, MICHIGAN 1982

STEIN, B., REYNOLDS, J.S., AND MCGUINNESS, W.J., : MECHANICAL AND
ELECTRICAL EQUIPMENT FOR BUILDINGS 7TH EDITION. JOHN WILEY
& SONS. NEW YORK 1986

ชยันต์ ศาลิคุปต์ และ เกชา อีระโกเมน. การประยุกต์ใช้เทคโนโลยี เพื่อการประหยัดพลังงาน
และ การออกแบบอาคารประหยัดพลังงาน. เอกสารการสัมมนา กฎหมาย อนุรักษ์-
พลังงาน ผลกระทบและการออกแบบสถาปัตยกรรมสมัยใหม่, 2536

ปราโมทย์ เอี่ยมศิริ. ภาพรวมสถานการณ์พลังงานในปัจจุบัน และ การบริโภคพลังงานในอาคาร.
หน้า 9-11. เอกสารการสัมมนา กฎหมาย อนุรักษ์พลังงาน ผลกระทบและการ-
ออกแบบสถาปัตยกรรมสมัยใหม่, 2536

พงศ์พัฒน์ มั่งคั่ง. ค่าการถ่ายเทความร้อนรวมในอาคาร. หน้า 5-7. เอกสารการสัมมนา กฎหมาย
อนุรักษ์พลังงาน ผลกระทบ และการออกแบบสถาปัตยกรรมสมัยใหม่, 2536

นพกุล ปลื้มถนอม. เจ้าหน้าที่ฝ่ายกรรมวิธีข้อมูล กองภูมิอากาศ กรมอุตุนิยมวิทยา. สัมภาษณ์,
24 มกราคม 2537 และ 4 กุมภาพันธ์ 2537

ขวัญชัย ศศิภาณุเดช. การศึกษาแสงธรรมชาติเพื่อประโยชน์ในการออกแบบอาคาร สาขาวิชา-
วิศวกรรมศาสตร์ วิทยานิพนธ์ปริญญาโทมหาบัณฑิต จุฬาลงกรณ์
มหาวิทยาลัย, 2527.

มิตรชัย อภิพัฒนะมนตรี. การจำลองแบบหาค่าความร้อนผ่านรูปร่างรอบนอกของอาคารใน-
กรุงเทพมหานคร สาขาวิชาวิศวกรรมศาสตร์ วิทยานิพนธ์ปริญญาโทมหาบัณฑิต
จุฬาลงกรณ์มหาวิทยาลัย, 2530.

วิสา แซ่เต๋ย. การพัฒนาเทคนิคการวิเคราะห์พลังงานแสงอาทิตย์ และ แผนที่มีการแผ่รังสี
สาขาวิชาสถิติ วิทยานิพนธ์ปริญญาโทมหาบัณฑิต จุฬาลงกรณ์มหาวิทยาลัย, 2526.

ภาคผนวก

2 2
 Radiation Balance Q and Total Radiation (sun and sky) T, 10 MJ/M
 Bangkok latitude 13 44 n longitude 100 34 e

January 1991

ประจำเดือน ม.ค. ๒๕๓๔

ตารางแสดงปริมาณการแผ่รังสีโดยรวมจากดวงอาทิตย์ รายชั่วโมง ณ สถานีกรุงเทพฯ

Hourly totals Time	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	Total
date																
1	0	0	0	20	89	174	221	242	200	240	175	182	106	27	0	1676
2	0	0	1	32	92	152	196	200	185	150	204	153	79	19	0	1463
3	0	0	0	28	66	118	208	111	156	125	129	157	87	22	0	1207
4	0	0	1	26	94	145	182	177	238	178	133	58	57	15	0	1301
5	0	0	0	26	88	89	210	285	292	286	226	134	88	17	0	1741
6	0	0	0	22	95	174	160	227	259	252	191	158	78	22	0	1638
7	0	0	0	21	57	111	173	196	67	76	176	140	91	23	0	1131
8	0	0	0	26	76	90	167	267	235	91	111	69	37	17	0	1186
9	0	0	0	23	59	33	38	49	128	224	145	111	55	16	0	881
10	0	0	0	23	66	187	189	237	98	130	153	159	58	22	0	1322
11	0	0	0	29	100	109	205	262	248	72	102	157	102	20	0	1406
12	0	0	0	25	90	165	208	283	314	248	192	149	64	17	0	1755
13	0	0	0	8	68	153	222	293	274	260	249	184	85	15	0	1811
14	0	0	2	32	100	157	248	309	319	271	269	184	96	22	0	2009
15	0	0	1	42	121	206	273	314	317	269	253	182	97	24	0	2099
16	0	0	1	41	122	200	265	311	320	269	246	189	103	25	0	2092
17	0	0	1	41	122	200	265	311	320	269	246	189	103	25	0	2092
18	0	0	1	36	115	193	259	305	315	267	226	152	92	21	0	1982
19	0	0	1	32	103	171	203	248	254	256	229	176	95	22	0	1790
20	0	0	1	33	92	159	195	283	310	260	245	186	83	26	0	1873
21	0	0	1	29	95	122	188	237	266	244	244	188	118	37	0	1769
22	0	0	0	35	66	110	217	267	321	262	205	170	97	34	0	1784
23	0	0	1	28	78	92	168	281	297	251	223	178	105	33	0	1715
24	0	0	0	24	76	78	100	135	143	89	175	150	76	23	0	1069
25	0	0	1	28	94	155	237	223	263	229	195	151	87	20	0	1683
26	0	0	1	27	93	161	191	244	270	254	208	165	96	29	0	1739
27	0	0	1	28	105	189	254	296	302	253	221	133	93	25	0	1900
28	0	0	1	29	103	185	245	295	304	263	206	134	86	20	0	1871
29	0	0	1	37	112	193	255	299	305	257	203	173	56	21	0	1912
30	0	0	1	39	121	203	267	313	323	274	231	190	107	29	0	2098
31	0	0	1	40	123	204	270	313	320	269	230	184	101	24	0	2070
N	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	
TOTAL	0	0	18	869	2759	4478	6214	7502	7643	6569	5995	4696	2575	687	0	50005
MEAN	0	0	1	29	92	149	207	250	255	219	200	157	86	23	0	1667

REMARKS : *** IS MISSING VALUE OR NO DATA REPORTED
 *** MEANS INCOMPLETE DATA IN THE SPECIFIED HOUR

กรมอุตุนิยมวิทยา

2 2
 Radiation Balance Q and Total Radiation (sun and sky) T, 10 MJ/M²
 Bangkok latitude 13 44 n longitude 100 34 e

February 1991

Hourly totals Time	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	Total
date																
1	0	1	42	123	207	269	310	321	265	204	160	88	24	0	0	2014
2	0	1	40	119	201	266	310	319	265	236	191	109	30	0	0	2087
3	0	1	32	107	188	253	299	309	257	226	173	102	28	0	0	1975
4	0	1	34	105	183	253	301	311	260	230	181	106	34	0	0	1999
5	0	1	35	112	191	254	296	304	256	219	172	88	25	0	0	1953
6	0	1	27	95	172	240	260	287	251	213	158	82	23	0	0	1809
7	0	0	24	82	155	209	253	260	229	193	144	84	26	1	0	1660
8	0	0	25	84	143	198	252	259	240	203	162	90	29	1	0	1686
9	0	0	26	89	156	223	250	249	222	185	164	97	24	1	0	1686
10	0	0	25	105	171	245	279	294	248	225	191	123	44	0	0	1950
11	0	2	45	106	166	258	298	309	268	240	203	125	43	1	0	2064
12	0	1	27	96	93	204	281	286	264	235	193	118	40	1	0	1839
13	0	1	33	103	164	255	282	304	263	231	192	117	40	1	0	1986
14	0	1	32	103	179	250	300	313	260	226	187	108	35	1	0	1995
15	0	1	32	98	156	217	265	270	225	218	191	119	42	1	0	1835
16	0	1	35	107	183	247	286	306	271	241	209	133	45	1	0	2065
17	0	1	37	111	184	219	249	316	270	233	208	129	42	1	0	2000
18	0	1	35	107	199	225	251	314	265	225	201	127	44	1	0	1995
19	0	1	34	110	197	239	284	296	254	224	183	102	35	1	0	1960
20	0	2	22	100	123	166	256	260	246	215	200	114	37	3	0	1744
21	0	9	39	57	51	117	139	269	147	64	67	63	15	0	0	1037
22	0	6	49	131	194	276	309	315	275	230	172	90	22	0	0	2069
23	0	5	37	128	209	268	305	307	270	230	166	84	21	0	0	2030
24	0	6	56	135	216	276	319	325	280	244	174	90	21	0	0	2142
25	0	6	60	139	224	284	323	330	285	252	183	98	24	0	0	2208
26	0	6	65	151	234	305	348	334	295	263	195	103	27	0	0	2326
27	0	5	49	116	180	256	303	303	269	250	188	104	26	0	0	2049
28	0	5	57	138	211	139	289	304	288	254	185	90	30	0	0	1990
N	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	
TOTAL	0	66	1054	3057	4930	6611	7897	8374	7188	6209	4993	2883	876	15	0	54153
EAN	0	2	38	109	176	236	282	299	257	222	178	103	31	1	0	1934
2	2															

ประจำเดือน ก.พ. 2534

ตาราง แสดงปริมาณการแผ่รังสีโดยรวมจากดวงอาทิตย์ รายชั่วโมง ณ สถานีกรุงเทพ

2 2

Radiation Balance Q and Total Radiation (sun and sky) T, 10 MJ/M
 Bangkok latitude 13 44 n longitude 100 34 e

February 1991

Hourly totals	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	Total
Time	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	Total
date																2014
1	0	1	42	123	207	269	310	321	265	204	160	88	24	0	0	2087
2	0	1	40	119	201	266	310	319	265	236	191	109	30	0	0	1975
3	0	1	32	107	188	253	299	309	257	226	173	102	28	0	0	1999
4	0	1	34	105	183	253	301	311	260	230	181	106	34	0	0	1953
5	0	1	35	112	191	254	296	304	256	219	172	88	25	0	0	1809
6	0	1	27	95	172	240	260	287	251	213	158	82	23	0	0	1660
7	0	0	24	82	155	209	253	260	229	193	144	84	26	1	0	1686
8	0	0	25	84	143	198	252	259	240	203	162	90	29	1	0	1686
9	0	0	26	89	156	223	250	249	222	185	164	97	24	1	0	1950
10	0	0	25	105	171	245	279	294	248	225	191	123	44	0	0	2064
11	0	2	45	106	166	258	298	309	268	240	203	125	43	1	0	1839
12	0	1	27	96	93	204	281	286	264	235	193	118	40	1	0	1986
13	0	1	33	103	164	255	282	304	263	231	192	117	40	1	0	1995
14	0	1	32	103	179	250	300	313	260	226	187	108	35	1	0	1835
15	0	1	32	98	156	217	265	270	225	218	191	119	42	1	0	2065
16	0	1	35	107	183	247	286	306	271	241	209	133	45	1	0	2000
17	0	1	37	111	184	219	249	316	270	233	208	129	42	1	0	1995
18	0	1	35	107	199	225	251	314	265	225	201	127	44	1	0	1960
19	0	1	34	110	197	239	284	296	254	224	183	102	35	1	0	1744
20	0	2	22	100	123	166	256	260	246	215	200	114	37	3	0	1037
21	0	9	39	57	51	117	139	269	147	64	67	63	15	0	0	2069
22	0	6	49	131	194	276	309	315	275	230	172	90	22	0	0	2030
23	0	5	37	128	209	268	305	307	270	230	166	84	21	0	0	2142
24	0	6	56	135	216	276	319	325	280	244	174	90	21	0	0	2208
25	0	6	60	139	224	284	323	330	285	252	183	98	24	0	0	2326
26	0	6	65	151	234	305	348	334	295	263	195	103	27	0	0	2049
27	0	5	49	116	180	256	303	303	269	250	188	104	26	0	0	1990
28	0	5	57	138	211	139	289	304	288	254	185	90	30	0	0	
N	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	
TOTAL	0	66	1054	3057	4930	6611	7897	8374	7188	6209	4993	2883	876	15	0	54153
EAN	0	2	38	109	176	236	282	299	257	222	178	103	31	1	0	1934
2	2															

Radiation Balance Q and Total Radiation (sun and sky) T, 10 MJ/M
 Bangkok latitude 13 44 n longitude 100 34 e

March 1991

ตาราง แสดงปริมาณการแผ่รังสีโดยตรงจากดวงอาทิตย์ รายชั่วโมง ณ สถานีกรุงเทพ
 ประจำเดือน มี.ค. 2534

Hourly totals Time	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	Total
date																
1	0	6	34	116	207	240	303	321	267	277	222	71	11	0	0	2075
2	0	8	66	158	252	326	326	293	181	262	220	126	38	0	0	2256
3	0	2	56	158	162	308	361	384	312	310	253	162	64	3	0	2535
4	0	3	51	142	231	300	352	367	306	288	231	142	57	2	0	2472
5	0	2	40	107	245	260	341	344	314	276	238	149	57	3	0	2376
6	0	2	50	124	222	275	314	372	318	294	239	154	60	3	0	2427
7	0	3	46	122	178	277	310	308	318	301	237	148	37	3	0	2288
8	0	3	46	147	242	313	359	377	321	299	238	146	56	4	0	2551
9	0	3	53	139	239	313	344	370	321	290	226	138	52	3	0	2491
10	0	3	36	93	185	254	273	328	315	297	225	137	51	3	0	2200
11	0	2	44	122	171	242	283	308	250	269	200	121	46	3	0	2061
12	0	2	33	65	194	246	297	315	274	284	212	130	50	3	0	2105
13	0	3	46	126	186	291	353	368	290	287	217	133	52	2	0	2354
14	0	3	38	114	201	273	285	306	105	210	73	60	60	3	0	1731
15	0	1	17	109	183	231	292	284	244	239	189	112	45	4	0	1950
16	0	2	43	122	212	284	334	329	321	286	220	138	52	3	0	2346
17	0	5	59	149	242	313	355	356	290	291	189	136	47	2	0	2434
18	0	2	21	90	187	326	382	374	308	277	212	113	45	4	0	2341
19	0	6	44	104	198	196	288	370	314	259	209	154	60	2	0	2204
20	0	6	71	159	247	319	354	333	342	314	246	155	60	3	0	2609
21	0	7	76	171	258	319	372	390	357	323	251	159	64	1	0	2748
22	0	6	58	88	203	217	306	282	241	299	216	84	29	2	0	2031
23	0	5	59	121	194	280	294	304	321	311	245	157	62	1	0	2354
24	0	4	51	132	178	176	288	295	313	320	253	163	46	1	0	2220
25	0	6	70	162	246	316	358	364	356	316	244	149	48	3	0	2638
26	0	9	78	156	228	272	301	351	354	305	233	141	56	4	0	2488
27	0	7	50	125	223	278	325	358	343	294	225	139	50	4	0	2421
28	0	6	48	88	158	213	255	301	345	289	219	132	50	3	0	2107
29	0	6	58	142	223	293	340	352	330	282	212	129	48	2	0	2417
30	0	8	63	141	217	211	267	256	328	275	217	81	47	1	0	2112
31	0	2	39	160	127	226	327	314	241	155	204	107	49	2	0	1953
N	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	
TOTAL	0	133	1544	3952	6439	8388	9939	10374	9240	8779	6815	4066	1549	77	0	71295
MEAN	0	4	50	127	208	271	321	335	298	283	220	131	50	2	0	2300

2 2

Radiation Balance Q and Total Radiation (sun and sky) T, 10 MJ/M
Bangkok latitude 13 44 n longitude 100 34 e

April 1991

ประจำเดือน เม.ย. 2534

ตาราง แสดงปริมาณการแผ่รังสีโดยรวมจากดวงอาทิตย์ รายชั่วโมง สถานีกรุงเทพ

Hourly totals Time	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	Total	
date																1325	
1	0	3	18	24	61	134	138	246	342	199	73	69	17	1	0	2547	
2	0	10	57	143	271	335	370	376	336	286	208	114	40	1	0	2497	
3	0	16	86	160	259	332	360	380	274	291	209	104	25	1	0	2495	
4	0	16	90	183	265	330	367	332	295	273	198	106	39	1	0	2436	
5	0	15	73	52	226	301	343	357	326	291	239	155	49	9	0	2361	
6	0	8	57	126	217	293	312	290	326	300	230	147	52	3	0	2224	
7	0	6	54	82	189	248	245	275	309	307	250	182	73	4	0	2200	
8	0	6	41	111	135	243	283	296	330	299	232	154	66	4	0	2290	
9	0	6	52	127	172	251	283	319	317	311	236	153	61	2	0	2283	
10	0	8	45	78	131	268	341	329	311	287	238	172	72	3	0	2368	
11	0	9	69	157	191	264	267	358	345	350	283	315	236	151	41	2	2120
12	0	9	67	95	162	166	243	350	283	315	236	151	41	2	0	2443	
13	0	12	50	131	191	266	272	383	376	314	235	153	57	3	0	2193	
14	0	11	46	88	174	221	230	324	363	317	241	143	30	5	0	2327	
15	0	7	64	157	208	292	304	254	283	298	227	153	72	8	0	2440	
16	0	13	73	153	167	269	280	335	329	314	242	166	89	10	0	2416	
17	0	9	45	146	231	288	283	304	336	312	240	151	65	6	0	2342	
18	0	10	52	146	186	255	313	335	339	298	222	124	56	6	0	2735	
19	0	10	70	180	269	297	363	384	366	319	242	160	69	6	0	2498	
20	0	9	56	93	212	251	357	333	358	320	244	170	89	6	0	1497	
21	0	12	59	151	233	250	208	216	238	70	27	15	18	0	0	1175	
22	0	6	25	7	15	24	84	181	307	278	150	67	29	2	0	2153	
23	0	14	81	163	235	216	308	265	287	309	195	65	15	0	0	2189	
24	0	9	62	126	205	230	268	326	331	195	179	176	77	5	0	888	
25	0	2	34	83	128	133	108	132	65	38	87	51	25	2	0	2327	
26	0	12	73	172	182	186	195	367	355	307	243	164	63	8	0	2272	
27	0	15	77	133	246	308	343	299	267	246	173	107	52	6	0	2986	
28	0	21	92	163	253	354	391	411	374	339	262	188	115	13	0	2806	
29	0	22	81	123	269	315	355	403	382	335	261	155	94	11	0	2620	
30	0	18	93	182	258	249	264	391	377	332	275	108	0	3	0		
N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
TOTAL	0	324	1842	3735	5951	7569	8478	9551	9527	8396	6322	3974	1651	133	0	67453	
MEAN	0	11	61	125	198	252	283	318	318	280	211	132	55	4	0	2248	

2 2

Radiation Balance Q and Total Radiation (sun and sky) T, 10 MJ/M
 Bangkok latitude 13 44 n longitude 100 34 e

May 1991

Hourly totals	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	Total
date																
1	0	27	111	200	275	338	380	390	306	300	275	98	21	1	0	2722
2	0	28	107	193	271	288	383	397	390	320	290	165	60	3	0	2895
3	0	16	79	121	203	336	276	370	382	277	151	110	54	8	0	2383
4	0	18	75	112	162	248	281	272	222	235	131	69	44	4	0	1873
5	0	25	106	187	187	238	351	308	221	111	105	69	30	2	0	1940
6	0	19	49	104	234	334	326	262	214	247	184	108	36	3	0	2120
7	0	23	101	128	260	326	294	359	285	223	114	107	56	9	0	2285
8	0	14	57	157	233	209	184	279	338	313	229	164	76	10	0	2263
9	0	22	87	135	213	217	229	354	374	122	55	49	33	4	0	1894
10	0	22	87	135	213	217	229	354	374	122	55	49	33	4	0	1567
11	0	29	81	92	223	354	363	289	21	17	35	30	29	4	0	1567
12	0	16	96	146	214	242	184	323	274	71	87	158	59	1	0	1871
13	0	23	96	178	237	360	326	384	366	311	248	165	74	5	0	2773
14	0	17	86	157	204	264	307	347	335	314	252	164	68	6	0	2521
15	0	18	88	180	146	210	322	370	352	156	128	81	47	8	0	2106
16	0	20	88	151	199	237	340	349	346	314	253	141	66	6	0	2510
17	0	17	86	171	80	88	286	315	340	323	205	-	35	6	0	-
18	0	24	97	189	257	255	169	22	41	125	199	159	84	11	0	1632
19	0	8	12	15	27	103	205	293	298	249	222	135	51	6	0	1624
20	0	17	93	138	218	244	349	322	293	230	177	108	61	5	0	2255
21	0	24	100	181	256	321	377	386	375	130	18	13	11	1	0	2193
22	0	17	35	105	196	199	339	333	275	60	62	59	40	8	0	1728
23	0	10	39	85	209	251	294	288	216	277	247	131	27	8	0	2082
24	0	15	126	172	133	104	154	169	283	297	142	117	88	9	0	1809
25	0	2	15	74	107	121	131	352	238	125	193	169	62	8	0	1597
26	0	19	74	214	253	341	372	359	362	342	98	94	43	4	0	2575
27	0	20	69	123	201	235	261	231	207	200	150	62	27	3	0	1789
28	0	12	67	144	149	235	176	193	320	144	38	27	35	8	0	1548
29	0	16	54	73	235	314	230	132	84	61	58	38	21	4	0	1320
30	0	8	95	183	258	292	295	250	351	171	62	65	22	3	0	2055
31	0	26	100	172	151	269	352	216	136	132	59	127	40	3	0	1783
N	30*	30*	30*	30*	30*	30*	30*	30*	30*	30*	30*	29*	30*	30*	30*	
TOTAL	0	550	2369	4280	5991	7573	8536	8914	8245	6197	4467	2982	1400	161	0	61665
MEAN	0	18	79	143	200	252	285	297	275	207	149	103	47	5	0	2126

REMARKS : * IS MISSING VALUE OR NO DATA REPORTED
 *** MEANS INCOMPLETE DATA IN THE SPECIFIED HOUR

2 2

Radiation Balance Q and Total Radiation (sum and sky) T, 10 MJ/M
 Bangkok latitude 13 44 n longitude 100 34 e

June 1991

Hourly totals	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	Total
date																
1	1	39	63	121	218	307	247	143	78	47	55	56	50	3	0	1428
2	2	48	63	82	106	122	135	184	166	135	171	136	38	3	0	1391
3	1	33	115	191	274	316	306	296	319	277	173	91	40	3	0	2465
4	1	19	73	95	176	311	384	362	264	258	183	43	5	0	0	2174
5	0	21	46	108	222	217	93	126	195	106	192	84	21	1	0	1432
6	0	22	56	76	126	144	164	253	266	153	88	74	27	2	0	1451
7	0	13	43	69	105	155	211	229	328	162	105	102	55	4	0	1581
8	1	15	69	136	175	198	263	163	204	169	116	96	24	4	0	1637
9	1	26	104	206	291	233	128	41	184	188	86	62	28	3	0	1581
10	0	8	32	43	71	142	194	166	206	139	41	56	29	3	0	1130
11	0	14	82	98	191	178	146	171	171	34	34	86	41	4	0	1250
12	0	21	65	136	135	199	233	172	103	119	50	30	15	3	0	1281
13	1	17	54	101	177	220	329	327	197	167	86	33	13	1	0	1723
14	0	16	56	158	257	278	245	134	279	248	195	154	65	8	0	2093
15	1	36	113	200	275	312	287	177	125	61	56	110	63	5	0	1821
16	0	27	-	124	225	285	277	187	178	163	98	95	25	5	0	-
17	0	22	70	124	179	212	257	214	136	137	-	80	32	5	0	-
18	1	16	61	158	179	183	136	225	203	132	-	81	22	3	0	-
19	0	3	45	129	132	174	323	324	188	223	171	89	65	10	0	1876
20	0	29	67	139	238	274	274	266	205	196	154	131	48	6	0	2027
21	0	38	121	197	207	210	197	196	199	85	23	5	i	0	0	1479
22	0	26	112	142	163	176	186	140	223	146	137	113	39	3	0	1606
23	0	22	69	-	218	150	128	121	160	116	91	63	31	3	0	-
24	0	5	8	38	94	176	202	176	239	181	141	124	36	3	0	1423
25	0	15	68	175	286	343	347	380	365	290	210	67	59	6	0	2611
26	0	24	55	112	225	299	381	384	339	206	209	-	24	2	0	-
27	0	18	66	154	162	90	190	384	204	332	244	161	81	7	0	2093
28	0	21	68	138	189	220	239	149	191	260	182	104	85	11	0	1857
29	0	24	59	193	259	250	253	260	289	277	223	175	84	9	0	2355
30	0	20	90	177	269	331	364	394	380	337	247	178	77	7	0	2871
N	30	30	29*	29*	30	30	30	30	30	30	28*	29*	30	30	30	
TOTAL	10	662	1992	3820	5824	6705	7119	6744	6614	5344	3761	2679	1223	127	0	52625
MEAN	0	22	69	132	194	224	237	225	220	178	134	92	41	4	0	2105

REMARKS : "-" IS MISSING VALUE OR NO DATA REPORTED
 "*" MEANS INCOMPLETE DATA IN THE SPECIFIED HOUR

2 2

Radiation Balance Q and Total Radiation (sun and sky) T, 10 MJ/M
 Bangkok Latitude 13 44 n longitude 100 34 e

July 1991

Hourly totals Time	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	Total
date																1851
1	0	21	93	187	247	310	230	299	178	94	93	58	37	4	0	1650
2	0	6	32	58	73	133	211	345	316	176	140	102	54	4	0	2165
3	0	23	88	160	196	291	317	209	340	272	187	69	12	1	0	1051
4	0	11	22	43	80	135	122	119	143	125	121	84	40	6	0	2303
5	0	16	54	161	289	293	298	288	252	206	213	155	69	9	0	2444
6	0	19	125	206	163	320	348	384	350	197	188	107	32	5	0	2469
7	0	26	101	192	269	329	378	219	268	248	201	153	76	9	0	2706
8	0	21	95	169	256	312	346	372	364	290	255	147	69	10	0	1461
9	0	7	53	114	182	146	172	205	139	170	133	83	49	8	0	2306
10	0	18	97	146	242	317	359	379	351	166	113	74	36	8	0	2020
11	0	12	44	135	267	326	327	349	301	145	63	33	14	4	0	2274
12	0	17	79	174	246	336	359	252	255	205	128	148	65	10	0	2146
13	0	14	62	142	194	233	249	273	255	306	182	150	74	12	0	1620
14	0	11	47	176	157	156	122	225	180	138	-	64	18	4	0	1204
15	0	10	53	92	169	178	244	227	125	196	200	85	36	5	0	1220
16	0	5	23	43	61	91	173	192	264	183	85	47	31	6	0	2437
17	0	10	53	95	110	116	137	209	231	160	62	25	8	4	0	2582
18	0	9	55	113	255	293	311	346	312	319	209	144	60	11	0	1555
19	0	7	83	175	234	327	295	364	351	269	238	171	58	10	0	1302
20	0	10	42	75	153	206	157	213	191	167	184	75	71	11	0	1635
21	0	7	26	54	159	110	172	185	249	117	75	89	46	13	0	1772
22	0	9	56	123	189	240	249	171	234	225	123	9	5	2	0	1729
23	0	8	48	94	141	212	182	292	329	217	120	94	34	1	0	1203
24	0	6	35	49	132	157	274	334	343	255	132	10	2	0	0	1626
25	0	4	22	65	64	111	104	167	207	150	141	105	50	13	0	1317
26	0	9	38	117	218	164	98	215	255	200	122	136	46	8	0	1300
27	0	2	17	52	101	129	242	234	163	149	144	53	27	4	0	1889
28	0	1	9	13	31	68	113	208	286	244	177	85	55	10	0	1996
29	0	6	43	87	101	196	252	215	282	274	180	158	84	11	0	1229
30	0	8	52	81	146	270	282	256	221	277	231	144	28	0	0	
31	0	5	30	103	121	139	182	147	162	126	139	64	11	0	0	
N	31	31	31	31	31	31	31	31	31	31	30*	31	31	31	31	
TOTAL	0	338	1677	3494	5246	6644	7305	7893	7897	6266	4579	2921	1297	203	0	55760
MEAN	0	11	54	113	169	214	236	255	255	202	153	94	42	7	0	1859

REMARKS : "..." IS MISSING VALUE OR NO DATA REPORTED
 "...." MEANS INCOMPLETE DATA IN THE SPECIFIED HOUR

2 2

Radiation Balance Q and Total Radiation (sun and sky) T, 10 MJ/M
 Bangkok latitude 13 44 n longitude 100 34 e

August 1991

Hourly totals Time	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	Total
date																
1	0	5	38	69	160	213	189	179	181	232	203	107	58	10	0	1644
2	0	9	57	134	227	292	219	323	304	226	102	50	34	8	0	1995
3	0	11	62	156	157	142	182	154	187	87	211	89	65	11	0	1514
4	0	14	90	173	256	315	366	373	358	326	219	159	66	16	0	2731
5	0	3	27	93	79	81	146	292	318	264	220	163	48	5	0	1739
6	0	5	20	60	96	153	230	276	204	123	135	162	73	12	0	1549
7	0	4	36	90	211	291	308	367	307	193	161	64	5	0	0	2037
8	0	16	78	125	158	129	77	199	185	135	180	27	35	4	0	1408
9	0	16	82	121	247	277	280	289	287	156	144	81	38	5	0	2023
10	0	17	89	95	226	298	362	322	241	259	170	108	40	3	0	2230
11	0	13	64	127	151	248	265	122	222	69	157	113	29	3	0	1583
12	0	7	41	81	186	223	251	222	141	106	40	4	2	0	0	1304
13	0	8	51	135	145	203	161	233	163	71	47	34	22	2	0	1275
14	0	6	31	64	175	247	279	331	206	140	79	60	18	1	0	1637
15	0	5	24	81	164	301	316	232	305	174	42	57	23	3	0	1727
16	0	10	60	116	183	208	202	235	165	169	181	73	40	3	0	1645
17	0	13	60	115	158	221	131	125	153	140	83	46	18	1	0	1264
18	0	3	28	59	65	66	87	74	87	68	29	29	15	1	0	609
19	0	3	22	29	139	226	148	157	149	187	88	66	26	3	0	1243
20	0	6	32	86	194	194	293	146	124	82	82	66	49	7	0	1361
21	0	9	52	118	264	298	201	269	248	249	75	46	26	0	0	1855
22	0	8	58	100	161	261	150	138	67	12	10	6	2	0	0	973
23	0	10	43	88	87	114	130	89	109	145	124	91	67	7	0	1104
24	0	14	83	151	222	228	257	257	264	230	175	116	53	3	0	2053
25	0	10	77	175	170	191	200	319	245	264	157	115	32	0	0	1955
26	0	12	68	168	186	174	190	187	189	186	152	126	65	6	0	1709
27	0	3	19	51	-	185	259	277	88	108	145	119	43	1	0	-
28	0	5	36	74	125	106	154	207	159	141	129	88	35	2	0	1262
29	0	4	32	82	103	219	208	202	160	43	51	13	5	1	0	1123
30	0	12	80	154	234	222	234	283	188	163	184	146	56	5	0	1961
31	0	13	80	131	174	254	240	232	195	233	207	43	2	0	0	1804
N	31	31	31	31	30*	31	31	31	31	31	31	31	31	31	31	
TOTAL	0	274	1620	3301	5103	6580	6715	7111	6199	4981	3982	2537	1088	124	0	49615
MEAN	0	9	52	106	170	212	217	229	200	161	128	82	35	4	0	1654

REMARKS: "-" IS MISSING VALUE OR NO DATA REPORTED
 "*" MEANS INCOMPLETE DATA IN THE SPECIFIED HOUR

2 2

Radiation Balance Q and Total Radiation (sun and sky) T, 10 MJ/M
 Bangkok latitude 13 44 n longitude 100 34 e

September 1991

Hourly totals
 Time 04-05 05-06 06-07 07-08 08-09 09-10 10-11 11-12 12-13 13-14 14-15 15-16 16-17 17-18 18-19 Total

date	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	Total
1	0	10	69	121	206	214	147	308	208	81	122	104	30	4	0	1633
2	0	12	71	160	247	326	356	328	266	256	170	129	63	4	0	2388
3	0	7	53	129	197	259	355	353	265	202	181	96	36	1	0	2134
4	0	10	63	157	246	323	312	142	240	257	190	95	49	3	0	2087
5	0	12	64	87	76	82	188	154	137	129	112	23	17	3	0	1084
6	0	13	82	172	260	308	290	223	181	179	38	27	23	3	0	1799
7	0	10	64	174	231	225	273	243	115	231	232	110	34	3	0	1945
8	0	9	45	85	206	313	205	194	192	218	126	134	46	3	0	1776
9	0	9	72	100	236	298	352	242	277	165	121	79	39	3	0	1993
10	0	7	35	92	163	290	195	227	143	215	91	47	40	1	0	1546
11	0	13	64	162	255	330	363	303	235	192	115	81	36	3	0	2152
12	0	1	31	112	122	180	296	370	334	241	192	74	31	1	0	1985
13	0	8	44	161	235	253	274	280	68	37	28	38	23	1	0	1450
14	0	7	49	159	223	331	226	107	81	139	97	81	40	2	0	1642
15	0	13	76	173	246	281	210	132	97	149	91	41	17	1	0	1527
16	0	10	70	165	204	265	187	93	146	193	135	121	16	1	0	1606
17	0	8	56	123	233	103	25	195	240	214	191	95	15	0	0	1498
18	0	7	30	127	152	196	258	150	68	35	28	26	13	0	0	1090
19	0	8	45	126	186	213	123	96	123	138	56	48	25	1	0	1188
20	0	9	51	146	202	247	60	91	51	92	103	100	31	1	0	1184
21	0	4	50	103	179	252	358	301	303	263	190	55	41	1	0	2100
22	0	5	41	94	265	299	257	174	203	85	187	117	24	1	0	1752
23	0	14	68	144	150	254	112	237	70	92	41	45	14	0	0	1241
24	0	9	45	123	159	79	135	135	75	53	23	5	2	0	0	843
25	0	7	31	97	127	143	259	258	270	131	61	14	1	0	0	1399
26	0	16	57	148	229	253	308	276	145	153	163	58	23	0	0	1829
27	0	13	61	177	276	281	151	154	126	122	83	-	15	0	0	1816
28	0	15	80	171	259	286	234	192	247	196	84	40	12	0	0	1816
29	0	9	21	44	74	40	26	-	177	149	94	64	20	0	0	1630
30	0	13	57	107	165	255	231	165	200	277	116	35	9	0	0	1630
N	30	30	30	30	30	30	30	29*	30	30	30	29*	30	30	30	
TOTAL	0	288	1645	3939	6009	7179	6866	6123	5283	4884	3461	1982	794	41	0	48494
MEAN	0	10	55	131	200	239	229	211	176	163	115	68	26	1	0	1732

REMARKS : * IS MISSING VALUE OR NO DATA REPORTED
 ** MEANS INCOMPLETE DATA IN THE SPECIFIED HOUR



2 2
 Radiation Balance Q and Total Radiation (sun and sky) T.10 MJ/M
 Bangkok latitude 13 44 n longitude 100 34 e

November 1991

Hourly totals	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	Total
Time																
date																2182
1	0	11	75	157	234	298	329	325	275	230	173	65	10	0	0	1887
2	0	10	65	146	216	277	308	261	229	189	130	47	9	0	0	1866
3	0	10	71	147	225	287	238	280	193	211	140	56	8	0	0	2026
4	0	11	74	164	245	305	294	304	169	243	160	52	5	0	0	1811
5	0	10	71	131	240	274	319	285	195	170	84	27	5	0	0	2013
6	0	10	71	152	238	291	322	333	252	195	88	52	9	0	0	1902
7	0	8	59	119	217	287	327	319	251	163	101	43	8	0	0	2028
8	0	11	68	166	215	295	263	305	252	249	142	53	9	0	0	1019
9	0	3	16	72	129	132	158	138	142	123	66	33	7	0	0	1621
10	0	7	86	166	134	235	249	243	208	106	134	49	4	0	0	2014
11	0	11	63	150	239	290	313	291	230	191	162	64	10	0	0	1982
12	0	10	65	148	237	295	322	286	236	170	141	62	10	0	0	2060
13	0	9	61	152	241	295	315	307	243	235	149	52	1	0	0	2033
14	0	10	69	155	240	278	333	321	238	203	117	60	9	0	0	2048
15	0	9	63	145	226	287	317	305	239	231	155	61	10	0	0	2110
16	0	9	68	152	232	291	326	321	248	240	156	58	9	0	0	2006
17	0	8	66	149	225	275	294	298	234	242	157	49	9	0	0	1999
18	0	7	40	142	221	287	317	315	243	247	127	46	7	0	0	1957
19	0	6	60	137	217	279	312	307	232	215	136	47	9	0	0	1989
20	0	7	61	143	218	280	311	305	245	235	122	53	9	0	0	1923
21	0	5	56	136	212	271	300	298	238	206	130	62	9	0	0	1926
22	0	6	58	138	213	272	296	304	237	203	124	66	9	0	0	1822
23	0	6	61	141	217	273	271	280	168	179	157	60	9	0	0	1637
24	0	6	61	143	215	276	306	311	91	86	80	53	9	0	0	2051
25	0	6	63	145	214	276	306	313	253	242	165	58	10	0	0	1981
26	0	6	65	149	224	277	308	316	258	218	101	49	10	0	0	1762
27	0	5	60	138	207	270	273	274	243	219	45	21	7	0	0	1148
28	0	4	54	129	187	236	166	174	107	39	26	6	0	0	0	1484
29	0	4	51	130	200	231	216	180	182	132	117	34	7	0	0	1516
30	0	4	46	116	185	245	223	186	149	143	151	60	8	0	0	
N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	
TOTAL	0	229	1847	4258	6463	8185	8632	8485	6480	5755	3736	1498	235	0	0	55803
MEAN	0	8	62	142	215	273	288	283	216	192	125	50	8	0	0	1860

Radiation Balance Q and Total Radiation (sun and sky) T.10 MJ/M

Bangkok

latitude 13 44 n longitude 100 34 e

December 1990

Hourly totals

Time	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	Total
date																
1	0	0	5	61	147	227	287	315	321	261	234	156	71	10	0	2095
2	0	0	5	63	153	234	294	319	323	266	247	174	84	13	0	2177
3	0	0	4	57	146	227	290	318	324	268	229	158	76	13	0	2110
4	0	0	3	37	111	158	291	307	305	256	237	163	81	13	0	1962
5	0	0	4	52	138	217	280	308	310	256	239	163	84	14	0	2065
6	0	0	4	50	142	223	285	306	303	248	230	154	75	12	0	2032
7	0	0	3	47	129	193	263	289	298	245	223	149	73	12	0	1924
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	0	0	1	38	107	189	254	263	286	249	234	173	95	17	0	1906
10	0	0	3	43	117	211	262	288	295	241	230	147	76	13	0	1926
11	0	0	3	47	137	208	265	276	270	195	160	79	40	11	0	1691
12	0	0	2	37	122	208	263	278	287	237	242	122	44	7	0	1849
13	0	0	4	53	135	214	275	292	288	265	249	126	48	1	0	1950
14	0	0	1	35	130	206	274	302	322	246	215	142	71	15	0	1959
15	0	0	2	45	137	209	272	294	290	267	200	162	77	18	0	1973
16	0	0	3	43	134	210	270	299	311	249	222	145	94	22	0	2002
17	0	0	2	33	113	202	261	282	287	242	243	200	105	10	0	1980
18	0	0	3	42	128	177	261	298	309	215	245	144	79	15	0	1916
19	0	0	2	36	124	201	269	308	317	237	193	145	41	8	0	1891
20	0	0	2	39	131	214	274	308	316	262	238	169	81	12	0	2046
21	0	0	1	23	86	162	214	196	123	101	127	137	63	11	0	1244
22	0	0	1	34	119	192	265	300	309	259	209	175	91	19	0	1973
23	0	0	2	36	126	205	267	300	310	272	223	162	87	19	0	2009
24	0	0	1	35	126	204	266	302	314	267	215	153	88	17	0	1988
25	0	0	1	33	120	201	265	296	304	277	230	162	76	14	0	1979
26	0	0	1	33	126	207	267	306	322	285	220	169	95	17	0	2048
27	0	0	2	30	124	198	271	310	328	258	180	145	98	23	0	1967
28	0	0	0	31	126	211	269	342	317	272	241	188	96	18	0	2111
29	0	0	1	41	114	182	251	290	326	298	145	167	91	22	0	1928
30	0	0	0	21	101	172	245	307	328	200	178	155	49	19	0	1775
31	0	0	0	30	112	181	214	227	214	105	109	90	48	16	0	1346
N	30*	30*	30*	30*	30*	30*	30*	30*	30*	30*	30*	30*	30*	30*	30*	
TOTAL	0	0	66	1205	3761	6043	7984	8826	8959	7299	6387	4574	2277	431	0	57812
MEAN	0	0	2	40	125	201	266	294	299	243	213	152	76	14	0	1927

REMARKS : "-" IS MISSING VALUE OR NO DATA REPORTED

"X" MEANS INCOMPLETE DATA IN THE SPECIFIED HOUR

Station: BANGKOK METROPOLIS

January 1971

Dry bulb temperature (Celsius) f

Day	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Mean
1	26.2	26.0	25.7	24.7	23.5	21.1	21.1	21.8	27.0	29.2	30.0	32.4	31.8	33.0	32.8	33.0	32.4	30.0	28.5	28.0	27.7	27.2	27.0	26.9	28.3
2	27.0	26.8	26.5	26.2	26.0	25.1	23.0	26.1	27.8	29.4	31.2	31.6	31.4	33.0	33.4	33.7	32.5	30.1	28.8	28.2	27.9	27.5	27.3	27.0	28.8
3	26.9	26.6	26.6	26.5	26.4	25.5	23.5	26.2	27.6	28.7	30.5	30.6	31.4	30.8	31.8	31.6	30.5	28.6	27.8	27.5	27.2	27.0	26.9	26.6	28.1
4	26.5	26.4	25.9	25.0	24.7	24.4	24.1	25.1	27.2	28.7	30.7	31.0	31.0	32.6	31.4	31.0	30.6	29.6	28.5	28.5	27.5	27.0	26.8	26.3	27.9
5	26.3	26.1	25.9	25.6	25.3	24.4	24.2	25.2	27.5	28.4	30.5	32.0	32.5	32.7	32.7	32.1	31.5	29.1	28.2	27.6	27.4	27.3	27.0	26.9	28.2
6	26.6	26.4	26.2	26.0	25.8	25.2	24.6	25.5	27.9	29.8	30.2	31.5	32.3	32.9	32.7	32.6	32.0	30.3	28.8	28.1	27.8	27.5	27.2	27.0	28.5
7	27.0	26.9	26.9	26.8	26.7	26.2	26.0	26.6	27.6	28.9	29.6	31.2	29.7	30.0	31.9	31.5	30.3	29.4	27.8	27.4	27.1	27.0	26.8	26.7	28.2
8	26.4	26.0	25.4	24.8	24.6	24.2	24.3	25.1	27.2	28.4	30.2	32.0	31.2	30.2	30.6	30.4	30.0	29.5	28.3	27.2	26.9	26.7	26.5	26.3	27.6
9	26.1	25.9	26.0	26.3	26.2	25.9	25.7	25.5	27.5	27.9	28.1	25.0	27.5	30.2	30.4	30.7	29.2	28.5	27.8	27.4	27.3	26.8	26.6	26.5	27.2
10	26.2	25.7	25.4	25.0	24.8	24.2	24.5	24.9	27.1	29.5	30.3	31.5	30.2	30.6	32.0	31.3	31.7	30.2	28.5	28.0	27.3	27.0	26.8	26.6	27.9
11	26.5	26.3	26.0	25.8	25.6	24.8	25.0	25.7	28.2	28.9	30.6	31.5	31.1	30.5	31.2	32.5	32.0	30.5	28.5	28.0	27.5	27.2	26.8	26.6	28.3
12	26.5	26.0	25.6	25.0	24.8	24.2	24.0	24.7	27.1	29.2	31.1	32.5	31.7	31.6	34.1	33.2	32.7	30.6	29.5	28.7	28.0	27.5	27.1	26.7	28.6
13	26.5	25.9	25.4	24.5	24.3	24.0	24.5	25.2	26.3	28.0	29.6	31.5	32.3	32.7	32.8	32.2	31.1	29.6	28.5	27.6	27.2	26.8	26.5	26.4	27.9
14	26.0	25.2	24.3	24.1	24.6	23.8	23.6	24.1	26.2	29.0	31.0	31.8	32.4	33.2	33.5	33.3	32.5	30.6	28.1	27.0	26.3	25.7	25.4	25.2	27.8
15	25.0	24.2	23.7	23.0	22.7	21.8	23.1	23.3	25.2	26.8	27.9	29.0	29.9	30.9	31.5	31.4	31.1	29.6	28.2	26.5	26.5	25.6	25.4	25.6	26.4
16	23.3	23.0	22.7	22.9	22.5	21.7	21.5	22.5	25.1	27.1	28.9	29.4	30.1	31.6	32.1	33.1	31.5	30.1	27.6	27.2	27.4	26.6	25.5	24.7	26.6
17	23.3	22.5	21.9	21.4	21.0	20.7	20.5	21.8	25.7	28.2	30.0	30.6	31.3	32.5	32.2	32.5	31.7	30.1	27.0	25.4	25.0	25.1	25.5	25.0	26.3
18	23.6	23.0	22.5	22.0	21.6	21.8	21.5	22.0	25.9	29.1	31.0	32.1	32.8	33.6	33.0	32.7	32.0	30.1	28.0	26.5	25.5	26.1	26.4	25.9	27.0
19	25.8	25.6	25.0	24.5	24.1	23.7	23.4	24.6	26.5	29.0	30.5	31.7	32.0	32.8	32.5	31.8	31.7	29.7	28.1	27.5	27.0	26.8	26.7	26.6	27.8
20	26.2	26.0	25.9	25.8	25.5	24.7	24.2	24.8	26.2	28.5	29.6	30.5	32.5	32.8	32.2	33.5	31.2	29.1	27.9	27.4	27.0	26.7	26.7	26.5	27.9
21	26.5	26.3	26.2	26.1	25.9	25.6	24.8	25.0	27.6	29.0	31.0	32.0	33.5	33.9	34.0	34.2	33.4	32.0	29.2	27.8	27.0	27.0	26.6	26.4	28.8
22	26.4	26.2	26.0	26.0	25.9	25.6	25.0	25.6	26.8	28.4	30.1	31.7	32.7	33.2	33.4	33.2	32.3	30.7	29.5	28.5	27.5	27.6	27.3	27.1	28.6
23	27.0	26.7	26.4	26.2	26.0	24.9	24.6	25.3	24.2	28.6	30.4	32.1	32.9	32.6	32.9	32.9	32.0	30.0	28.6	28.0	27.9	27.6	27.5	27.4	28.6
24	27.1	26.9	26.8	26.5	26.1	25.4	25.5	26.5	28.0	29.5	29.4	30.6	31.2	31.2	32.5	31.9	32.2	30.0	28.8	28.2	27.9	27.6	27.5	27.3	29.0
25	27.1	26.9	26.7	26.6	26.5	25.7	25.5	26.0	27.8	29.8	31.2	32.2	32.8	33.2	33.2	33.2	32.8	30.7	29.3	28.7	28.1	27.8	27.6	27.5	29.0
26	27.3	27.1	26.9	26.2	25.8	25.1	25.0	25.6	27.5	29.5	31.2	32.1	33.5	33.7	34.0	33.9	32.2	32.0	29.8	29.2	29.0	28.8	28.5	28.1	29.3
27	27.5	26.6	26.8	26.4	25.2	25.1	25.0	25.6	27.8	30.0	31.1	31.6	32.5	33.4	33.5	33.8	32.7	31.6	29.3	28.0	27.5	27.5	27.4	27.1	29.9
28	27.4	26.5	26.5	25.2	25.0	24.5	24.5	25.0	28.5	30.2	31.1	31.5	32.8	33.4	33.4	33.5	32.2	31.0	29.0	28.4	28.4	28.5	27.6	26.5	28.7
29	26.2	26.0	25.4	24.7	24.0	23.4	23.1	23.8	26.7	28.4	29.6	30.6	32.0	32.6	32.9	32.9	31.6	30.1	29.0	28.2	27.5	26.8	25.0	23.0	27.7
30	25.3	24.6	23.9	23.0	22.7	22.7	23.7	22.3	25.6	27.4	29.0	30.2	31.5	32.2	32.7	32.7	31.5	30.5	28.0	26.6	25.8	24.5	23.2	21.8	26.8
31	24.0	23.4	23.0	22.6	22.4	22.0	21.9	22.8	26.2	28.6	29.0	30.8	31.4	32.7	32.9	32.8	32.6	30.3	28.3	26.8	25.2	24.1	23.5	22.9	26.7
Mean	26.1	25.7	25.3	25.0	24.8	24.2	24.1	24.7	27.0	28.8	30.0	31.1	31.8	32.3	32.6	32.4	31.8	30.2	28.5	27.7	27.2	26.9	26.6	26.3	28.0

ภาคผนวก ข.

ตาราง แสดงอุณหภูมิกระเปาะแห้ง รายชั่วโมง ณ สถานีกรุงเทพฯ ประจำเดือน ม.ค. 2534

Station: BANGKOK METROPOLIS

February 1991

Dry bulb temperature (Celsius) F

Day	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Mean
1	22.7	22.4	21.1	22.5	22.3	22.1	21.5	22.2	23.0	26.4	28.7	30.3	32.0	32.3	32.4	32.3	31.5	30.3	27.8	25.8	24.6	24.2	23.5	22.6	26.1
2	23.6	23.6	21.5	22.5	22.4	22.0	21.1	21.7	25.6	27.0	28.5	29.8	31.1	32.2	32.4	32.4	32.2	30.6	28.2	25.6	23.4	23.3	23.4	23.2	26.0
3	23.7	23.7	23.4	22.5	23.4	23.0	21.5	21.7	28.2	29.9	29.9	30.9	32.2	33.0	33.0	33.0	32.8	31.0	28.0	26.7	23.6	24.7	24.0	23.8	26.9
4	23.7	23.7	22.4	22.1	23.2	23.6	23.6	23.7	25.2	29.0	30.1	31.8	32.2	32.8	32.9	33.0	32.6	31.4	28.8	26.5	23.5	24.8	24.2	23.0	27.1
5	23.5	23.3	22.8	21.5	20.4	19.8	22.2	23.0	25.6	28.4	30.0	31.2	32.3	33.0	33.4	33.4	33.0	31.8	28.4	27.2	23.8	24.8	24.0	23.9	26.8
6	23.5	23.8	24.1	23.0	21.8	21.1	21.0	22.5	27.1	29.5	31.2	32.8	33.6	34.1	34.7	34.4	34.2	31.8	29.0	27.1	26.0	25.2	25.2	25.0	27.6
7	24.0	23.7	23.4	23.2	23.0	22.5	22.2	23.0	25.8	28.5	31.4	32.6	34.2	34.5	33.9	33.5	32.6	30.3	28.7	28.0	27.7	27.6	27.4	27.2	27.9
8	27.0	26.8	26.6	26.3	25.8	25.4	24.6	24.6	26.5	29.2	31.0	31.6	32.2	32.5	32.5	32.5	31.8	29.4	28.1	28.0	28.0	28.0	27.8	27.5	28.5
9	27.5	27.4	27.3	27.1	26.9	26.5	26.7	27.2	28.7	30.2	31.6	33.4	33.6	34.5	34.0	33.3	32.0	29.8	28.7	28.1	27.9	27.9	28.0	28.0	29.4
10	27.6	27.6	27.4	27.2	27.0	26.7	26.4	26.6	29.0	30.5	32.5	33.0	34.0	34.2	34.3	34.0	33.6	32.4	29.4	28.2	27.8	27.7	27.4	27.3	29.7
11	27.0	26.8	26.6	26.5	26.1	25.7	25.3	26.2	28.3	30.3	32.4	32.5	32.1	32.7	32.5	32.5	32.4	30.0	28.7	28.3	27.9	27.5	27.4	27.3	28.9
12	27.2	27.0	26.8	26.7	26.4	25.9	25.4	26.2	28.7	29.5	31.3	31.2	32.4	32.3	32.2	32.7	31.6	30.2	28.8	28.0	27.8	27.6	27.4	27.1	28.8
13	27.0	26.7	26.7	26.6	26.3	26.4	26.5	27.1	28.8	30.2	31.4	31.8	32.7	32.7	33.0	32.7	31.8	30.2	28.7	28.0	27.6	27.5	27.4	27.2	29.0
14	27.1	26.9	26.7	26.5	26.1	25.2	24.5	24.8	28.8	30.7	32.4	33.6	34.7	36.2	36.6	36.2	35.2	33.0	30.2	29.9	28.6	28.0	27.8	27.2	29.9
15	26.1	25.6	24.6	23.3	22.5	21.7	21.0	22.0	25.9	29.0	31.7	32.9	33.4	33.9	36.1	35.7	35.4	33.7	28.8	26.5	25.0	24.4	23.9	23.7	28.0
16	26.0	26.0	25.5	24.5	23.8	23.4	23.2	23.8	27.9	30.1	32.7	34.3	35.1	35.4	35.0	34.9	34.5	32.6	29.6	28.0	23.7	26.1	25.6	23.9	28.3
17	25.5	25.3	25.1	25.6	25.2	24.6	23.6	25.0	27.6	30.4	31.7	32.7	33.0	33.6	34.2	34.8	33.3	31.6	29.6	28.5	28.1	27.7	27.5	27.2	28.4
18	27.0	26.8	26.6	26.2	26.4	26.4	25.4	26.0	28.4	31.0	31.7	32.1	32.8	33.2	33.0	33.2	32.4	30.3	28.7	28.1	28.0	27.9	27.5	27.2	29.0
19	27.1	27.0	26.7	26.2	25.4	25.4	25.1	25.8	28.8	31.1	31.4	32.5	33.5	32.8	33.0	33.2	32.2	30.3	29.0	28.5	28.3	28.1	27.8	27.6	29.0
20	27.5	27.2	26.8	26.5	26.3	25.4	25.2	25.5	28.5	29.9	30.8	32.5	32.7	32.9	33.3	33.0	32.5	31.2	29.7	29.0	28.9	28.9	28.5	28.3	29.2
21	27.5	25.7	25.6	25.6	25.5	25.0	25.1	26.0	24.5	25.4	26.2	27.6	29.8	30.5	28.8	27.8	27.7	26.6	26.0	25.9	26.0	25.7	25.0	24.8	26.4
22	24.9	24.5	24.6	24.3	24.0	23.3	23.0	24.5	26.8	28.8	30.0	31.5	33.5	33.1	34.0	33.8	33.3	32.3	30.3	29.5	28.0	27.5	26.4	26.3	28.2
23	26.8	26.5	26.3	25.4	25.2	24.9	24.2	24.2	25.4	27.5	28.5	29.3	31.0	30.9	31.8	31.9	31.2	30.0	28.5	27.5	26.0	26.0	25.0	24.1	27.4
24	23.3	23.4	23.4	22.4	22.2	22.2	21.8	21.8	23.0	25.5	27.0	28.5	30.2	30.5	31.5	31.2	31.1	29.5	27.7	25.7	23.0	23.8	23.7	22.6	25.7
25	22.0	21.7	21.9	20.7	20.0	19.5	19.7	22.2	24.8	27.0	28.2	30.2	31.0	31.9	32.8	33.2	32.4	30.7	28.0	26.2	23.6	23.2	25.0	24.1	26.0
26	22.8	22.6	22.4	22.1	21.0	20.5	20.2	22.7	27.5	30.2	31.5	32.5	33.5	34.6	35.1	35.8	35.3	34.2	33.7	29.0	27.4	28.0	28.3	27.7	28.3
27	27.1	26.3	25.7	24.6	24.3	23.2	23.0	23.7	28.1	29.7	31.5	32.2	33.1	32.8	33.3	33.4	32.4	30.7	29.0	28.4	28.0	28.0	27.8	27.5	28.5
28	27.4	27.2	26.9	27.0	26.8	26.5	26.4	27.4	29.6	31.5	30.7	31.6	32.5	32.5	32.4	32.0	30.4	29.8	28.6	28.3	28.0	28.0	28.0	27.9	29.1
Mean	25.5	25.3	24.9	24.6	24.2	23.8	23.5	24.4	27.1	29.1	30.6	31.7	32.7	33.1	33.3	33.1	32.2	30.9	28.8	27.7	26.9	26.6	26.3	25.9	28.0

Station: BANGKOK METROPOLIS

1 March 1991

Dry bulb temperature (Celsius) F

Day	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Mean
1	27.6	27.5	27.5	27.5	27.5	27.4	27.2	27.7	29.1	31.0	31.2	31.9	32.3	32.2	31.4	32.3	30.8	29.5	28.8	28.5	28.4	28.2	28.0	28.0	29.3
2	27.6	27.5	27.4	27.2	27.0	26.0	25.7	27.5	29.5	31.5	32.7	32.2	32.0	32.5	33.0	31.3	32.0	30.3	29.0	28.4	27.8	27.5	27.6	27.7	29.3
3	27.0	26.7	26.4	26.0	25.8	24.7	25.1	26.3	29.6	29.7	32.0	32.0	31.8	31.2	31.2	31.8	33.1	31.5	29.1	28.5	28.2	28.0	27.9	27.8	29.2
4	27.7	27.5	27.4	27.2	27.0	26.7	27.0	24.2	30.0	31.3	32.5	32.8	33.5	34.0	34.0	33.7	33.1	31.4	29.5	28.9	28.7	28.7	28.6	28.4	29.9
5	28.1	27.8	27.7	27.6	27.5	27.5	27.5	28.5	29.9	31.5	31.6	32.9	33.1	33.0	33.0	33.1	32.3	30.3	29.1	28.5	28.2	28.1	28.0	28.0	29.7
6	27.7	27.6	27.5	27.3	27.0	27.0	27.0	28.2	29.6	30.7	32.2	32.0	32.6	33.0	33.2	32.8	32.3	30.5	29.0	28.4	28.0	27.8	27.4	27.4	29.4
7	27.3	27.3	27.1	27.0	27.0	26.8	26.7	27.3	30.3	31.1	31.6	32.6	32.2	32.5	32.8	32.6	31.8	29.6	28.5	28.2	28.1	27.8	27.6	27.4	29.2
8	27.2	27.0	26.8	26.8	26.7	26.5	25.6	27.2	30.0	31.2	32.2	32.6	33.6	33.4	33.6	33.5	32.4	30.5	29.0	28.3	27.8	27.6	27.5	27.1	29.3
9	27.1	26.9	26.8	26.6	26.5	26.4	26.3	28.0	29.8	31.0	31.3	32.4	33.4	33.0	33.4	32.6	31.6	29.9	29.0	28.4	27.9	27.7	27.5	27.2	29.2
10	27.4	27.2	27.0	26.7	26.6	26.4	26.7	28.0	29.1	30.6	32.0	32.4	33.4	33.0	33.2	33.0	32.0	30.7	28.8	28.5	28.4	28.4	28.2	28.0	29.4
11	27.9	27.8	27.7	27.6	27.6	27.4	27.8	28.5	30.2	31.2	31.6	32.6	32.6	32.5	32.4	31.4	30.7	29.5	29.0	28.5	28.1	28.0	27.9	27.7	29.4
12	27.6	27.4	27.3	27.0	27.0	27.0	27.4	28.4	29.4	31.5	32.4	32.9	33.1	33.1	33.1	32.8	31.9	30.1	29.1	28.9	28.6	28.5	28.2	28.0	29.6
13	28.0	27.9	27.8	27.7	27.7	27.4	27.7	28.6	30.5	31.5	32.6	32.8	33.0	32.8	33.0	32.3	31.5	30.2	29.2	28.8	28.6	28.5	28.4	28.0	29.8
14	28.1	28.0	28.0	28.0	27.9	27.9	27.9	28.7	30.0	31.4	32.5	33.5	33.3	33.0	29.3	31.7	30.6	30.4	29.4	28.8	28.5	28.5	28.4	28.0	29.5
15	27.9	27.7	27.5	27.4	27.0	26.5	26.0	26.3	28.7	30.5	32.5	33.1	34.0	34.1	33.8	33.1	32.5	31.4	30.7	30.1	29.6	29.1	28.8	28.6	29.9
16	28.4	28.2	28.0	28.0	27.7	27.4	26.6	28.2	30.2	32.1	34.0	34.5	35.6	36.6	37.4	37.0	36.5	35.2	32.5	31.4	30.8	29.7	28.2	27.5	31.3
17	28.8	28.6	28.5	28.0	28.4	28.0	25.8	28.0	30.3	31.9	32.7	33.4	35.1	35.3	36.4	36.9	35.6	34.8	33.5	32.0	30.4	29.7	28.5	28.2	30.8
18	28.6	28.0	27.6	27.1	26.1	26.2	25.9	26.8	28.7	31.1	35.2	34.1	35.1	34.5	35.2	34.0	33.7	30.3	29.4	29.2	28.8	28.4	28.7	28.6	30.0
19	28.5	28.3	28.1	27.9	28.0	27.9	27.8	28.7	29.6	31.5	31.6	32.1	33.5	33.0	33.5	31.6	31.0	30.1	28.9	28.7	28.7	28.5	28.5	28.5	29.8
20	28.5	28.4	28.2	28.0	27.4	27.3	27.3	28.0	30.6	31.2	33.0	33.0	33.0	32.9	32.6	32.5	31.8	30.6	29.2	28.7	28.5	28.4	28.2	28.0	29.8
21	28.0	27.8	27.7	27.5	27.2	26.8	27.0	29.0	30.7	31.7	32.4	32.4	32.6	33.4	33.8	34.0	32.8	31.0	29.6	29.0	28.6	28.3	28.1	28.0	29.9
22	28.0	27.8	27.6	27.6	27.5	27.7	27.8	28.6	30.3	32.0	32.7	33.0	32.4	33.5	32.8	32.5	30.7	29.5	29.0	28.7	28.5	28.4	28.4	28.4	29.7
23	28.4	28.3	28.2	28.1	28.0	28.0	28.0	29.5	31.4	31.5	33.0	33.4	33.5	34.5	34.2	34.4	33.1	31.5	29.8	29.3	28.8	28.6	28.5	28.4	30.4
24	28.4	28.3	28.2	28.2	28.1	28.2	28.5	29.0	30.8	31.0	31.4	33.0	33.2	33.6	34.5	34.1	33.7	31.1	29.8	29.2	28.9	28.4	28.4	28.4	30.3
25	28.0	27.8	27.6	27.4	27.3	27.5	27.6	29.1	30.8	31.8	33.4	33.5	33.6	34.0	33.7	33.7	32.6	30.5	29.6	29.0	28.8	28.5	28.3	28.0	30.1
26	27.5	27.5	27.4	27.3	27.1	26.9	26.5	28.9	31.0	32.2	32.6	32.7	33.4	34.2	33.7	33.6	32.5	30.4	29.1	29.2	28.8	28.6	28.4	28.3	29.9
27	28.0	27.8	27.6	27.5	27.5	27.3	27.6	28.4	30.0	31.6	31.6	32.6	33.5	34.2	33.8	32.9	32.0	30.5	29.5	29.0	28.5	28.2	28.2	28.2	29.8
28	28.7	28.0	28.0	27.9	27.9	28.0	28.4	29.0	30.0	31.0	31.6	32.2	32.9	33.0	33.8	32.4	31.6	30.5	29.1	29.0	28.6	28.6	28.6	28.6	29.9
29	28.5	28.4	28.4	28.3	28.4	28.1	28.1	29.2	31.2	32.8	33.0	34.0	34.2	34.7	34.2	34.2	33.0	31.1	30.0	29.4	29.1	29.0	28.9	28.8	30.6
30	28.6	28.6	28.5	28.5	28.5	28.3	28.5	29.6	30.7	31.7	32.1	32.8	33.3	34.1	34.1	33.5	31.8	30.4	29.1	29.1	29.1	29.1	29.0	29.0	30.3
31	28.8	28.7	28.5	28.5	28.5	28.4	25.0	25.7	28.5	29.4	31.4	32.3	33.7	33.8	33.3	33.8	32.8	31.0	29.6	29.0	28.7	28.5	28.5	28.0	29.7
K-M	27.9	27.8	27.6	27.5	27.3	27.1	27.0	28.2	30.0	31.3	32.3	32.9	33.4	33.5	33.6	33.3	32.4	30.8	29.6	29.0	28.7	28.5	28.3	28.1	29.8

Station: BANGKOK METROFOLS

April 1991

Dry bulb temperature (Celsius) F

Day	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Mean
1	27.0	27.2	26.3	25.0	24.2	23.2	23.2	23.4	23.9	24.8	25.7	27.0	28.5	30.3	30.2	29.7	29.2	28.2	27.4	26.6	26.5	26.0	25.6	25.3	26.4
2	25.1	24.7	24.2	23.9	23.7	23.4	23.6	24.5	25.9	29.3	30.2	31.5	32.4	33.4	33.9	33.6	32.4	31.0	29.0	28.1	27.4	26.9	26.3	25.4	27.9
3	24.7	24.6	24.5	24.5	24.5	24.5	24.7	25.8	28.3	31.2	33.0	34.0	35.1	35.8	36.1	35.5	34.7	33.4	31.6	30.6	29.7	29.0	28.8	27.2	29.4
4	25.5	26.0	25.2	24.6	24.3	23.8	24.2	24.2	24.9	31.6	34.2	35.2	35.0	35.5	35.6	34.4	33.6	31.4	30.0	29.5	29.2	29.0	28.8	27.7	29.9
5	24.4	24.3	24.0	24.0	24.2	24.2	24.3	24.2	29.6	32.0	33.1	33.1	34.0	34.1	34.8	34.3	33.8	31.5	29.8	29.2	29.1	29.0	29.0	28.9	30.5
6	24.6	24.6	24.5	24.5	24.4	24.1	24.4	24.4	30.4	31.7	32.7	32.9	33.5	33.6	34.0	33.8	32.8	31.0	29.8	29.4	29.0	29.0	28.9	28.9	30.4
7	24.8	24.7	24.5	24.4	24.3	24.2	24.6	24.6	30.0	31.0	31.8	32.8	33.0	34.5	34.9	35.1	33.8	32.8	30.4	29.6	29.3	29.0	28.8	28.7	30.8
8	24.5	24.5	24.5	24.5	24.5	24.5	24.7	24.6	31.1	31.9	33.3	34.0	34.2	34.5	34.9	34.4	33.3	31.5	30.0	29.6	29.3	29.2	29.1	29.0	30.8
9	29.0	28.8	28.7	28.5	28.4	28.4	28.5	29.6	31.5	32.3	33.1	34.1	34.0	34.4	34.4	34.1	33.3	31.0	30.1	29.7	29.6	29.4	29.1	29.1	30.8
10	29.0	29.0	28.9	28.9	28.9	28.9	29.0	30.0	30.7	31.4	32.2	34.0	34.2	35.0	35.4	35.3	34.5	33.6	31.0	30.2	29.8	29.5	29.3	29.2	31.2
11	29.1	29.0	28.8	28.6	28.5	28.6	29.2	30.5	32.2	32.8	34.4	34.5	34.2	35.5	35.8	35.2	33.8	31.2	30.4	30.0	29.8	29.5	29.6	29.5	31.3
12	29.3	29.2	29.2	29.1	29.0	28.9	29.4	30.5	31.0	32.2	33.2	33.0	34.4	34.4	34.4	34.6	34.5	31.8	30.4	30.0	29.7	29.4	29.3	29.2	31.1
13	29.1	29.0	29.2	29.3	29.2	29.1	29.4	30.1	31.6	32.2	33.1	33.5	34.5	34.6	34.2	34.5	34.2	33.2	30.6	30.3	29.9	29.6	29.4	29.2	31.2
14	29.4	29.3	29.2	29.2	29.2	29.2	29.4	30.1	31.3	31.7	33.3	33.7	34.8	34.6	34.8	34.2	32.8	30.8	30.0	29.9	29.7	29.5	29.4	29.3	31.0
15	29.1	29.0	28.8	28.7	28.6	28.6	28.9	30.4	31.5	33.0	33.5	33.2	33.5	34.1	34.0	33.7	32.8	30.6	30.3	29.8	29.7	29.6	29.5	29.4	30.8
16	29.1	29.0	29.0	28.8	28.8	28.7	29.5	30.5	32.0	33.5	33.5	33.5	34.0	34.3	34.7	34.4	33.2	31.2	31.0	30.2	29.8	29.6	29.1	29.2	31.1
17	29.2	29.0	29.0	28.8	29.0	29.0	29.2	30.1	31.7	32.6	33.2	33.6	34.1	34.5	34.8	34.5	33.7	32.5	30.9	30.4	30.0	29.9	29.6	29.5	31.2
18	29.4	29.4	29.4	29.4	29.3	29.1	29.3	30.4	32.0	32.5	33.3	34.1	34.6	35.4	35.6	34.4	33.0	31.4	30.5	30.0	29.8	29.6	29.5	29.4	31.3
19	29.8	29.1	29.0	29.0	29.0	29.0	28.9	29.7	32.0	33.3	33.5	34.1	34.7	34.8	34.7	34.2	33.6	31.6	30.5	30.0	29.7	29.6	29.4	29.3	31.2
20	29.0	28.9	28.8	28.7	28.5	28.4	28.6	30.1	31.0	32.5	34.0	35.0	35.1	35.2	35.1	35.1	34.2	33.0	31.0	30.3	30.0	29.7	29.5	29.2	31.2
21	29.1	29.0	28.6	28.0	27.5	26.6	27.0	28.1	30.5	31.2	33.6	33.6	33.6	35.0	33.1	32.2	27.0	27.1	27.5	28.3	28.6	29.0	29.1	29.2	29.6
22	29.4	29.1	29.0	29.0	28.9	28.0	29.0	29.8	31.6	32.3	34.0	35.7	37.5	39.2	30.2	28.6	28.5	28.2	28.0	27.0	27.0	26.8	26.2	25.6	26.9
23	29.3	29.0	28.7	28.5	28.5	28.3	28.9	29.5	32.2	33.5	34.1	34.1	34.5	35.0	36.2	35.2	33.4	28.7	24.4	23.2	24.0	26.0	23.2	23.3	28.1
24	29.7	29.9	29.2	28.4	28.4	28.4	28.9	29.0	32.5	32.9	34.2	34.5	32.6	33.5	32.9	33.5	33.8	31.7	31.2	30.3	29.7	29.4	29.4	29.4	28.9
25	29.2	29.0	28.8	28.6	28.5	28.0	28.2	27.1	28.2	29.1	29.5	29.1	29.4	29.0	27.9	28.1	28.0	28.0	27.4	27.0	26.6	26.5	26.5	26.1	27.8
26	26.0	26.0	25.8	25.8	25.7	25.3	25.0	26.4	29.3	30.0	31.0	32.0	33.3	33.5	33.7	33.1	33.5	30.8	29.4	29.4	29.1	29.1	29.4	29.4	29.2
27	28.9	28.7	28.0	27.4	27.2	26.9	27.5	29.8	31.2	33.0	34.0	34.5	34.0	34.2	33.7	33.3	32.3	31.6	30.4	29.8	29.4	29.4	29.2	29.2	30.6
28	28.8	28.6	28.4	28.1	27.7	27.2	28.1	30.5	31.6	32.7	33.5	33.7	34.2	34.0	34.2	34.5	33.8	33.0	31.0	30.0	29.8	29.3	29.3	29.2	30.9
29	29.2	29.0	28.8	28.8	28.8	28.8	29.1	30.6	31.8	33.0	33.5	33.8	34.5	34.6	34.8	35.0	34.1	33.2	31.0	30.4	30.0	30.0	30.0	29.9	31.4
30	30.0	29.8	29.5	29.3	29.1	28.7	28.5	30.8	32.6	33.8	34.7	34.7	36.2	36.3	36.3	35.7	34.9	33.5	31.5	31.0	31.0	30.6	30.3	30.0	32.1
Mean	28.3	28.1	27.9	27.7	27.4	27.2	27.5	28.8	30.2	31.4	32.4	33.0	33.6	34.1	34.2	33.7	32.8	31.1	29.9	29.4	29.1	28.9	28.7	28.5	30.2

Suwan BANGKOK METROPOLIS

May 1991

Dry bulb temperature (Celsius)

Day	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1200	1300	1400	1500	1600	1700	1800	1900	2100	2300	2400	Mean	
1	30.1	30.0	29.7	29.3	29.0	29.0	28.9	30.3	32.0	33.8	35.0	35.6	36.7	37.2	37.1	35.6	33.7	31.1	30.9	30.7	30.4	30.3	32.2
2	30.1	29.9	29.7	29.5	29.3	29.3	29.2	30.2	31.6	33.3	34.5	35.0	36.7	37.2	36.8	35.7	33.3	32.1	31.1	31.1	30.7	30.5	32.3
3	30.0	29.8	29.6	29.5	29.3	29.2	29.2	29.6	31.5	32.8	34.0	34.4	34.5	35.4	34.1	33.5	32.5	31.5	31.0	30.6	30.3	30.0	31.5
4	29.7	29.5	29.4	29.3	29.2	29.1	29.1	30.0	31.5	33.0	33.7	34.0	34.0	33.7	33.1	32.6	31.4	30.7	30.4	30.3	30.2	29.7	31.2
5	29.5	29.3	29.5	29.4	29.3	29.1	29.1	30.0	32.0	32.5	33.6	34.5	35.7	33.5	33.3	31.0	29.0	28.5	28.6	28.6	28.2	28.5	30.5
6	26.4	26.5	26.7	26.6	26.5	25.8	26.2	27.2	29.3	32.1	34.0	34.5	34.2	35.4	33.8	32.2	31.1	30.1	30.0	29.8	29.7	29.2	30.1
7	28.7	28.6	28.4	28.2	27.5	27.3	27.7	28.6	31.0	34.1	34.7	34.7	35.7	35.4	32.2	32.2	31.6	30.8	30.4	30.0	29.8	29.8	30.9
8	29.6	29.5	29.4	29.2	29.0	28.8	29.4	30.1	32.1	34.4	35.1	35.1	36.1	36.0	35.7	34.9	33.0	31.4	30.7	30.5	30.2	30.0	31.9
9	29.6	29.5	29.4	29.2	29.0	28.8	29.3	29.8	32.0	32.3	33.0	33.6	34.7	35.2	33.1	31.2	30.6	30.1	30.1	29.9	29.4	28.7	30.4
10	28.0	27.6	27.2	27.0	26.8	26.6	27.6	29.1	29.5	32.0	33.5	35.1	36.0	27.4	26.6	28.3	28.8	28.5	28.4	28.3	28.0	27.4	28.9
11	28.0	27.3	26.8	26.5	26.4	26.3	26.7	28.8	31.0	32.5	33.5	33.5	34.1	32.1	32.2	32.9	31.7	30.9	29.2	28.6	28.3	27.6	30.0
12	29.1	29.0	28.8	28.7	28.6	28.4	27.4	28.8	31.1	32.8	33.1	34.2	35.0	36.0	35.7	34.9	33.0	31.8	31.0	30.6	30.8	29.8	31.5
13	28.0	28.0	27.8	27.8	27.7	27.5	26.7	27.8	30.5	31.8	33.7	35.2	35.7	35.5	35.2	34.7	32.8	31.4	30.9	30.5	30.5	30.1	31.0
14	28.6	27.9	27.7	27.5	26.9	26.4	27.2	29.1	31.5	32.0	33.1	34.8	35.7	36.7	34.0	33.5	33.0	32.4	30.6	30.4	30.4	30.4	30.9
15	29.8	29.2	28.8	28.6	28.5	28.5	27.8	29.3	31.7	33.0	33.9	35.2	35.0	35.4	35.5	33.9	32.8	31.5	31.1	30.8	30.6	30.5	31.5
16	30.1	29.3	28.5	27.9	27.6	27.5	28.1	30.2	32.1	29.9	28.9	28.9	34.1	35.0	35.1	33.4	32.2	31.5	29.0	28.2	28.3	28.2	30.5
17	28.0	28.0	27.8	27.6	27.0	26.4	27.0	28.9	31.1	33.4	34.5	34.0	28.1	27.2	29.2	34.1	32.9	31.7	30.6	30.0	29.8	29.8	30.0
18	29.8	29.7	29.6	29.5	29.0	27.6	25.2	24.2	23.9	24.5	26.3	30.5	33.2	34.8	33.4	34.0	32.1	31.0	30.4	30.2	30.1	30.0	29.8
19	30.0	29.8	29.6	29.5	29.3	29.0	29.6	30.1	32.6	33.5	33.8	34.6	34.8	35.0	34.0	33.5	32.5	31.5	31.0	30.5	30.4	30.1	31.6
20	29.9	29.8	29.6	29.5	29.4	29.1	29.5	31.2	31.6	33.5	33.9	35.0	35.2	32.8	30.9	30.2	30.2	30.2	30.2	30.2	29.5	29.0	31.1
21	28.5	28.0	27.6	27.3	26.9	26.6	25.4	26.0	27.5	28.4	31.7	33.2	33.8	32.2	31.3	31.0	30.8	30.4	30.1	29.8	29.8	29.2	28.8
22	24.6	24.8	24.8	24.8	25.0	25.0	25.3	26.4	26.6	28.5	29.9	30.6	32.0	33.6	33.9	33.5	31.2	30.3	30.0	29.8	29.5	29.0	28.8
23	28.8	28.6	28.4	28.2	28.1	28.0	28.2	30.4	32.0	31.0	31.0	31.6	31.7	31.7	31.1	31.0	30.8	29.9	29.5	29.2	29.1	29.0	29.1
24	29.0	28.5	28.0	28.1	28.4	28.7	28.6	28.0	29.5	27.5	24.0	24.4	23.3	27.8	30.5	29.2	30.5	29.9	29.3	29.3	29.0	28.9	27.5
25	27.9	27.7	27.5	27.7	27.8	28.4	24.4	25.0	25.9	27.5	29.0	30.0	32.7	33.5	33.1	32.8	31.5	30.4	29.8	29.5	29.0	28.8	28.4
26	28.8	28.6	28.3	28.0	27.7	27.2	27.5	29.0	30.5	31.3	32.8	33.9	34.1	34.1	31.8	30.5	30.1	29.0	28.8	28.5	28.7	28.6	30.1
27	27.8	27.0	26.5	26.3	26.2	26.6	26.4	27.4	29.1	30.7	31.8	31.8	31.6	30.0	29.1	28.2	28.3	28.2	27.6	27.4	26.6	26.4	28.1
28	26.0	25.8	25.7	25.9	25.8	26.0	25.7	26.6	24.1	29.3	30.3	30.5	32.4	31.0	30.4	30.0	29.2	29.1	28.8	28.5	27.5	26.5	28.5
29	26.5	26.1	26.0	25.7	25.5	25.6	26.1	26.8	27.8	30.3	32.0	32.2	31.5	29.0	28.1	26.8	27.4	27.4	27.2	27.0	27.8	28.0	27.6
30	27.5	27.0	26.6	26.2	25.5	25.8	24.0	25.1	28.0	29.8	30.3	31.2	31.0	27.0	27.6	27.8	28.0	27.7	27.2	27.0	26.8	26.4	27.5
31	28.8	28.6	28.5	28.3	28.0	28.2	26.0	27.2	29.0	30.5	31.8	32.6	32.6	32.1	30.1	30.0	31.2	29.8	28.4	28.2	28.4	28.8	28.8
Mean	28.5	28.4	27.9	27.5	27.4	27.1	27.3	28.4	30.1	31.3	32.3	33.2	33.7	33.5	33.0	32.0	31.2	30.3	29.8	29.5	29.4	28.9	30.1

Station: BANGKOK METROPOLIS

Jan. 1991

Dry bulb temperature (Celsius) F

Day	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Mean
1	28.7	28.6	28.5	28.3	28.1	24.5	23.5	26.5	27.8	30.0	31.0	32.1	32.0	31.5	31.0	30.7	30.4	30.3	29.5	29.1	28.7	28.5	28.5	28.5	29.1
2	28.6	28.4	28.2	27.9	27.6	27.4	26.7	26.5	27.3	28.7	28.2	28.5	28.5	29.7	29.6	30.2	29.8	29.3	28.5	28.1	27.8	27.1	26.6	26.8	28.2
3	27.0	26.9	26.8	26.7	26.6	26.7	27.6	28.6	29.7	31.2	31.9	32.6	33.2	33.5	33.6	33.4	32.0	31.1	30.3	29.9	29.5	29.5	29.5	29.4	29.9
4	29.1	29.0	28.8	28.7	28.5	28.0	28.0	28.5	29.2	29.5	30.2	32.5	33.7	34.0	34.1	33.7	32.8	31.4	30.5	29.5	28.8	28.5	28.7	28.5	29.9
5	28.4	28.2	28.1	28.0	27.8	27.5	28.2	29.0	30.0	31.6	32.4	34.0	34.0	30.2	30.4	31.2	30.6	30.0	29.5	29.1	28.4	27.9	27.5	27.3	29.1
6	27.0	26.9	26.7	26.5	26.3	26.1	27.1	27.5	29.0	29.7	30.5	30.0	29.0	31.2	30.5	30.0	30.0	29.8	29.6	29.4	28.4	28.2	28.2	28.2	28.6
7	28.0	27.9	27.6	27.4	26.1	25.5	25.4	26.0	26.5	26.9	27.4	28.6	29.9	30.7	30.4	30.2	30.0	29.7	29.2	28.9	29.0	29.1	28.5	28.0	28.0
8	26.4	26.4	26.4	26.3	26.2	26.0	26.3	27.2	28.6	29.7	30.4	32.0	32.7	31.7	31.2	31.0	30.4	30.4	30.0	29.9	29.6	28.8	28.5	28.3	29.0
9	27.5	27.0	26.7	26.5	26.3	26.6	27.0	29.3	31.2	31.8	32.2	32.0	32.0	31.8	31.6	32.0	31.3	30.5	29.2	29.0	28.3	27.8	27.5	27.0	28.9
10	26.6	26.6	26.6	26.6	26.4	26.0	26.0	26.2	26.9	27.5	27.2	29.1	29.8	31.0	31.1	30.7	27.9	28.8	28.0	27.7	27.6	27.6	27.5	27.3	27.8
11	27.3	27.0	26.2	26.0	26.0	25.8	26.0	28.0	29.1	30.8	31.4	31.1	31.5	31.8	27.0	25.4	26.8	28.0	27.8	27.6	27.5	27.3	27.1	26.6	27.9
12	26.5	26.0	25.8	25.7	25.6	26.0	27.0	28.2	29.5	29.6	30.4	31.1	30.6	30.3	30.6	30.5	30.1	29.9	29.5	28.8	28.8	28.7	28.5	28.5	28.6
13	28.4	28.0	27.8	27.6	27.5	27.4	27.5	28.2	29.2	30.5	31.8	32.7	33.0	32.7	32.4	31.8	30.5	30.3	29.9	29.5	29.5	28.1	28.1	28.0	29.6
14	28.0	27.8	27.7	27.6	27.5	27.3	27.7	28.5	30.2	31.7	32.4	32.8	32.2	31.7	31.8	31.0	31.3	32.2	31.2	30.5	30.2	30.0	29.8	29.3	30.4
15	28.9	28.6	28.4	28.0	27.0	26.7	28.1	30.0	31.1	32.1	33.4	34.2	33.4	33.3	30.5	26.5	27.5	28.3	28.5	28.5	28.4	28.3	28.0	29.3	29.4
16	27.1	26.8	26.5	26.3	26.0	25.8	26.7	28.1	29.5	31.0	31.9	32.6	32.6	31.7	32.2	31.9	31.8	31.5	30.0	29.5	29.0	28.5	28.0	28.9	29.2
17	27.0	26.8	26.8	26.6	26.5	26.6	26.0	28.2	29.1	30.2	30.9	31.8	31.5	31.8	31.4	31.2	30.9	30.3	29.6	29.3	28.6	28.2	28.2	28.1	29.0
18	27.5	27.0	26.6	26.2	25.8	25.4	25.8	26.3	29.4	30.7	31.2	30.4	30.7	31.2	31.0	30.8	31.0	30.5	29.9	29.0	28.4	28.5	28.2	27.7	28.7
19	28.2	28.3	28.1	28.2	28.0	28.7	28.9	29.3	28.8	28.1	29.0	30.7	31.0	30.7	31.5	31.4	30.1	30.0	29.4	29.1	29.1	28.4	28.3	28.6	29.0
20	28.7	28.4	28.2	28.0	27.8	27.8	28.5	29.6	30.3	31.5	31.6	32.0	32.5	32.0	32.3	31.9	31.6	31.0	30.1	29.7	29.6	29.5	29.5	29.2	30.1
21	29.0	28.6	28.4	28.2	28.0	27.8	28.6	30.1	31.6	32.0	32.2	32.5	33.0	32.6	30.1	27.8	27.0	26.7	27.2	27.0	26.9	27.5	27.6	27.7	29.1
22	27.6	27.2	26.9	26.6	26.4	26.3	27.2	29.3	30.3	30.7	31.0	31.4	31.6	32.3	31.8	31.5	31.4	31.2	30.0	29.8	29.4	29.5	29.0	28.4	29.4
23	28.0	27.8	27.7	27.5	27.2	27.1	27.8	28.8	29.2	31.0	31.2	30.2	29.8	30.6	30.5	30.8	30.7	30.1	29.5	29.2	28.7	28.0	27.5	27.2	29.0
24	27.4	26.8	26.5	26.2	26.0	25.9	26.4	26.6	27.1	28.5	30.0	30.8	31.0	31.1	31.0	31.3	30.9	30.4	29.7	29.5	29.4	29.3	29.1	29.0	28.7
25	28.8	28.5	28.3	28.1	27.9	27.8	28.3	29.2	30.3	31.2	32.0	32.2	32.4	33.0	32.5	32.0	30.5	30.0	29.5	29.4	29.4	29.6	29.5	29.3	30.0
26	29.1	28.9	28.7	28.5	28.3	28.1	28.8	29.5	30.1	31.0	31.8	32.4	33.0	32.2	32.2	32.1	31.3	30.1	29.6	29.4	29.4	29.4	29.4	29.4	30.0
27	23.7	24.0	24.4	24.3	24.2	24.2	24.7	26.5	27.1	28.9	28.8	29.7	32.0	31.8	32.8	32.7	32.0	30.5	29.8	29.4	29.2	28.7	26.9	27.2	27.9
28	27.1	27.2	27.0	26.8	26.6	26.4	26.8	28.8	30.2	31.0	31.6	31.4	32.1	32.6	33.6	33.2	31.7	30.5	30.0	29.5	29.1	27.5	27.2	26.5	29.4
29	26.2	26.4	26.5	26.7	26.6	26.5	27.3	28.4	30.2	31.1	32.3	32.2	33.0	33.3	33.6	34.1	33.4	32.5	30.4	30.4	29.4	28.8	28.5	28.2	29.9
30	28.0	27.8	27.5	27.1	26.8	27.2	27.5	29.1	30.4	32.0	33.0	34.0	34.6	35.0	35.7	35.3	34.5	34.0	31.4	30.2	29.8	29.2	28.8	28.4	30.7
Mean	27.7	27.5	27.3	27.1	26.9	26.6	27.1	28.1	29.2	30.3	31.0	31.4	31.6	31.9	31.7	31.3	30.8	30.3	29.6	29.2	28.9	28.4	28.2	27.8	29.2

Station: BANGKOK METROF JUS

July 1991

Dry bulb temperature (Celsius) F

Day	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Mean
1	28.4	28.4	28.3	28.0	27.8	27.6	27.4	28.6	30.1	31.1	31.3	33.2	34.5	33.7	33.6	33.7	33.4	33.6	32.6	31.0	30.4	30.2	30.2	30.0	30.8
2	29.2	28.8	28.6	28.5	28.0	27.5	27.7	26.4	26.5	27.4	28.5	29.2	31.8	30.8	33.0	30.8	30.1	29.4	26.5	27.0	27.0	27.0	27.0	27.2	28.6
3	27.3	27.2	27.0	26.8	26.5	26.5	27.0	28.5	30.0	30.5	32.0	32.1	31.5	32.4	32.2	31.6	30.5	28.2	25.9	26.5	26.5	28.3	28.2	28.2	27.4
4	25.0	24.9	24.8	24.6	24.5	24.5	25.2	25.9	26.3	27.3	28.4	28.8	29.3	29.6	30.0	30.1	29.7	29.2	28.6	28.4	28.2	28.3	28.2	26.6	27.4
5	26.5	26.3	26.1	26.0	25.9	25.8	26.0	27.3	29.5	30.8	31.5	31.7	32.0	32.1	32.8	33.2	32.8	31.5	31.1	30.7	30.4	29.8	29.4	29.0	29.5
6	28.7	28.0	27.6	27.4	27.2	26.6	27.0	28.7	30.0	30.1	31.8	32.0	33.5	33.8	33.5	33.1	32.6	31.5	30.0	29.6	29.3	29.1	29.1	28.9	30.0
7	28.7	28.5	28.2	27.9	27.2	27.1	27.2	28.5	29.7	30.9	31.6	32.0	32.7	31.9	31.7	31.4	31.4	30.5	29.5	29.1	29.0	29.0	28.8	28.8	29.7
8	28.5	28.2	27.9	27.5	27.0	26.5	27.0	28.1	30.0	31.2	32.2	33.0	33.4	34.5	34.2	33.1	34.4	33.3	30.3	29.7	29.3	29.4	29.2	28.8	30.3
9	28.6	28.0	28.2	28.6	28.7	28.0	28.0	28.6	26.0	28.1	28.6	30.2	31.2	31.2	32.5	32.2	31.7	31.0	29.8	29.4	28.4	28.6	28.5	28.3	28.0
10	28.2	27.5	27.4	27.3	27.2	27.0	27.0	27.8	29.3	30.9	31.9	33.0	34.4	35.4	34.7	33.3	32.5	31.2	30.8	30.0	29.7	29.5	29.3	29.2	30.2
11	29.2	28.0	27.7	27.6	27.5	27.3	27.4	28.0	28.8	30.3	31.6	32.4	34.0	34.5	33.6	32.8	32.0	31.1	30.8	29.0	28.0	26.6	27.1	26.5	29.7
12	26.0	26.0	26.0	26.1	26.0	25.8	26.5	27.0	29.0	30.3	31.2	32.5	32.7	33.6	34.0	32.7	32.0	31.3	30.7	30.6	30.4	30.2	30.2	28.5	29.5
13	27.9	27.5	27.3	27.0	26.5	26.5	26.6	28.1	29.5	30.5	31.2	32.0	33.1	33.3	33.5	33.5	33.0	31.4	30.5	30.0	29.6	29.0	28.5	28.2	29.8
14	27.8	27.6	27.4	27.2	27.0	27.0	27.4	28.0	30.3	30.4	30.4	29.9	30.4	30.4	30.3	30.0	29.8	29.3	29.1	29.2	29.0	28.9	28.5	28.4	28.9
15	28.2	28.2	28.2	28.2	28.2	28.0	28.0	28.6	29.1	30.0	30.2	30.4	30.6	30.3	30.6	30.8	30.5	29.2	26.5	26.5	26.7	26.8	26.8	27.0	28.7
16	26.9	26.9	26.8	26.8	26.8	26.0	26.4	27.0	27.5	28.2	29.0	30.0	31.0	31.3	31.2	30.3	29.6	29.4	29.0	28.5	28.2	28.2	28.2	28.3	27.9
17	24.5	24.6	24.7	24.8	24.7	24.4	25.0	26.4	27.8	28.8	29.7	30.4	31.5	32.1	32.2	31.4	30.5	30.0	29.0	28.6	28.5	28.4	28.5	28.5	28.1
18	28.2	28.0	27.8	27.8	27.5	26.8	27.0	28.3	29.3	31.0	31.5	32.4	33.5	33.3	34.0	34.4	34.5	33.4	31.7	30.4	29.1	29.3	29.1	29.2	30.3
19	29.0	29.0	29.1	29.2	29.1	29.0	27.7	29.8	30.2	31.3	32.5	32.7	33.4	34.4	34.7	35.0	34.5	31.6	30.5	30.6	30.0	29.2	28.8	28.5	30.8
20	28.2	27.9	27.7	27.5	27.3	27.4	27.6	28.2	29.0	30.1	31.2	31.4	32.1	32.2	32.6	32.5	32.1	32.0	31.5	31.0	30.0	29.5	28.6	28.3	29.8
21	28.1	27.9	27.8	27.6	27.5	27.4	27.5	28.0	28.5	30.3	30.6	31.5	31.7	32.1	32.2	31.6	31.4	31.5	31.0	30.3	30.1	29.5	29.1	28.8	29.7
22	28.3	27.8	27.5	27.2	27.0	26.8	27.5	28.5	29.5	30.8	31.8	32.5	32.3	33.0	33.3	33.0	33.0	32.7	26.1	26.2	28.0	28.2	27.8	27.6	28.7
23	27.4	27.2	27.0	26.8	26.7	26.5	26.6	27.2	28.7	29.5	30.6	31.0	32.0	32.9	33.5	32.5	31.8	30.4	29.8	29.6	29.0	26.4	26.5	26.5	29.0
24	26.7	26.6	26.5	26.4	26.4	26.3	26.7	27.5	28.4	29.7	30.5	31.5	32.2	32.5	32.1	31.1	25.6	26.6	25.7	25.5	25.7	26.0	26.4	26.7	27.9
25	26.9	27.1	27.0	27.0	26.9	26.5	25.8	26.0	26.9	27.1	28.0	28.5	29.7	30.5	30.2	30.1	29.9	29.5	29.2	28.9	28.8	28.8	28.0	27.8	28.1
26	27.7	27.7	27.7	27.7	27.7	27.5	26.8	27.5	28.5	29.8	29.2	29.0	29.6	30.4	30.4	29.9	29.5	29.0	28.5	28.4	28.0	27.6	27.6	27.6	28.5
27	27.4	27.2	27.2	27.1	27.4	27.0	27.2	27.3	27.4	28.0	28.7	29.5	30.6	31.0	31.3	30.3	28.8	28.6	25.2	25.3	25.6	26.5	27.0	27.3	27.9
28	27.5	27.6	27.3	26.5	26.3	26.5	24.5	28.1	24.3	24.7	25.7	27.2	29.2	30.5	30.6	29.6	28.9	28.5	28.4	28.1	28.0	28.0	28.0	28.2	27.4
29	26.5	26.3	26.3	24.6	24.8	25.2	25.5	26.4	28.1	28.6	29.6	31.0	30.8	31.5	31.3	31.8	31.8	30.8	28.8	28.8	28.6	27.6	27.6	27.6	28.3
30	27.8	27.8	27.8	27.8	27.7	27.8	27.5	28.7	29.5	30.3	31.6	32.0	32.1	32.5	32.8	32.5	32.0	28.6	28.8	28.4	24.9	23.5	23.7	23.7	28.6
31	25.7	25.7	25.7	25.6	25.6	25.4	25.4	26.4	28.0	29.3	30.0	31.0	30.8	31.1	30.7	31.0	29.9	24.4	24.0	24.1	24.5	24.9	24.9	25.0	27.1
Mean	27.6	27.2	27.1	26.9	26.8	26.6	26.6	27.5	28.6	29.6	30.5	31.1	31.9	32.3	32.4	31.9	31.0	30.0	29.0	28.6	28.4	27.9	27.8	27.7	29.0

Station: BANGKOK METROPOLIS

August 1991

Dry bulb temperature (Celsius) F

Day	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Mean	
1	25.8	25.8	26.0	26.0	26.1	26.3	26.2	26.5	26.8	27.8	30.0	30.5	30.6	30.4	31.2	31.1	30.4	29.0	28.3	27.8	28.0	27.7	27.5	27.2	27.2	28.0
2	26.5	26.3	26.0	25.9	25.8	25.8	25.9	25.9	26.4	30.3	31.2	32.0	31.6	31.8	31.6	30.8	30.4	29.7	29.0	28.4	28.3	27.7	27.6	27.6	28.6	28.6
3	26.7	26.6	26.5	26.4	26.0	25.8	25.8	25.7	26.4	31.0	31.0	31.8	32.0	32.4	31.9	31.0	32.2	31.3	30.0	29.0	28.9	28.8	28.6	28.4	29.3	29.3
4	28.1	27.7	27.5	27.4	27.2	26.5	26.9	28.1	29.4	30.6	31.1	32.5	34.1	34.2	34.5	34.7	34.7	34.0	30.9	29.6	29.7	29.7	29.5	27.8	30.2	30.2
5	27.7	26.5	26.0	25.6	25.4	24.7	24.7	25.3	27.7	28.0	28.1	29.5	31.0	31.7	32.6	32.8	33.1	32.0	31.6	31.1	30.5	29.7	29.5	28.5	28.9	28.9
6	27.5	27.3	27.1	27.0	26.9	26.5	26.5	26.7	27.5	27.7	29.2	30.2	30.5	31.0	30.4	30.7	30.7	30.6	29.8	29.5	29.2	29.0	28.8	28.5	28.7	28.7
7	28.2	27.8	27.5	27.2	27.0	26.6	27.0	27.5	28.5	30.5	31.6	32.7	33.1	33.3	32.8	31.6	30.0	29.5	28.8	28.4	28.4	28.6	28.7	28.4	28.1	28.1
8	28.5	28.5	28.5	28.4	28.7	28.7	28.9	28.5	28.2	29.3	30.3	29.2	30.3	30.3	30.0	30.5	30.4	29.5	28.5	27.4	27.4	27.5	27.5	27.0	27.6	27.6
9	26.2	26.0	25.7	25.5	25.3	25.0	26.5	27.0	28.2	30.0	30.8	31.1	32.0	32.0	32.7	32.3	31.6	30.3	29.4	29.2	28.5	28.3	28.2	28.2	28.8	28.8
10	27.7	27.4	27.1	27.0	26.8	25.7	26.2	28.3	29.6	30.6	31.3	32.0	32.5	32.6	32.8	32.5	32.1	31.0	30.0	29.7	29.7	29.4	29.0	28.8	28.6	28.6
11	28.3	27.8	27.6	27.4	27.3	27.2	26.7	27.4	29.6	30.0	31.0	31.5	30.8	31.4	30.4	31.1	30.5	29.5	28.0	27.6	27.4	27.2	27.2	27.0	27.8	27.8
12	26.7	26.5	26.4	26.2	26.0	26.2	26.2	26.0	29.0	30.0	30.5	30.8	31.4	31.5	30.5	29.6	29.0	29.6	28.1	28.0	28.0	28.6	28.7	28.0	28.8	28.8
13	25.2	25.2	25.2	25.2	25.6	26.2	26.2	26.9	27.7	29.0	29.5	29.7	30.0	29.8	28.8	27.9	27.8	27.4	27.2	27.2	27.2	26.7	24.6	24.5	27.0	27.0
14	24.6	24.6	24.7	24.7	25.4	26.2	26.6	27.4	28.2	29.5	30.3	31.1	31.6	31.2	30.0	29.5	29.0	28.5	28.5	28.4	28.4	28.0	27.6	27.4	27.9	27.9
15	27.4	26.8	26.6	26.5	26.4	26.5	27.0	27.4	27.8	28.6	30.5	31.2	31.0	31.9	31.0	29.9	29.5	29.4	29.0	28.5	28.5	28.3	28.1	27.8	28.6	28.6
16	27.6	27.2	27.0	26.8	26.6	26.3	26.4	27.5	29.1	30.3	30.5	31.0	31.3	30.8	31.2	31.4	30.7	30.0	29.0	28.9	28.7	28.7	28.5	28.3	28.9	28.9
17	27.9	27.3	27.1	26.9	26.7	26.4	27.0	27.5	28.8	29.7	30.5	30.2	30.4	30.7	31.0	31.1	30.0	29.6	29.4	29.2	29.2	28.3	28.0	27.4	28.7	28.7
18	27.5	27.3	27.0	26.7	26.5	26.5	26.6	26.9	26.9	27.0	27.2	27.2	27.0	27.0	26.7	25.8	26.0	25.8	25.6	25.5	25.4	25.6	25.7	25.8	26.4	26.4
19	25.7	25.7	25.3	25.3	25.4	25.2	26.0	26.4	26.2	26.7	28.0	28.3	28.1	28.2	28.6	28.0	28.0	27.6	27.3	27.2	27.2	27.0	27.0	26.9	26.9	26.9
20	26.4	26.2	26.1	26.0	26.0	26.3	26.7	26.6	27.3	28.4	29.5	30.2	28.4	28.2	27.4	27.5	28.1	28.0	27.5	27.4	27.4	27.2	27.5	27.2	27.4	27.4
21	27.1	27.0	26.8	26.5	26.2	26.0	27.0	27.8	28.7	30.5	31.0	30.6	31.8	31.6	31.7	30.0	29.4	28.8	27.0	26.6	26.6	26.6	27.2	27.0	28.3	28.3
22	26.7	26.6	26.6	26.7	26.6	26.4	26.9	27.7	28.6	29.6	31.1	30.6	30.8	29.5	26.0	24.5	25.0	25.2	25.8	25.7	25.8	26.2	26.2	25.8	27.1	27.1
23	25.7	25.7	25.8	25.8	25.8	25.5	25.5	26.4	28.1	28.7	29.3	29.7	29.5	29.7	30.2	30.3	30.0	29.6	29.0	28.8	28.4	28.5	28.4	28.0	28.0	28.0
24	27.5	27.2	26.8	26.5	26.3	25.7	26.1	27.6	29.1	30.5	31.0	31.8	32.3	32.6	32.5	31.3	32.0	31.9	29.7	29.5	29.0	28.6	28.4	28.0	29.3	29.3
25	27.6	27.2	26.9	26.5	26.7	26.6	27.4	28.0	30.1	30.7	30.5	31.1	32.4	31.5	32.2	32.0	30.9	29.7	28.8	28.8	28.7	28.5	28.5	28.5	29.2	29.2
26	27.7	27.5	27.0	26.5	26.5	26.5	27.4	28.4	30.0	30.5	30.5	30.8	31.2	31.7	31.6	31.1	30.7	30.0	29.0	28.7	28.7	28.5	28.4	28.4	29.1	29.1
27	28.3	28.2	28.1	28.0	27.9	27.5	27.5	28.0	28.6	29.5	30.8	32.1	32.5	31.4	31.0	31.5	31.3	29.5	28.3	27.8	27.8	28.0	28.5	28.4	28.8	28.8
28	25.4	25.4	25.3	25.2	25.3	25.4	25.9	26.0	27.5	28.2	28.8	29.5	30.1	30.3	30.2	30.5	30.1	26.2	26.1	26.4	26.4	26.0	25.6	25.4	27.1	27.1
29	25.4	25.2	25.1	25.0	24.9	24.5	24.9	26.0	27.7	28.5	30.2	30.7	31.2	30.6	27.5	28.1	24.8	24.7	24.7	24.7	24.7	24.8	25.3	25.3	26.5	26.5
30	25.6	25.9	26.2	26.3	26.3	26.3	26.3	27.3	28.7	30.1	30.6	31.4	31.7	31.5	31.8	31.8	31.5	29.7	29.0	28.5	28.5	27.5	27.2	27.0	28.5	28.5
31	27.0	26.5	26.4	26.2	26.3	25.6	26.5	28.0	29.6	30.5	31.6	32.0	32.0	32.5	32.0	31.6	26.5	24.5	25.1	25.1	25.3	25.6	25.8	26.0	27.9	27.9
Mean	26.8	26.5	26.4	26.2	26.2	26.0	26.3	27.2	28.5	29.4	30.3	30.7	31.1	31.1	30.8	30.6	29.7	28.7	28.0	27.7	27.6	27.4	27.2	27.1	28.2	28.2

Station: BANGKOK METROPOLIS

September 1991

Dry bulb temperature (Celsius) F

Day	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Mean	
1	26.0	26.1	25.9	25.7	25.5	25.1	25.6	27.5	28.5	30.0	31.0	31.3	32.3	32.5	31.3	31.8	31.0	31.1	30.0	29.5	28.7	28.7	28.7	28.5	28.4	28.9
2	28.1	28.0	27.8	27.6	27.4	27.4	28.0	29.2	30.2	31.2	31.8	32.4	33.4	34.3	34.4	34.1	32.4	31.0	31.3	30.1	29.6	29.6	29.6	29.3	29.2	30.4
3	28.8	28.6	28.3	28.0	27.7	27.4	27.4	28.0	29.2	30.5	31.7	32.0	32.7	33.3	32.7	32.2	31.4	31.0	29.8	29.1	29.3	29.3	29.3	29.1	28.8	30.0
4	28.6	28.3	28.0	27.6	27.5	27.4	27.2	27.6	30.0	31.6	32.1	32.5	32.9	33.4	33.0	32.5	32.0	31.2	30.0	29.4	29.4	29.3	29.1	28.8	28.9	29.9
5	28.4	28.2	28.0	27.7	27.5	27.5	27.9	28.5	29.5	29.8	30.0	31.2	30.3	30.4	30.5	30.4	27.0	26.3	26.7	26.9	26.5	26.7	26.7	27.0	26.8	28.3
6	26.6	26.5	26.5	26.2	26.1	25.9	26.0	28.0	29.7	31.0	31.7	32.4	32.1	31.7	32.1	25.1	25.4	25.5	25.8	27.2	27.2	27.7	27.0	26.8	26.8	27.9
7	26.6	26.3	26.0	25.8	25.6	25.3	24.9	25.5	26.5	30.0	31.0	31.8	32.0	30.7	31.5	31.9	30.6	30.0	29.2	29.3	28.7	28.7	26.4	25.8	26.0	28.4
8	26.2	26.1	26.0	25.8	25.7	25.6	26.5	27.0	28.5	30.2	31.2	31.6	31.1	30.7	31.0	30.7	29.4	30.8	29.2	28.9	28.5	28.6	28.6	28.5	28.2	28.7
9	27.7	27.2	26.8	26.5	26.4	26.3	26.5	27.9	28.5	30.3	31.2	32.2	32.1	31.0	32.5	33.9	31.6	30.1	29.5	29.4	29.2	29.1	29.2	29.1	28.7	29.4
10	28.0	27.3	27.1	27.0	27.0	26.5	26.7	27.5	28.4	29.8	31.1	31.0	31.7	31.5	32.4	31.8	30.6	30.0	28.6	28.7	28.6	28.6	28.8	28.8	28.7	28.2
11	24.7	24.8	25.0	25.4	25.4	25.5	25.7	27.0	28.4	29.5	30.7	31.5	32.2	32.7	32.2	31.7	31.0	30.4	29.5	29.1	29.0	29.1	29.1	28.8	28.4	28.4
12	24.8	24.7	24.7	24.7	24.7	24.7	24.7	27.1	28.8	27.6	29.3	30.7	31.2	32.0	31.4	32.1	31.2	30.3	28.8	28.0	28.0	28.0	28.0	28.2	27.4	27.4
13	26.2	26.2	26.1	26.0	26.0	25.8	25.6	27.1	29.0	29.7	30.7	31.3	32.4	31.1	30.1	28.6	29.6	29.0	28.8	28.0	28.4	27.7	27.4	27.5	27.9	27.9
14	26.0	25.9	25.7	25.6	25.5	25.5	26.1	27.2	28.5	30.0	30.7	31.3	30.5	30.4	31.3	31.7	31.3	30.6	29.6	29.4	29.4	27.7	27.4	27.5	27.4	28.4
15	27.2	27.0	26.6	26.3	26.2	26.0	26.0	26.8	28.8	30.0	31.6	32.5	31.8	31.6	30.1	30.1	29.5	28.6	27.8	27.5	27.3	27.3	27.1	27.1	26.6	28.2
16	26.2	26.0	25.7	25.5	25.3	24.9	25.6	27.2	29.0	30.1	31.5	31.2	31.0	29.0	30.0	31.2	31.1	27.5	26.9	26.8	26.6	26.5	26.5	26.4	26.5	27.8
17	26.0	26.8	26.5	26.4	26.2	26.1	25.6	26.4	28.6	30.4	30.3	27.0	27.2	29.5	31.5	31.1	32.0	31.0	29.5	29.0	28.5	28.5	28.5	28.0	28.2	28.2
18	25.8	25.9	25.8	25.8	25.7	25.5	25.7	26.4	28.0	29.2	30.5	31.2	31.5	30.5	29.8	29.2	28.8	29.0	28.2	28.0	28.8	28.8	28.3	28.3	28.3	28.1
19	25.5	25.5	25.5	25.6	25.5	25.4	25.2	25.9	28.5	30.0	31.0	31.4	30.2	30.5	31.0	30.0	29.6	29.2	28.6	28.5	28.3	28.3	28.3	27.4	27.2	28.1
20	27.2	26.7	26.0	25.6	25.1	25.2	25.7	27.2	29.0	30.5	31.0	30.3	29.7	29.4	30.1	30.3	30.3	29.1	28.8	28.5	27.8	27.5	27.5	27.0	26.5	28.1
21	26.3	26.2	26.1	26.3	26.4	26.0	26.0	27.0	28.0	29.6	30.3	31.9	32.6	31.6	33.0	31.1	31.5	31.3	30.0	29.4	28.6	28.6	27.7	27.4	27.2	28.9
22	27.0	27.0	26.8	26.7	26.6	26.5	26.8	27.7	28.2	30.5	31.5	32.1	32.4	30.7	31.7	31.7	32.4	31.1	30.4	29.6	28.5	28.1	27.7	27.4	27.0	28.2
23	27.5	27.2	27.1	27.0	26.9	26.8	26.0	27.5	28.5	28.6	29.5	30.5	31.0	29.0	29.0	28.5	27.7	27.5	27.0	27.2	27.0	26.8	26.8	26.6	26.5	27.1
24	26.4	26.3	26.1	26.0	25.6	25.2	25.6	26.4	27.8	29.0	28.4	28.1	28.0	28.1	28.1	28.0	27.0	25.7	25.4	25.4	25.3	25.3	25.3	25.6	26.7	26.7
25	25.6	25.5	25.3	24.8	24.7	24.6	25.0	25.8	27.2	28.5	29.5	31.2	31.0	32.3	32.4	30.3	26.8	24.4	24.5	24.7	25.0	25.0	25.0	25.0	26.8	26.8
26	25.1	25.0	25.0	25.0	24.9	24.9	25.5	26.4	27.6	28.6	30.0	31.2	31.1	31.4	31.7	31.4	31.3	30.1	29.0	28.6	28.2	28.2	28.4	28.0	27.9	27.9
27	24.9	25.0	25.3	25.3	25.2	25.0	25.5	27.0	29.1	30.2	30.8	31.1	31.5	31.2	31.4	30.6	31.3	29.6	29.3	27.9	27.6	27.4	27.2	27.0	28.2	28.2
28	26.8	26.7	26.6	26.6	26.6	26.6	26.6	26.6	29.5	31.0	31.6	32.0	31.7	31.2	31.2	31.2	30.3	29.5	29.1	29.1	28.9	28.8	28.0	28.0	28.8	28.8
29	25.0	24.9	24.6	24.3	24.0	23.9	24.8	25.1	25.7	27.0	27.2	28.2	28.7	28.2	29.4	29.2	28.7	28.5	27.4	27.2	26.7	26.7	26.7	26.7	26.2	26.2
30	24.6	24.5	24.5	24.4	24.6	24.6	25.0	25.5	27.5	28.5	29.4	29.0	29.2	29.5	30.3	29.1	28.4	28.1	27.2	26.3	26.5	26.5	26.0	26.0	26.0	26.9
Mean	26.5	26.3	26.1	25.9	25.8	25.6	25.9	26.9	28.5	29.8	30.6	31.1	31.1	31.1	31.2	30.9	30.2	29.3	28.5	27.9	27.6	27.2	26.9	26.6	26.6	28.2



Station: BANGKOK METROPOLIS

Oct. Dec. 1991

D₁ Sub temperature, e (Celsius) F

Day	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Mean
1	26.0	26.0	25.9	25.7	25.5	25.5	25.5	26.5	27.8	28.8	29.2	30.0	30.5	30.7	29.8	29.4	28.4	28.0	27.9	27.9	27.6	27.6	27.5	27.4	27.7
2	27.3	27.0	26.8	26.7	26.5	26.4	26.4	27.0	28.7	29.5	30.3	31.2	31.5	31.6	31.1	31.2	30.9	29.0	28.2	28.0	27.9	28.0	27.8	27.7	28.6
3	27.5	27.3	27.0	26.8	26.5	26.4	26.0	27.6	28.5	29.6	30.0	31.0	31.5	31.6	32.4	32.4	32.2	30.7	29.1	28.6	27.6	27.5	27.5	27.4	28.4
4	27.4	27.2	27.0	26.8	26.2	25.8	25.7	27.3	29.1	30.7	32.0	31.5	31.3	29.8	30.7	31.1	30.1	28.7	28.0	27.9	27.6	27.3	27.0	26.8	28.5
5	26.7	26.7	26.7	26.6	26.0	25.9	26.2	27.5	28.1	29.1	29.5	30.8	31.6	32.3	31.0	26.2	26.6	26.8	26.8	26.5	26.6	26.5	26.7	26.3	27.6
6	25.8	25.7	25.5	25.4	25.0	25.0	25.4	27.1	29.1	30.7	31.4	32.2	32.1	32.0	33.0	32.0	31.0	28.5	27.5	27.5	25.5	25.3	25.6	25.2	28.0
7	24.9	24.8	24.6	24.4	24.3	24.3	24.8	25.9	28.1	29.4	30.0	31.0	31.1	30.7	31.4	30.7	29.8	29.5	28.0	27.6	27.4	26.7	26.4	26.2	27.6
8	25.4	25.1	24.8	24.6	24.6	24.5	24.8	26.4	28.7	29.3	29.6	30.5	30.7	31.0	31.3	31.5	29.4	27.7	27.5	27.4	27.0	27.0	26.8	26.6	27.6
9	26.5	26.2	25.8	25.5	25.3	25.3	25.7	26.6	28.2	28.8	30.0	30.5	29.6	28.2	30.1	29.2	29.3	25.5	25.6	24.8	25.0	25.0	25.0	25.0	28.9
10	25.4	25.3	25.2	25.1	25.0	25.0	25.6	26.5	26.4	27.5	29.2	29.0	29.9	30.6	36.4	27.1	27.0	26.6	26.2	26.0	26.0	26.1	25.8	25.6	26.6
11	25.6	25.5	25.4	25.4	25.0	24.8	24.2	24.4	26.1	27.8	28.2	29.8	30.7	30.4	30.5	30.4	29.8	28.5	27.7	27.4	27.4	27.2	27.2	27.1	27.4
12	26.8	26.8	26.7	26.5	26.4	25.8	26.0	26.9	27.5	28.3	29.0	30.5	31.0	31.1	31.2	30.5	30.0	29.8	28.2	27.8	27.7	27.7	27.7	27.6	28.2
13	25.9	25.0	24.1	23.6	23.8	24.0	24.2	25.7	28.5	29.2	29.6	31.1	31.4	31.6	32.0	30.9	29.0	28.4	27.9	27.6	27.4	27.1	27.0	26.5	27.6
14	26.7	26.6	26.5	26.5	26.5	24.4	24.0	26.5	29.2	30.5	31.4	31.9	32.0	32.5	32.5	31.9	31.5	29.4	28.5	28.0	27.4	27.4	26.9	26.5	28.5
15	26.4	26.3	26.2	25.9	25.7	25.3	25.7	27.1	28.8	30.1	31.0	31.3	29.0	27.4	30.4	31.6	31.0	30.2	29.0	28.5	27.0	26.6	26.1	26.0	28.0
16	25.9	25.8	25.6	25.5	25.4	24.9	25.5	28.0	29.2	30.7	30.5	31.5	31.5	33.0	26.6	28.2	27.9	27.5	26.9	26.7	26.2	26.0	26.2	26.1	28.9
17	26.0	25.9	25.7	25.6	25.5	24.8	25.3	27.6	29.2	30.4	31.0	31.2	29.6	23.7	28.5	29.7	29.5	27.5	27.5	27.0	26.8	26.2	26.0	25.5	27.3
18	24.5	24.5	24.6	24.8	24.5	24.3	24.7	25.3	27.5	29.0	30.1	31.5	32.5	32.5	33.1	32.7	32.4	30.8	28.5	27.5	27.2	27.0	27.2	27.2	28.1
19	27.5	26.8	26.5	26.5	25.6	25.4	25.6	27.6	28.7	30.2	31.0	31.5	32.1	30.5	27.7	29.1	30.0	29.2	27.3	27.0	26.7	26.5	26.0	26.0	27.9
20	26.0	25.8	25.5	25.5	24.9	24.4	25.2	26.5	28.2	29.2	29.3	30.5	28.5	23.3	23.8	23.1	23.0	22.9	22.8	22.0	22.8	22.7	23.0	23.3	25.1
21	23.7	23.9	23.8	23.7	23.6	23.5	24.0	24.0	24.3	25.7	28.2	28.0	29.2	29.7	30.0	30.1	28.7	28.5	26.0	25.8	25.5	24.6	24.4	24.6	28.0
22	24.9	25.0	25.0	25.1	24.7	24.4	24.6	25.4	27.5	29.1	29.2	29.5	31.0	31.8	24.5	24.7	24.9	25.1	24.8	24.9	24.8	24.7	24.4	24.4	26.0
23	24.3	24.3	24.4	24.4	24.3	24.2	24.5	26.0	27.7	29.3	30.5	31.0	31.9	31.8	31.7	30.6	27.0	27.4	26.2	26.0	25.7	25.6	25.6	25.4	27.1
24	25.2	25.2	25.0	24.9	24.8	24.8	25.0	26.5	27.1	29.3	30.8	30.1	31.5	32.1	31.2	31.5	30.6	29.3	28.3	28.2	27.6	27.2	26.7	26.6	27.9
25	25.4	25.1	25.0	25.2	25.0	24.8	25.3	26.4	28.0	30.0	30.9	30.6	31.2	32.0	31.6	31.8	31.5	29.3	28.3	28.0	27.1	26.7	26.0	25.8	28.0
26	25.4	25.3	25.2	24.8	24.7	25.1	25.4	26.2	27.1	29.0	30.2	31.0	32.1	32.7	32.5	32.5	31.9	30.0	29.0	28.0	27.1	27.0	26.2	25.9	28.1
27	25.7	25.5	25.3	25.6	25.8	26.2	26.4	27.4	29.2	30.2	31.8	32.6	33.6	32.5	31.8	32.0	31.0	29.8	29.0	28.7	28.1	28.0	27.7	27.5	28.8
28	24.5	24.0	23.3	22.7	22.6	22.5	23.2	24.6	27.1	28.5	29.0	30.5	31.2	31.1	31.1	29.5	29.3	28.4	27.6	27.3	27.1	26.0	25.8	25.0	27.6
29	24.5	24.0	23.3	22.7	22.6	22.5	23.2	24.6	27.1	28.5	29.2	30.3	31.1	31.5	31.2	31.1	30.0	29.5	26.5	25.4	25.4	24.7	24.0	23.8	26.5
30	23.5	23.0	22.6	21.8	21.4	21.2	21.3	23.8	26.4	28.5	29.7	31.0	32.1	32.5	32.2	32.0	30.9	28.0	26.0	25.6	25.3	24.0	23.5	23.2	26.2
31	22.5	22.3	22.2	22.0	21.8	21.4	22.1	24.2	27.1	29.0	30.3	31.0	31.5	31.8	31.7	31.6	30.5	27.9	26.4	26.0	24.1	23.8	22.5	21.4	26.0
Mean	25.7	25.5	25.3	25.1	24.9	24.7	24.9	26.2	27.9	29.2	30.1	30.8	30.8	30.5	30.4	30.2	29.5	28.3	27.3	26.9	26.5	26.2	26.0	25.8	27.4

Station: BANGKOK METROPOLIS

N: number 1991

Dry bulb temperature (Celsius) F

Dry	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Mean
1	21.0	21.0	20.9	20.9	20.7	20.4	21.5	23.5	26.7	28.0	30.0	30.8	31.5	31.2	31.0	31.6	30.7	28.0	27.4	26.3	24.8	24.9	23.4	23.2	26.0
2	24.8	24.0	23.5	22.6	22.4	21.8	22.2	24.7	28.8	28.5	30.5	31.0	31.5	32.1	31.8	31.7	30.7	28.8	26.4	23.3	24.9	24.6	24.6	24.4	26.7
3	24.2	24.0	23.8	23.6	23.5	23.2	23.6	25.2	28.4	30.0	31.3	31.5	32.6	31.8	32.7	32.0	31.0	29.7	27.2	27.2	25.8	26.0	26.0	25.9	27.5
4	25.5	25.2	24.8	24.1	24.3	24.1	24.1	26.4	28.7	30.1	31.1	31.5	32.1	32.3	33.2	33.0	31.4	29.5	28.7	28.2	27.7	27.0	26.8	26.3	28.2
5	25.7	25.6	25.4	25.0	24.7	24.3	24.5	26.0	27.5	29.6	30.3	31.5	32.0	31.7	31.8	31.3	30.1	29.3	28.5	27.8	27.5	27.0	26.9	26.7	27.9
6	26.5	26.1	25.7	25.2	24.5	24.3	24.3	26.0	28.0	29.0	31.0	31.8	32.7	32.5	32.8	32.0	31.5	30.6	29.3	28.9	28.5	27.9	27.1	26.5	28.4
7	26.1	25.6	25.3	24.9	24.6	24.1	24.4	26.0	28.2	30.4	31.8	33.1	33.4	34.1	33.7	32.6	31.8	30.5	29.6	29.1	28.8	28.3	27.6	27.4	28.8
8	27.2	26.6	26.3	25.9	25.5	24.9	25.1	26.5	28.6	30.1	31.0	32.4	33.0	33.4	33.7	32.5	31.8	30.0	29.6	29.2	28.9	28.0	27.7	27.4	29.0
9	27.0	26.8	26.5	26.2	26.0	25.8	25.7	26.3	27.5	28.7	29.2	30.3	30.6	30.8	31.1	30.4	29.8	28.8	27.3	26.6	26.3	26.5	27.0	26.6	27.8
10	26.3	26.0	25.6	25.3	25.2	25.0	25.7	26.8	29.0	29.0	30.4	30.9	31.0	31.2	30.1	31.0	30.0	27.2	27.5	27.0	24.5	24.2	24.0	23.9	27.3
11	23.7	23.6	23.4	23.8	24.1	24.2	24.4	25.4	27.5	29.1	30.3	31.0	31.1	31.4	31.6	31.5	30.5	28.4	27.6	26.7	26.2	26.8	26.5	26.0	27.3
12	25.6	25.0	24.4	23.7	23.3	22.8	23.0	24.5	26.8	29.0	30.2	31.0	31.0	31.5	31.5	30.8	30.3	28.8	27.7	26.8	26.4	26.1	26.2	25.0	27.2
13	24.3	23.7	23.4	23.0	22.5	22.4	22.7	23.6	25.7	28.0	29.0	30.3	30.4	30.6	30.8	30.6	29.6	28.0	27.2	26.8	26.3	25.3	25.0	23.7	26.4
14	23.1	22.9	22.7	22.5	22.3	22.3	22.5	23.4	25.7	27.2	28.3	29.0	29.7	30.1	30.5	29.3	28.8	27.3	26.5	26.1	25.6	24.6	23.5	23.1	25.7
15	22.3	21.8	21.2	20.6	20.4	19.8	19.7	21.4	23.5	25.5	27.2	28.2	29.0	29.6	29.8	29.0	28.0	26.9	25.1	24.6	24.1	23.5	22.7	22.0	24.4
16	21.5	21.4	21.2	21.0	20.8	20.3	20.3	22.5	24.0	26.5	28.2	29.5	30.1	30.8	31.0	30.6	29.0	28.0	26.4	25.5	25.0	24.7	24.7	22.0	25.2
17	22.0	21.5	21.1	20.8	20.6	20.3	20.1	21.9	24.2	27.0	28.8	29.9	31.7	32.3	32.5	32.2	31.6	28.4	26.5	26.0	26.0	25.8	25.0	24.6	25.9
18	24.5	24.2	23.7	23.3	23.0	22.5	22.8	23.5	26.2	28.5	30.4	31.7	32.4	32.6	32.7	31.4	30.0	29.1	28.1	27.5	27.8	26.8	25.0	24.7	27.2
19	23.0	22.8	22.6	22.2	22.0	21.9	22.0	22.6	26.0	29.0	29.8	30.8	32.2	32.5	32.4	31.4	30.2	28.3	26.2	25.4	25.0	24.0	23.6	26.3	28.5
20	22.3	22.0	21.5	21.0	20.8	20.4	20.4	22.0	24.6	26.7	28.3	30.0	31.2	30.7	30.5	29.7	29.0	27.5	25.9	25.7	25.2	24.6	24.4	23.6	25.3
21	23.0	22.5	21.9	21.5	21.3	20.8	21.4	22.6	25.2	27.5	29.1	30.5	31.5	32.0	31.5	31.0	30.0	29.2	26.8	26.3	26.0	25.8	25.6	25.4	26.2
22	24.5	24.1	23.5	23.0	22.8	22.3	22.5	23.5	26.1	28.4	30.5	31.1	31.5	32.0	32.6	32.6	31.2	29.4	28.5	28.0	27.4	26.6	26.4	26.1	27.3
23	23.6	23.2	22.8	22.5	22.3	22.2	22.8	24.7	28.0	30.2	31.5	32.6	33.3	33.4	33.4	32.7	32.0	30.5	29.5	29.0	28.5	28.0	27.5	26.5	28.5
24	26.0	25.5	25.4	25.2	24.9	24.4	24.6	26.0	29.2	31.1	32.3	33.4	34.6	33.9	33.2	32.0	31.5	30.1	28.5	27.7	27.1	27.1	26.8	26.5	28.5
25	26.2	25.6	25.0	24.5	24.2	23.8	24.0	25.4	28.2	30.2	31.7	33.0	34.1	34.1	33.7	33.1	32.6	30.4	29.0	28.5	27.8	27.8	27.2	27.0	28.6
26	26.8	26.3	25.0	24.3	23.5	23.0	22.7	24.1	27.2	29.3	30.8	31.6	33.0	33.2	32.7	32.0	31.2	29.5	28.5	27.8	27.4	27.3	27.2	26.0	27.9
27	25.4	25.0	24.5	24.0	23.7	23.1	23.2	24.2	27.0	28.8	29.5	31.7	32.1	32.2	32.8	31.2	29.8	29.1	28.2	27.5	27.0	27.0	26.5	26.2	27.5
28	25.5	25.0	24.4	23.8	23.3	22.8	23.6	25.0	27.5	30.2	31.7	33.3	33.6	33.6	33.1	30.5	29.7	29.3	28.2	27.2	27.0	26.5	25.8	25.5	27.4
29	23.7	23.5	23.2	23.0	22.7	22.3	22.6	23.7	27.7	30.1	31.5	31.4	32.5	33.2	33.2	32.8	31.9	29.7	28.3	26.5	25.4	24.3	23.7	23.5	27.1
30	23.2	23.0	22.5	22.0	21.5	21.1	21.1	23.5	27.1	29.8	30.5	31.3	33.0	33.1	33.2	32.7	31.5	30.0	27.5	26.5	26.0	25.4	25.0	25.0	26.9
Mean	24.6	24.2	23.8	23.4	23.1	22.8	23.0	24.4	26.9	28.9	30.2	31.1	31.9	32.1	32.1	31.5	30.5	29.0	27.7	27.1	26.5	26.1	25.7	25.2	27.2

December 1990
Dry bulb temperature (Celsius)

Day	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Mean
1	24.0	23.5	23.0	22.6	22.4	23.5	23.2	23.7	25.2	26.3	26.8	27.7	28.0	28.3	28.6	28.3	27.5	26.0	25.4	24.5	24.4	23.9	22.9	21.8	25.1
2	21.5	21.0	20.5	20.3	20.0	19.6	19.7	20.2	21.8	23.3	25.0	26.0	27.1	27.6	27.7	27.6	27.0	25.0	23.8	22.5	21.7	20.7	20.5	19.8	22.9
3	19.5	19.2	19.0	18.1	17.6	17.6	17.1	18.7	21.3	22.6	24.8	25.8	26.6	27.6	27.6	27.2	26.0	24.9	24.0	23.5	22.8	21.9	21.1	20.5	22.3
4	20.4	20.0	20.1	20.2	20.5	20.8	20.6	20.8	22.1	22.9	25.0	26.6	27.4	28.3	28.3	28.3	27.2	25.7	24.5	23.5	22.8	21.6	21.1	20.7	23.3
5	20.4	20.0	19.7	19.1	18.5	17.6	17.5	19.1	22.1	23.8	25.0	26.5	27.5	28.1	28.4	27.7	26.8	25.6	23.6	23.1	21.5	20.5	19.4	18.8	22.5
6	18.0	18.0	18.3	18.1	17.5	17.0	17.0	18.7	21.5	23.7	25.2	27.0	28.4	28.6	28.4	28.2	27.0	25.5	24.0	23.4	23.0	22.2	21.7	20.3	22.5
7	19.1	18.8	18.5	18.3	18.0	18.2	18.3	19.7	22.5	25.1	27.0	28.5	29.0	29.5	29.7	29.3	28.5	26.7	25.6	25.0	24.8	24.5	23.1	23.4	23.8
8	23.2	23.0	21.5	21.3	20.8	21.2	21.4	22.7	23.8	27.0	29.2	30.1	31.5	32.0	31.8	30.5	30.1	28.6	27.6	27.2	26.6	25.9	24.6	24.1	26.1
9	24.2	24.0	23.6	23.0	22.5	22.2	22.0	23.0	25.0	27.8	29.3	30.4	31.1	31.6	31.9	31.5	31.0	28.8	27.6	26.8	26.7	25.5	24.5	23.9	26.6
10	23.5	23.2	23.0	22.8	22.7	21.7	21.2	22.5	24.8	27.8	29.7	31.0	32.0	32.4	32.5	32.5	31.5	29.5	28.2	27.7	27.1	26.6	26.1	25.4	26.9
11	25.0	24.6	24.4	23.7	23.4	23.2	23.2	24.0	27.0	28.8	30.3	32.0	32.5	32.4	29.8	31.4	30.5	29.8	28.5	28.4	28.0	27.3	26.5	26.1	27.5
12	25.3	25.0	24.7	24.4	24.5	23.8	23.7	24.9	27.8	29.9	31.2	31.6	32.8	33.0	33.3	32.4	31.0	29.4	28.5	28.0	27.0	27.3	27.0	26.0	28.1
13	25.5	25.0	24.6	24.0	23.8	23.3	23.2	25.6	29.0	30.1	31.4	32.4	32.8	33.4	33.4	32.1	30.9	29.7	28.9	28.1	27.8	27.1	26.9	25.5	28.1
14	25.3	25.0	24.2	24.0	23.7	23.3	23.1	23.8	27.7	30.0	31.5	31.8	32.4	32.7	33.5	32.8	32.0	30.8	29.9	29.2	27.5	27.0	26.5	26.0	28.1
15	25.7	25.2	24.8	24.5	24.1	25.0	25.2	25.5	28.5	30.0	31.5	32.5	33.3	33.7	33.0	33.1	32.1	30.5	29.3	28.9	28.1	27.2	26.7	26.0	28.5
16	25.6	25.0	24.6	24.4	24.1	23.9	23.3	24.6	27.1	29.6	30.8	32.4	33.1	33.5	33.3	33.2	31.5	30.0	28.5	27.5	26.5	26.2	25.2	25.0	27.9
17	24.8	24.0	23.0	22.5	22.5	22.0	21.9	24.0	27.0	29.7	30.7	31.8	32.4	33.0	33.5	33.7	32.5	30.0	28.6	28.0	26.5	25.3	25.0	24.8	27.4
18	24.0	23.2	22.7	22.0	21.8	21.2	21.2	22.5	26.8	28.5	30.0	31.6	32.1	32.1	33.3	33.0	31.7	30.1	28.9	28.5	27.7	27.1	25.6	24.6	26.9
19	25.2	25.0	24.2	23.8	22.7	22.2	22.1	24.0	27.2	29.2	31.5	32.3	33.6	34.4	33.1	33.1	31.0	30.1	29.0	28.2	27.5	26.8	26.5	24.8	27.8
20	23.8	23.5	23.5	23.4	23.3	22.3	22.5	24.3	27.8	30.7	31.6	32.8	33.2	33.8	34.6	33.8	33.5	30.1	28.4	27.7	27.3	26.5	26.0	25.8	27.9
21	24.9	24.6	24.3	23.9	23.7	23.5	23.4	24.5	26.7	29.3	31.0	33.7	31.5	31.8	31.5	31.6	31.4	29.0	27.0	25.7	25.1	24.7	24.4	24.1	27.1
22	24.2	24.0	23.5	23.2	23.0	22.6	23.0	25.0	27.3	29.5	31.1	32.4	32.5	32.6	33.5	33.1	32.5	30.7	29.4	28.2	27.6	27.5	27.0	26.4	27.9
23	25.5	25.0	24.6	24.4	24.2	25.2	24.9	25.2	27.6	28.8	30.0	30.8	31.0	31.8	32.2	31.6	31.2	30.3	27.5	26.8	26.6	26.3	26.0	25.0	27.6
24	25.2	24.9	24.3	23.7	23.4	22.8	22.5	23.0	25.4	27.6	29.0	30.5	30.2	30.6	31.5	30.6	30.0	28.0	26.1	25.4	25.0	25.0	24.8	23.4	26.4
25	22.6	21.8	21.0	20.5	20.1	20.0	19.7	21.1	25.0	27.6	29.0	30.7	31.2	31.8	31.5	31.7	30.5	28.6	27.5	27.0	26.5	25.5	24.0	23.5	25.8
26	23.3	22.9	22.3	21.6	21.3	20.6	20.0	21.1	25.7	28.0	28.9	31.0	31.8	32.3	32.6	32.5	32.0	29.6	28.6	27.6	27.0	26.7	25.9	25.0	26.6
27	24.7	24.4	23.2	23.0	22.7	22.2	22.7	24.0	26.4	28.6	30.8	32.0	32.8	33.3	32.9	33.4	32.3	31.0	28.5	27.5	28.1	28.0	27.5	26.2	27.8
28	25.0	24.3	23.5	23.1	22.8	22.6	22.4	23.2	27.9	30.1	31.9	33.0	33.2	33.8	33.5	33.4	31.5	30.5	29.3	28.5	27.4	27.0	26.0	25.8	27.9
29	25.9	25.2	24.6	24.0	23.8	23.8	24.4	25.2	27.2	30.0	31.1	32.0	32.8	33.7	32.7	33.4	32.6	31.0	27.5	27.0	26.8	26.7	26.0	25.8	28.1
30	24.6	24.2	23.7	23.3	23.0	23.2	24.0	25.0	27.0	30.1	31.7	32.5	33.1	33.3	33.5	33.2	31.8	29.5	27.7	26.8	26.0	25.6	25.5	25.4	27.7
31	25.3	25.0	24.5	24.0	23.8	23.3	23.0	24.1	27.7	29.5	30.5	32.0	32.4	32.2	31.9	31.0	30.7	27.9	27.9	26.4	25.4	24.9	26.0	26.1	27.4
Mean	23.7	23.3	22.8	22.4	22.1	21.9	21.9	23.0	25.8	27.8	29.4	30.7	31.3	31.7	31.7	31.5	30.5	28.9	27.4	26.7	26.1	25.5	24.8	24.2	26.5

time	ω	$\cos \theta_z$	$\cos \theta$	$RB = \cos \theta / \cos \theta_z$	time	ω	$\cos \theta_z$	$\cos \theta$	$RB = \cos \theta / \cos \theta_z$
JAN					APRIL				
6:00	-90	0.02	-0.347	4.093	6:00	-90	0.04	0.159	4.093
7:00	-75	0.27	-0.404	-2.693	7:00	-75	0.29	0.098	0.343
8:00	-60	0.50	-0.458	-1.240	8:00	-60	0.52	0.042	0.081
9:00	-45	0.70	-0.504	-0.904	9:00	-45	0.72	-0.007	-0.009
10:00	-30	0.85	-0.539	-0.769	10:00	-30	0.87	-0.044	-0.050
11:00	-15	0.95	-0.561	-0.709	11:00	-15	0.96	-0.067	-0.070
12:00	0	0.98	-0.569	-0.691	12:00	0	1.00	-0.075	-0.075
13:00	15	0.95	-0.561	-0.709	13:00	15	0.96	-0.067	-0.070
14:00	30	0.85	-0.539	-0.769	14:00	30	0.87	-0.044	-0.050
15:00	45	0.70	-0.504	-0.904	15:00	45	0.72	-0.007	-0.009
16:00	60	0.50	-0.458	-1.240	16:00	60	0.52	0.042	0.081
17:00	75	0.27	-0.404	-2.693	17:00	75	0.29	0.098	0.343
18:00	90	0.02	-0.347	4.093	18:00	90	0.04	0.159	4.093
FEB					MAY				
6:00	-90	-0.05	-0.218	4.093	6:00	-90	0.08	0.313	4.093
7:00	-75	0.19	-0.278	-1.447	7:00	-75	0.31	0.255	0.810
8:00	-60	0.42	-0.333	-0.794	8:00	-60	0.54	0.201	0.374
9:00	-45	0.62	-0.381	-0.619	9:00	-45	0.73	0.154	0.212
10:00	-30	0.77	-0.418	-0.545	10:00	-30	0.87	0.118	0.136
11:00	-15	0.96	-0.441	-0.512	11:00	-15	0.96	0.096	0.099
12:00	0	0.89	-0.449	-0.503	12:00	0	1.00	0.088	0.089
13:00	15	0.86	-0.441	-0.512	13:00	15	0.96	0.096	0.099
14:00	30	0.77	-0.418	-0.545	14:00	30	0.87	0.118	0.136
15:00	45	0.62	-0.381	-0.619	15:00	45	0.73	0.154	0.212
16:00	60	0.42	-0.333	-0.794	16:00	60	0.54	0.201	0.374
17:00	75	0.19	-0.278	-1.447	17:00	75	0.31	0.255	0.810
18:00	90	-0.05	-0.218	4.093	18:00	90	0.08	0.313	4.093
MARCH					JUNE				
6:00	-90	-0.01	-0.041	4.093	6:00	-90	0.09	0.384	4.093
7:00	-75	0.24	-0.102	-0.424	7:00	-75	0.32	0.327	1.008
8:00	-60	0.48	-0.160	-0.336	8:00	-60	0.54	0.275	0.509
9:00	-45	0.68	-0.209	-0.309	9:00	-45	0.72	0.230	0.317
10:00	-30	0.83	-0.246	-0.297	10:00	-30	0.87	0.195	0.225
11:00	-15	0.93	-0.270	-0.291	11:00	-15	0.96	0.173	0.181
12:00	0	0.96	-0.278	-0.290	12:00	0	0.99	0.166	0.168
13:00	15	0.93	-0.270	-0.291	13:00	15	0.96	0.173	0.181
14:00	30	0.83	-0.246	-0.297	14:00	30	0.87	0.195	0.225
15:00	45	0.68	-0.209	-0.309	15:00	45	0.72	0.230	0.317
16:00	60	0.48	-0.160	-0.336	16:00	60	0.54	0.275	0.509
17:00	75	0.24	-0.102	-0.424	17:00	75	0.32	0.327	1.008
18:00	90	-0.01	-0.041	4.093	18:00	90	0.09	0.384	4.093

ตารางที่ 3.15 แสดงค่า Cosine of Angle of incidence, Cosine of Zenith และ RB

Time (h)	ω	$\cos(\omega)$	$\cos(\omega)$	$RB=\cos(\omega) / \cos(\omega)$	Time (h)	ω	$\cos(\omega)$	$\cos(\omega)$	$RB=\cos(\omega) / \cos(\omega)$
JULY					OCTOBER				
6:00	-90	0.09	0.351	4.093	6:00	-90	-0.04	-0.162	4.093
7:00	-75	0.32	0.294	0.917	7:00	-75	0.21	-0.223	-1.068
8:00	-60	0.54	0.240	0.446	8:00	-60	0.44	-0.279	-0.635
9:00	-45	0.73	0.195	0.268	9:00	-45	0.64	-0.327	-0.514
10:00	-30	0.97	0.159	0.183	10:00	-30	0.79	-0.365	-0.462
11:00	-15	0.96	0.137	0.143	11:00	-15	0.89	-0.388	-0.438
12:00	0	0.99	0.130	0.131	12:00	0	0.92	-0.396	-0.431
13:00	15	0.96	0.137	0.143	13:00	15	0.89	-0.388	-0.438
14:00	30	0.87	0.159	0.183	14:00	30	0.79	-0.365	-0.462
15:00	45	0.73	0.195	0.268	15:00	45	0.64	-0.327	-0.514
16:00	60	0.54	0.240	0.446	16:00	60	0.44	-0.279	-0.635
17:00	75	0.32	0.294	0.917	17:00	75	0.21	-0.223	-1.068
18:00	90	0.09	0.351	4.093	18:00	90	-0.04	-0.162	4.093
AUGUST					NOVEMBER				
6:00	-90	0.06	0.226	4.093	6:00	-90	-0.09	-0.315	4.093
7:00	-75	0.30	0.166	0.555	7:00	-75	0.16	-0.373	-2.318
8:00	-60	0.53	0.111	0.210	8:00	-60	0.38	-0.427	-1.116
9:00	-45	0.72	0.063	0.087	9:00	-45	0.57	-0.474	-0.827
10:00	-30	0.87	0.026	0.030	10:00	-30	0.72	-0.509	-0.708
11:00	-15	0.97	0.003	0.003	11:00	-15	0.81	-0.532	-0.656
12:00	0	1.00	-0.005	-0.005	12:00	0	0.84	-0.539	-0.641
13:00	15	0.97	0.003	0.003	13:00	15	0.81	-0.532	-0.656
14:00	30	0.87	0.026	0.030	14:00	30	0.72	-0.509	-0.708
15:00	45	0.72	0.063	0.087	15:00	45	0.57	-0.474	-0.827
16:00	60	0.53	0.111	0.210	16:00	60	0.38	-0.427	-1.116
17:00	75	0.30	0.166	0.555	17:00	75	0.16	-0.373	-2.318
18:00	90	0.06	0.226	4.093	18:00	90	-0.08	-0.315	4.093
SEPTEMBER					DECEMBER				
6:00	-90	0.01	0.038	4.093	6:00	-90	-0.09	-0.380	4.093
7:00	-75	0.26	-0.024	-0.091	7:00	-75	0.14	-0.437	-3.156
8:00	-60	0.49	-0.081	-0.164	8:00	-60	0.35	-0.490	-1.383
9:00	-45	0.70	-0.130	-0.187	9:00	-45	0.54	-0.535	-0.992
10:00	-30	0.85	-0.168	-0.197	10:00	-30	0.68	-0.569	-0.836
11:00	-15	0.95	-0.192	-0.202	11:00	-15	0.77	-0.591	-0.767
12:00	0	0.98	-0.200	-0.204	12:00	0	0.80	-0.599	-0.748
13:00	15	0.95	-0.192	-0.202	13:00	15	0.77	-0.591	-0.767
14:00	30	0.85	-0.168	-0.197	14:00	30	0.68	-0.569	-0.836
15:00	45	0.70	-0.130	-0.187	15:00	45	0.54	-0.535	-0.992
16:00	60	0.49	-0.081	-0.164	16:00	60	0.35	-0.490	-1.383
17:00	75	0.26	-0.024	-0.091	17:00	75	0.14	-0.437	-3.156
18:00	90	0.01	0.038	4.093	18:00	90	-0.09	-0.380	4.093

ตารางที่ 3.15 แสดงค่า Cosine of Angle of incidence ,Cosine of Zenith และ RB (ต่อ)

19 LIGHT SOURCES: THEIR CHARACTERISTICS AND APPLICATION

TABLE 19.6A Coefficients of Utilization^aData: 75% Ceiling Reflectance^b, 30% Floor Reflectance, No Window Controls

(1) Overcast Sky

Length ^c :	CU					
	20 ft		30 ft		40 ft	
	Wall Reflectance:					
	70%	30%	70%	30%	70%	30%
Depth (ft) ^c						
20	.0248	.0226	.0172	.0156	.0129	.0121
Max 30	.0245	.0223	.0169	.0155	.0123	.0118
40	.0242	.0221	.0164	.0154	.0120	.0117
20	.0143	.0105	.0091	.0078	.0073	.0064
Mid 30	.0052	.0045	.0049	.0036	.0031	.0030
40	.0035	.0024	.0027	.0021	.0020	.0017
20	.0078	.0048	.0057	.0039	.0045	.0033
Min 30	.0029	.0017	.0026	.0015	.0018	.0013
40	.0017	.0008	.0014	.0008	.0011	.0007

(2) Clear Sky

Depth (ft)						
20	.0185	.0156	.0129	.0111	.0099	.0088
Max 30	.0183	.0156	.0123	.0108	.0088	.0083
40	.0180	.0151	.0118	.0107	.0086	.0082
20	.0138	.0094	.0090	.0071	.0075	.0060
Mid 30	.0074	.0049	.0056	.0039	.0041	.0033
40	.0047	.0029	.0036	.0025	.0026	.0021
20	.0095	.0054	.0071	.0044	.0060	.0039
Min 30	.0049	.0025	.0042	.0021	.0029	.0019
40	.0028	.0013	.0024	.0012	.0019	.0011

(3) Uniform Brightness Ground

Depth (ft)						
20	.0132	.0101	.0092	.0079	.0073	.0064
Max 30	.0127	.0101	.0088	.0079	.0069	.0063
40	.0123	.0101	.0084	.0077	.0065	.0062
20	.0115	.0081	.0085	.0064	.0066	.0054
Mid 30	.0075	.0051	.0056	.0043	.0045	.0037
40	.0050	.0033	.0040	.0030	.0038	.0023
20	.0095	.0064	.0074	.0049	.0060	.0040
Min 30	.0046	.0023	.0037	.0021	.0030	.0019
40	.0026	.0015	.0023	.0011	.0020	.0010

^aInformation in Table 19.6A was supplied by Prof. B. Evans of Virginia Polytechnic Institute and State University and is reproduced with his permission.

^bTo convert CU figures for a ceiling reflectance of 80%, divide by 0.9.

^cLength is dimension along the window wall; depth is dimension at right angles to window.

TABLE 19.6B K Factors

80/75% CLG Reflectance, 30% Floor Reflectance

(1) Overcast Sky

Ceiling Ht:	K								
	8 ft		10 ft		12 ft		14 ft		
Wall Reflectance:	70%	30%	70%	30%	70%	30%	70%	30%	
Width (ft)									
Max	20	.125	.129	.121	.123	.111	.111	.0991	.0973
	30	.122	.131	.122	.121	.111	.111	.0945	.0973
	40	.145	.133	.131	.126	.111	.111	.0973	.0982
Mid	20	.0908	.0982	.107	.115	.111	.111	.105	.122
	30	.156	.102	.0939	.113	.111	.111	.121	.134
	40	.106	.0948	.123	.107	.111	.111	.135	.127
Min	20	.0908	.102	.0951	.114	.111	.111	.118	.134
	30	.0924	.119	.101	.114	.111	.111	.125	.126
	40	.111	.0926	.125	.109	.111	.111	.133	.130

(2) Clear Sky

Width (ft)									
Max	20	.145	.155	.129	.132	.111	.111	.101	.0982
	30	.141	.149	.125	.130	.111	.111	.0954	.101
	40	.157	.157	.135	.134	.111	.111	.0964	.0991
Mid	20	.110	.128	.116	.126	.111	.111	.103	.108
	30	.106	.125	.110	.129	.111	.111	.112	.120
	40	.117	.118	.122	.118	.111	.111	.123	.122
Min	20	.105	.129	.112	.130	.111	.111	.111	.116
	30	.0994	.144	.107	.126	.111	.111	.107	.124
	40	.119	.116	.130	.118	.111	.111	.120	.118

(3) Uniform Brightness Ground

Width (ft)									
Max	20	.124	.206	.140	.135	.111	.111	.0909	.0859
	30	.182	.188	.140	.143	.111	.111	.0918	.0878
	40	.124	.182	.140	.142	.111	.111	.0936	.0879
Mid	20	.123	.145	.122	.129	.111	.111	.100	.0945
	30	.0966	.104	.107	.112	.111	.111	.110	.105
	40	.0790	.0786	.0999	.106	.111	.111	.118	.118
Min	20	.0994	.108	.110	.114	.111	.111	.107	.104
	30	.0816	.0822	.0984	.105	.111	.111	.121	.116
	40	.0700	.0656	.0946	.0986	.111	.111	.125	.132

The quantity enclosed in square brackets represents the daylight entering the room through the window. Factor *CU* modifies this entering light in

accordance with room *length* and depth. Factor *K* further accommodates the entering light in accordance with room *height* and depth. It requires

**Transmission Data and Light
Loss Factors for Windows—IES Method**

*(a) Transmittance Data of Glass and Plastic
Materials*

<i>Material</i>	<i>Transmittance (percent)</i>
Polished plate window glass	80–90
Sheet drawn window glass	85–91
Heat-absorbing plate glass	70–80
Neutral low-transmission glass	10–60
Corrugated glass	80–85
Glass block	60–80
Clear plastic sheet	80–92
Colorless patterned plastic	80–90

Source: From *Recommended Practice of Daylighting*, IES.

*(b) Average Window Maintenance Factors Expressed as Percentage of
Clean Glass Transmission*

	<i>Office^a</i>		<i>Factory^b</i>		
	<i>Window Position</i>				
	<i>Vertical</i>	<i>Vertical</i>	<i>30° from Vertical</i>	<i>60° from Vertical</i>	<i>Horizontal</i>
3-month cleaning cycle	82%	69%	62%	54%	50%
6-month cleaning cycle	73%	55%	45%	39%	34%

Source: From *Recommended Practice of Daylighting*, IES.

^aTypical clean location.

^bTypical dirty location.

**TABLE 19.7 Reflectances of Building Materials
and Outside Surfaces**

<i>Material^a</i>	<i>Reflec- tance (In per- cent)</i>	<i>Material</i>	<i>Reflec- tance (In per- cent)</i>
Bluestone, sandstone	18	Asphalt (free from dirt)	7
Brick		Earth (moist culti- vated)	7
light buff	48	Granolite pavement	17
dark buff	40	Grass (dark green)	6
dark red glazed	30	Gravel	13
Cement	27	Macadam	18
Concrete	55	Slate (dark clay)	8
Granite	40	Snow	
Marble (white)	45	new	74
Paint (white)		old	64
new	75	Vegetation (mean)	25
old	55		

Source: From *Recommended Practice of Daylighting*, IES.

DAY	B	E	δ	DAY	B	E	δ	DAY	B	E	δ
1	-79.12	-3.61	-23.01	62	-18.79	-12.67	-7.54	123	41.54	3.17	15.52
2	-79.13	-4.05	-22.93	63	-17.80	-12.46	-7.15	124	42.53	3.27	15.82
3	-77.11	-4.50	-22.84	64	-16.81	-12.24	-6.76	125	43.52	3.36	16.11
4	-76.15	-4.93	-22.75	65	-15.82	-12.01	-6.38	126	44.51	3.45	16.40
5	-75.16	-5.36	-22.65	66	-14.84	-11.78	-5.99	127	45.49	3.52	16.69
6	-74.18	-5.79	-22.54	67	-13.85	-11.54	-5.60	128	46.48	3.58	16.97
7	-73.19	-6.21	-22.42	68	-12.86	-11.29	-5.20	129	47.47	3.64	17.25
8	-72.20	-6.62	-22.30	69	-11.87	-11.03	-4.81	130	48.46	3.68	17.52
9	-71.21	-7.03	-22.17	70	-10.88	-10.77	-4.41	131	49.45	3.72	17.78
10	-70.22	-7.42	-22.04	71	-9.89	-10.50	-4.02	132	50.44	3.74	18.04
11	-69.23	-7.81	-21.90	72	-8.90	-10.22	-3.62	133	51.43	3.75	18.30
12	-68.24	-8.19	-21.75	73	-7.91	-9.94	-3.22	134	52.42	3.76	18.55
13	-67.25	-8.57	-21.60	74	-6.92	-9.66	-2.82	135	53.41	3.75	18.79
14	-66.26	-8.93	-21.44	75	-5.93	-9.36	-2.42	136	54.40	3.74	19.03
15	-65.27	-9.29	-21.27	76	-4.95	-9.07	-2.02	137	55.38	3.72	19.26
16	-64.29	-9.63	-21.10	77	-3.96	-8.77	-1.61	138	56.37	3.68	19.49
17	-63.30	-9.97	-20.92	78	-2.97	-8.46	-1.21	139	57.36	3.64	19.71
18	-62.31	-10.29	-20.73	79	-1.98	-8.15	-0.81	140	58.35	3.59	19.93
19	-61.32	-10.61	-20.54	80	-0.99	-7.84	-0.40	141	59.34	3.53	20.14
20	-60.33	-10.91	-20.34	81	0.00	-7.53	0.00	142	60.33	3.46	20.34
21	-59.34	-11.21	-20.14	82	0.99	-7.21	0.40	143	61.32	3.38	20.54
22	-58.35	-11.49	-19.93	83	1.98	-6.90	0.81	144	62.31	3.30	20.73
23	-57.36	-11.76	-19.71	84	2.97	-6.58	1.21	145	63.30	3.20	20.92
24	-56.37	-12.02	-19.49	85	3.96	-6.26	1.61	146	64.29	3.10	21.10
25	-55.38	-12.27	-19.26	86	4.95	-5.94	2.02	147	65.27	2.99	21.27
26	-54.40	-12.51	-19.03	87	5.93	-5.61	2.42	148	66.26	2.87	21.44
27	-53.41	-12.73	-18.79	88	6.92	-5.29	2.82	149	67.25	2.74	21.60
28	-52.42	-12.94	-18.55	89	7.91	-4.97	3.22	150	68.24	2.61	21.75
29	-51.43	-13.14	-18.30	90	8.90	-4.65	3.62	151	69.23	2.47	21.90
30	-50.44	-13.33	-18.04	91	9.89	-4.34	4.02	152	70.22	2.33	22.04
31	-49.45	-13.51	-17.78	92	10.88	-4.02	4.41	153	71.21	2.17	22.17
32	-48.46	-13.67	-17.52	93	11.87	-3.70	4.81	154	72.20	2.02	22.30
33	-47.47	-13.82	-17.25	94	12.86	-3.39	5.20	155	73.19	1.85	22.42
34	-46.48	-13.95	-16.97	95	13.85	-3.08	5.60	156	74.18	1.68	22.54
35	-45.49	-14.08	-16.69	96	14.84	-2.78	5.99	157	75.16	1.51	22.65
36	-44.51	-14.19	-16.40	97	15.82	-2.47	6.38	158	76.15	1.33	22.75
37	-43.52	-14.29	-16.11	98	16.81	-2.18	6.76	159	77.14	1.14	22.84
38	-42.53	-14.37	-15.82	99	17.80	-1.88	7.15	160	78.13	0.96	22.93
39	-41.54	-14.44	-15.52	100	18.79	-1.59	7.53	161	79.12	0.76	23.01
40	-40.55	-14.50	-15.21	101	19.78	-1.31	7.91	162	80.11	0.57	23.09
41	-39.56	-14.54	-14.90	102	20.77	-1.03	8.29	163	81.10	0.37	23.15
42	-38.57	-14.57	-14.59	103	21.76	-0.75	8.67	164	82.09	0.17	23.21
43	-37.58	-14.59	-14.27	104	22.75	-0.47	9.04	165	83.08	-0.03	23.27
44	-36.59	-14.50	-13.95	105	23.74	-0.22	9.41	166	84.07	-0.24	23.31
45	-35.60	-14.59	-13.62	106	24.73	0.03	9.79	167	85.05	-0.45	23.35
46	-34.62	-14.57	-13.29	107	25.71	0.28	10.15	168	86.04	-0.66	23.39
47	-33.63	-14.54	-12.95	108	26.70	0.52	10.51	169	87.03	-0.87	23.41
48	-32.64	-14.50	-12.62	109	27.69	0.76	10.87	170	88.02	-1.08	23.43
49	-31.65	-14.44	-12.27	110	28.68	0.99	11.22	171	89.01	-1.29	23.44
50	-30.66	-14.37	-11.93	111	29.67	1.21	11.58	172	90.00	-1.50	23.45
51	-29.67	-14.29	-11.58	112	30.66	1.42	11.93	173	90.99	-1.71	23.45
52	-28.68	-14.20	-11.23	113	31.65	1.62	12.27	174	91.98	-1.92	23.44
53	-27.69	-14.09	-10.87	114	32.64	1.82	12.62	175	92.97	-2.13	23.42
54	-26.70	-13.98	-10.51	115	33.63	2.00	12.95	176	93.96	-2.34	23.40
55	-25.71	-13.95	-10.15	116	34.62	2.18	13.29	177	94.95	-2.54	23.37
56	-24.73	-13.71	-9.78	117	35.60	2.35	13.62	178	95.93	-2.74	23.34
57	-23.74	-13.56	-9.41	118	36.59	2.51	13.95	179	96.92	-2.94	23.29
58	-22.75	-13.40	-9.04	119	37.58	2.66	14.27	180	97.91	-3.14	23.24
59	-21.76	-13.23	-8.67	120	38.57	2.80	14.59	181	98.90	-3.33	23.18
60	-20.77	-13.05	-8.29	121	39.56	2.93	14.90	182	99.89	-3.52	23.12
61	-19.78	-12.86	-7.91	122	40.55	3.05	15.21	183	100.88	-3.71	23.05

ตารางที่ 3.14 แลพองค่า SOLAR TIME (E) และ DECLINATION (δ)

DA7	B	E	δ	DA7	B	E	δ	DA7	B	E	δ
184	101.87	-4.49	22.47	214	162.20	0.36	7.34	306	222.53	16.10	-13.67
185	102.86	-4.47	22.49	216	163.11	1.31	6.36	307	223.52	16.35	-13.46
186	103.85	-4.44	22.46	217	164.18	1.66	6.57	308	224.51	16.29	-13.26
187	104.84	-4.41	22.76	218	165.16	2.31	6.13	309	225.40	16.22	-13.55
188	105.82	-4.37	22.50	219	166.15	2.37	6.17	310	226.40	16.19	-13.43
189	106.81	-4.32	22.43	220	167.14	2.72	5.40	311	227.47	16.02	-13.12
190	107.80	-4.37	22.36	221	168.13	3.09	5.01	312	228.46	15.91	-12.89
191	108.79	-4.31	22.21	222	169.12	3.45	4.61	313	229.45	15.79	-12.65
192	109.78	-4.15	22.11	223	170.11	3.82	4.22	314	230.44	15.64	-12.91
193	110.77	-4.28	21.97	224	171.10	4.19	3.82	315	231.43	15.47	-13.17
194	111.76	-4.40	21.83	225	172.09	4.56	3.42	316	232.42	15.32	-13.42
195	112.75	-4.51	21.67	226	173.08	4.93	3.02	317	233.41	15.11	-13.67
196	113.74	-4.62	21.52	227	174.07	5.30	2.62	318	234.40	14.95	-13.92
197	114.73	-4.71	21.35	228	175.05	5.68	2.22	319	235.39	14.74	-14.15
198	115.71	-4.80	21.18	229	176.04	6.05	1.81	320	236.37	14.52	-13.36
199	116.70	-4.88	21.01	230	177.03	6.42	1.41	321	237.36	14.29	-13.63
200	117.68	-4.95	20.84	231	178.02	6.79	1.01	322	238.35	14.05	-13.92
201	118.66	-5.01	20.68	232	179.01	7.16	0.61	323	239.34	13.79	-14.20
202	119.67	-5.07	20.44	233	180.00	7.53	0.21	324	240.33	13.52	-14.51
203	120.66	-5.11	20.24	234	180.99	7.90	-0.19	325	241.32	13.24	-14.84
204	121.65	-5.14	20.03	235	181.98	8.26	-0.61	326	242.31	12.93	-15.18
205	122.64	-5.17	19.82	236	182.97	8.62	-1.01	327	243.30	12.58	-15.52
206	123.63	-5.19	19.60	237	183.96	8.97	-1.41	328	244.29	12.34	-15.87
207	124.62	-5.18	19.38	238	184.95	9.33	-1.81	329	245.27	12.01	-16.23
208	125.60	-5.19	19.15	239	185.93	9.67	-2.22	330	246.26	11.68	-16.58
209	126.59	-5.16	18.91	270	186.92	10.02	-2.62	331	247.25	11.33	-16.92
210	127.58	-5.14	18.67	271	187.91	10.36	-3.02	332	248.24	10.98	-17.27
211	128.57	-5.10	18.42	272	188.90	10.69	-3.42	333	249.23	10.62	-17.63
212	129.56	-5.05	18.17	273	189.89	11.02	-3.82	334	250.22	10.25	-17.97
213	130.55	-5.00	17.91	274	190.88	11.34	-4.22	335	251.21	9.87	-18.31
214	131.54	-4.93	17.65	275	191.87	11.65	-4.61	336	252.20	9.48	-18.64
215	132.53	-4.95	17.39	276	192.86	11.96	-5.01	337	253.19	9.09	-18.96
216	133.52	-4.96	17.11	277	193.85	12.26	-5.40	338	254.18	8.68	-19.29
217	134.51	-4.96	16.83	278	194.84	12.55	-5.79	339	255.16	8.26	-19.63
218	135.49	-4.95	16.55	279	195.82	12.83	-6.18	340	256.15	7.85	-19.97
219	136.48	-4.93	16.26	280	196.81	13.11	-6.57	341	257.14	7.42	-20.30
220	137.47	-4.90	15.96	281	197.80	13.37	-6.96	342	258.13	6.99	-20.63
221	138.46	-4.86	15.67	282	198.79	13.63	-7.34	343	259.12	6.55	-20.97
222	139.45	-4.80	15.36	283	199.78	13.89	-7.72	344	260.11	6.11	-21.30
223	140.44	-4.84	15.06	284	200.77	14.12	-8.10	345	261.10	5.66	-21.62
224	141.43	-4.67	14.74	285	201.76	14.35	-8.48	346	262.09	5.21	-21.94
225	142.42	-4.49	14.43	286	202.75	14.56	-8.86	347	263.08	4.76	-22.24
226	143.41	-4.30	14.11	287	203.74	14.77	-9.23	348	264.07	4.30	-22.52
227	144.40	-4.09	13.78	288	204.73	14.97	-9.60	349	265.05	3.84	-22.84
228	145.39	-3.88	13.45	289	205.71	15.15	-9.97	350	266.04	3.37	-23.17
229	146.37	-3.66	13.12	290	206.70	15.33	-10.33	351	267.03	2.91	-23.49
230	147.36	-3.43	12.79	291	207.69	15.49	-10.69	352	268.02	2.44	-23.82
231	148.35	-3.19	12.45	292	208.68	15.64	-11.05	353	269.01	1.97	-24.14
232	149.34	-2.95	12.10	293	209.67	15.78	-11.40	354	270.00	1.50	-24.45
233	150.33	-2.69	11.75	294	210.66	15.90	-11.75	355	270.99	1.03	-24.75
234	151.32	-2.43	11.40	295	211.65	16.01	-12.10	356	271.98	0.56	-25.04
235	152.31	-2.15	11.05	296	212.64	16.12	-12.45	357	272.97	0.09	-25.33
236	153.30	-1.87	10.69	297	213.63	16.20	-12.79	358	273.96	-0.38	-25.61
237	154.29	-1.58	10.33	298	214.62	16.29	-13.12	359	274.95	-0.85	-25.89
238	155.27	-1.29	9.97	299	215.60	16.34	-13.45	360	275.93	-1.32	-26.15
239	156.26	-0.98	9.60	300	216.59	16.39	-13.78	361	276.92	-1.79	-26.41
240	157.25	-0.67	9.23	301	217.58	16.42	-14.10	362	277.91	-2.24	-26.67
241	158.24	-0.36	8.86	302	218.57	16.44	-14.43	363	278.90	-2.70	-26.91
242	159.23	0.04	8.49	303	219.56	16.45	-14.75	364	279.89	-3.16	-27.15
243	160.22	0.29	8.11	304	220.55	16.45	-15.07	365	280.88	-3.61	-27.38
244	161.21	0.63	7.73	305	221.54	16.43	-15.39				

ประวัติผู้เขียน



นายวิรัช ควรวประเสริฐ เกิดวันที่ 11 มิถุนายน พ.ศ. 2510 ที่กรุงเทพมหานคร สำเร็จการศึกษา
ระดับปริญญาตรีเกียรตินิยม สถาปัตยกรรมศาสตร์บัณฑิต สาขาสถาปัตยกรรม คณะสถาปัตยกรรม
ศาสตร์ สถาบันเทคโนโลยีพระจอมเกล้าเจ้าคุณทหารลาดกระบัง ในปีการศึกษา 2531 และเข้า
ศึกษาต่อในหลักสูตรสถาปัตยกรรมศาสตร์มหาบัณฑิตที่จุฬาลงกรณ์มหาวิทยาลัย เมื่อ พ.ศ. 2535
ปัจจุบัน เป็นสถาปนิกโครงการของบริษัท ดีไซน์+ดีเวลลอป จำกัด