JULY 2003
LOCAL CLIMATOLOGICAL DATA
NOAA, National Climatic Data Center

WILMINGTON, DE
NEW CASTLE COUNTY AP (ILG)
Lat: 39°40' N Long: 75°36' W Elev (Ground): 92 Feet
Time Zone: EASTERN WBAN: 13781 ISSN #:0198−117X

DATE	TEMPERATURE °F MAXIMUM	MINIMUM	AVERAGE	DEP FROM NORMAL	AVERAGE DEW PT	AVERAGE WET BULB	DEG DAYS BASE 65° HEATING	COOLING	WEATHER	SNOW/ICE ON GND(IN) 0700 LST DEPTH	1300 LST WATER EQUIV	PRECIPITATION (INCHES) 2400 LST SNOW−FALL	2400 LST WATER EQUIV	PRESSURE (INCHES OF HG) AVERAGE STATION	AVERAGE SEA LEVEL	WIND SPEED = MPH DIR = TENS OF DEGREES RESULTANT SPEED	RES DIR	AVERAGE SPEED	MAXIMUM 5−SEC SPEED	5−SEC DIR	MAXIMUM 2−MIN SPEED	2−MIN DIR	DATE
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
01	85	64	75	0	60	66	0	10		0		0.0	0.00	30.02	30.10	2.8	31	5.3	16	04	12	29	01
02	81	66	74	-2	68	70	0	9	RA BR HZ	0		0.0	0.12	29.91	29.99	6.6	14	7.2	20	16	17	14	02
03	78	67	73	-3	69	70	0	8	RA BR	0		0.0	0.60	29.77	29.85	8.2	04	9.0	21	06	17	04	03
04	89	67	78	2	71	73	0	13	RA BR HZ	0		0.0	T	29.81	29.89	6.3	23	6.7	20	24	16	25	04
05	92*	73	83*	7	72	75	0	18	TS TSRA RA BR HZ VCTS	0		0.0	0.11	29.82	29.90	7.0	25	8.3	36	31	30	31	05
06	90	71	81	5	73	75	0	16	TSRA RA BR SQ VCTS	0		0.0	0.51	29.84	29.92	3.7	26	5.7	46*	22	31*	23	06
07	88	69	79	3	72	74	0	14	RA BR	0		0.0	T	29.85	29.93	6.7	24	7.6	22	23	18	24	07
08	88	72	80	4	71	74	0	15		0		0.0	0.00	29.86	29.94	8.0	26	8.8	22	28	16	29	08
09	88	69	79	3	70	73	0	14	RA BR VCTS	0		0.0	0.26	29.83	29.91	4.9	29	9.1	23	27	20	24	09
10	70	66	68*	-8	66	67	0	3	RA BR VCTS	0		0.0	0.07	29.85	29.94	8.4	06	9.6	17	09	14	10	10
11	85	68	77	1	69	71	0	12	RA BR VCTS	0		0.0	0.10	29.70	29.78	5.3	22	7.2	32	21	26	21	11
12	84	65	75	-2	62	67	0	10	RA VCTS	0		0.0	0.07	29.85	29.94	9.5	23	9.7	35	23	26	23	12
13	82	63	73	-4	61	66	0	8	RA	0		0.0	0.05	30.01	30.10	3.9	28	5.2	18	33	13	29	13
14	77	67	72	-5	66	68	0	7	RA BR	0		0.0	0.26	30.10	30.18	6.2	10	6.6	16	09	13	11	14
15	80	63	72	-5	66	68	0	7	BR HZ	0		0.0	0.00	30.02	30.11	6.9	15	8.0	24	16	21	15	15
16	88	70	79	2	68	72	0	14		0		0.0	0.00	29.87	29.95	6.7	24	9.6	23	28	18	28	16
17	83	63	73	-4	59	65	0	8		0		0.0	0.00	29.99	30.07	6.4	30	7.7	18	27	14	29	17
18	85	62	74	-3	65	68	0	9	RA BR	0		0.0	T	29.91	30.00	3.9	23	5.0	18	25	15	21	18
19	84	66	75	-2	59	65	0	10	BR	0		0.0	0.00	29.90	29.99	5.5	34	6.6	16	31	14	02	19
20	84	60*	72	-5	61	66	0	7		0		0.0	0.00	29.92	30.01	5.3	18	7.4	22	16	18	15	20
21	90	70	80	3	72	75	0	15	BR HZ	0		0.0	0.00	29.76	29.84	11.3	18	11.6	28	18	22	17	21
22	87	72	80	3	73	75	0	15	TSRA RA BR HZ	0		0.0	0.08	29.68	29.76	9.1	21	10.2	23	21	20	20	22
23	81	71	76	-1	71	72	0	11	RA BR	0		0.0	0.10	29.77	29.85	7.7	19	8.7	21	16	17	17	23
24	81	70	76	-1	67	70	0	11	TS TSRA RA BR	0		0.0	0.12	29.92	30.00	7.2	22	8.3	18	22	15	24	24
25	86	64	75	-2	61	67	0	10		0		0.0	0.00	30.14	30.22	4.3	27	5.9	15	29	13	25	25
26	88	65	77	0	67	71	0	12		0		0.0	0.00	30.13	30.21	7.7	22	8.2	21	22	17	23	26
27	90	74	82	5	72	75	0	17	RA BR HZ VCTS	0		0.0	0.02	29.88	29.96	10.1	22	10.5	31	24	24	24	27
28	85	69	77	0	69	72	0	12	RA BR HZ	0		0.0	0.04	29.78	29.86	4.6	29	6.3	17	31	14	30	28
29	81	63	72	-5	63	67	0	7	RA	0		0.0	T	29.89	29.98	1.3	11	6.6	16	14	14	14	29
30	79	62	71	-6	64	66	0	6	RA BR	0		0.0	0.27	30.07	30.15	5.4	09	7.2	17	08	14	10	30
31	80	68	74	-3	69	70	0	9	RA BR	0		0.0	0.07	30.05	30.14	8.8	05	9.4	18	06	16	05	31
	84.2	67.1	75.7		67.0	70.1	0.0	10.9	< MONTHLY AVERAGES TOTALS−>			0.0	2.85	29.90	29.98	2.2	20	7.9					<− MONTHLY AVERAGES
	-1.8	-.2	-.9		<−−−−−−−−−−−−−DEPARTURE FROM NORMAL−−−−−−−−−−−−−>								-1.43	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3									

JULY 2003
WILMINGTON, DE

DEGREE DAYS

	MONTHLY TOTAL	MONTHLY DEPARTURE	SEASON TO DATE TOTAL	SEASON TO DATE DEPARTURE
HEATING:	0	-1	0	-1
COOLING:	337	-31	524	-132

GREATEST 24−HR PRECIPITATION: 0.72 DATE :02-03
GREATEST 24−HR SNOWFALL: 0.0 DATE :
GREATEST SNOW DEPTH: 0 DATE :

SEA LEVEL PRESSURE		DATE	TIME
MAXIMUM	30.29	26	0751
MINIMUM	29.72	22	1851

NUMBER OF DAYS WITH →

MAXIMUM TEMP ≥ 90:	4	MINIMUM TEMP ≤ 32 :	0
MAXIMUM TEMP ≤ 32 :	0	MINIMUM TEMP ≤ 0 :	0
THUNDERSTORMS :	4	HEAVY FOG :	0
PRECIPITATION ≥ 0.01 INCH :	17		
PRECIPITATION ≥ 0.10 INCH :	10		
SNOWFALL ≥ 1.0 INCH :	0		

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

WILMINGTON, DE

JULY 2003 ILG WBAN # 13781

DATE	FOR HOUR (LST) ENDING AT												DATE	FOR HOUR (LST) ENDING AT												DATE	Sum if Different (See Note)	2400 LST Water Equiv.
	1	2	3	4	5	6	7	8	9	10	11	12		13	14	15	16	17	18	19	20	21	22	23	24			
01													01													01		0.00
02													02					T	T	0.07	0.04	T	T	T	0.01	02		0.12
03	T	0.02	0.31	0.16	0.06	T				T	T		03	T	T	0.01	0.04									03		0.60
04													04							T						04		T
05													05												0.11	05		0.11
06													06					0.33	T					0.10	0.08	06		0.51
07	T												07				T									07		T
08													08													08		0.00
09													09							T	0.22	0.03	T		0.01	09		0.26
10	T		T	T	0.05			T	T	T			10											0.01		10	0.06	0.07
11	0.01	T	0.02										11				0.08									11	0.11	0.10
12													12								0.06	T	0.01			12		0.07
13		0.05											13													13		0.05
14					T	0.07	0.16	0.03	T				14													14		0.26
15													15													15		0.00
16													16													16		0.00
17													17													17		0.00
18													18			T	T	T	T					T		18		T
19													19													19		0.00
20													20													20		0.00
21													21													21		0.00
22													22		T								0.06	0.01	0.01	22		0.08
23	0.01	T		T	0.02	0.02				T	0.01		23	0.04												23		0.10
24		0.09	0.02	0.01									24													24		0.12
25													25													25		0.00
26													26													26		0.00
27						T	0.02					T	27											T	T	27		0.02
28						T	T	T					28				T	T	T			0.01	0.03	T	T	28		0.04
29			T										29													29		T
30													30											0.26	0.01	30		0.27
31													31													31	0.00	0.07

MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)	.14	.20	.26	.28	.31	.32	.36	.42	.44	.52	.53	.55
Ending Date	06	06	06	06	06	06	03	03	03	03	03	03
Ending Time (Hour/Min)	1621	1623	1624	1624	1635	1648	0303	0323	0357	0357	0412	0412

Date and time are not entered for TRACE amounts.

Note : The sum of the hourly totals is given when it differs from the daily total. NWS does not edit ASOS hourly values but may edit daily and monthly totals. Hourly, daily, and monthly totals are printed as reported by the ASOS site.

REFERENCE NOTES & SUPPLEMENTAL SUMMARIES

* = Extreme for the month (last occurence if more than one)
T = Trace precipitation amount
+ = also occurs on earlier date
FG+ = Heavy fog, visibility .25 miles or less
BLANK entries denote missing or unreported data

Resultant wind is the vector sum of the wind speeds and directions divided by the number of observations.

Wind direction is recorded in tens of degrees (2 digits) clockwise from true north. '00' = calm, 'VR' = variable.

Precipitation is for the 24−hour period ending at the time indicated in the column heading.

Water Equivalent of snow on the ground is reported only when the depth is 2 or more inches.

NORMALS ARE FOR THE YEARS 1971−2000

WEATHER NOTATIONS

QUALIFIER	WEATHER PHENOMENA		
DESCRIPTOR	PRECIPITATION	OBSCURATION	OTHER
BC Patches	DZ Drizzle	BR Mist	DS Duststorm
BL Blowing	GR Hail	DU Widespread Dust	FC Funnel Cloud
DR Low Drifting	GS Small Hail and/or Snow Pellets	FG Fog	+FC Tornado Waterspout
FZ Freezing	IC Ice Crystals	FU Smoke	PO Well−Developed Dust/Sand Whirls
MI Shallow	PL Ice Pellets	HZ Haze	SQ Squalls
PR Partial	RA Rain	PY Spray	SS Sandstorm
SH Shower(s)	SG Snow Grains	SA Sand	GL Glaze
TS Thunderstorm	SN Snow	VA Volcanic Ash	
VC In the Vicinity	UP Unknown Precipitation		

Intensity (as indicated on pages 4 to 6):
'+' = Heavy ' ' = Moderate '−' = Light

WILMINGTON, DE
JULY 2003

Ceilometer (30−second) data are used to derive cloudiness at or below 12,000 feet. This cloudiness is the mean cloud cover detected during sunrise to sunset (SR−SS), or midnight to midnight (MN−MN).

Satellite data are used to derive cloudiness above 12,000 feet. Effective Cloud Amount is based on the cloud cover and the transparency of the clouds within the satellite field of view (approx. 31x31 miles).

Sky Condition is based on the sum (not to exceed 8) of the sunrise to sunset cloud cover below and above 12,000 feet. Both ceilometer and satellite data must be present to compute Sky Condition. Clear = 0−2 oktas, Partly Cloudy = 3−6 oktas, Cloudy = 7−8 oktas.

A Heating (Cooling) Degree Day is the difference between the average daily temperature and 65 degrees F. The HDD season begins July 1, the CDD season begins January 1.

Dew Point is the temperature to which the air must be cooled to achieve 100% relative humidity.
Wet Bulb is the temperature the air would have if cooled to saturation at constant pressure by evaporation of water into it.

Snow Depth, Snowfall, and Sunshine data may come from nearby sites that the National Weather Service deems Climatologically representative of this site.

ADDITIONAL NOTES:

DATE	SUNSHINE		CLOUDINESS (OKTAS)				VISIBILITY (MILES)		RESERVED
			SR−SS		MN−MN				
	TOTAL MINUTES	PERCENT POSSIBLE	CEILOMETER	SATELLITE	CEILOMETER	SATELLITE	MINIMUM	MAXIMUM	
01							10.00	10.00	
02							3.00	10.00	
03							2.00	10.00	
04							2.50	10.00	
05							2.50	10.00	
06							.75	10.00	
07							5.00	10.00	
08							10.00	10.00	
09							3.00	10.00	
10							5.00	10.00	
11							1.75	10.00	
12							9.00	10.00	
13							8.00	10.00	
14							4.00	10.00	
15							5.00	10.00	
16							7.00	10.00	
17							10.00	10.00	
18							6.00	10.00	
19							3.00	10.00	
20							9.00	10.00	
21							2.50	8.00	
22							4.00	10.00	
23							5.00	10.00	
24							4.00	10.00	
25							7.00	10.00	
26							7.00	10.00	
27							4.00	10.00	
28							5.00	10.00	
29							10.00	10.00	
30							2.50	10.00	
31							4.00	10.00	
MONTHLY AVGS							5.53	9.94	

SUNSHINE (MINUTES)

Total: Possible:
Percent Possible:

NUMBER OF DAYS WITH:

SKY CONDITION

CLR	PTLY CLDY	CLOUDY	MISSING
			31

MINIMUM VISIBILITY (MILES)

<=0.25	<=3.0	>=7.0
0	7	10

OBSERVATIONS AT 3–HOURLY INTERVALS

WILMINGTON, DE

JULY 2003 ILG WBAN # 13781

HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE: OBSERVATION TIME (LST)	SATELLITE: EFF CLD AMT Oktas	VISIBILITY (MILES)	WEATHER	TEMPERATURE ℉: DRY BULB	TEMPERATURE ℉: DEW POINT	TEMPERATURE ℉: WET BULB	RELATIVE HUMIDITY (PCT)	WIND: SPEED (MPH)	WIND: DIRECTION TENS OF DEG	PRESSURE (INCHES,HG): STATION	PRESSURE (INCHES,HG): SEA LEVEL
					SUNRISE: 0438	**JUL 01**			**SUNSET: 1934**					
01	CLR	NC			10.00		69	58	62	68	7	32	30.05	30.13
04	CLR	NC			10.00		67	60	63	79	3	31	30.05	30.14
07	CLR	NC			10.00		72	61	65	69	5	VR	30.07	30.15
10	FEW	NC			10.00		78	61	67	56	5	VR	30.06	30.15
13	CLR	NC			10.00		82	57	67	43	8	26	30.03	30.11
16	FEW	NC			10.00		84	56	67	38	5	30	29.97	30.06
19	CLR	NC			10.00		79	61	68	54	7	24	29.96	30.04
22	CLR	NC			10.00		74	64	68	71	0	00	29.97	30.05
					SUNRISE: 0439	**JUL 02**			**SUNSET: 1934**					
01	CLR	NC			10.00		69	64	66	84	0	00	29.95	30.03
04	CLR	NC			7.00		69	65	66	87	0	00	29.93	30.01
07	CLR	NC			7.00		72	67	69	84	0	00	29.94	30.02
10	CLR	NC			8.00		77	72	74	85	8	15	29.94	30.02
13	CLR	NC			10.00		80	68	72	67	15	14	29.90	29.99
16	CLR	NC			10.00		77	64	69	64	12	14	29.88	29.96
19	OVC	021			4.00	RA BR	72	70	71	94	5	15	29.86	29.95
22	BKN	022			10.00	-RA	69	68	68	96	8	16	29.86	29.94
					SUNRISE: 0439	**JUL 03**			**SUNSET: 1934**					
01	OVC	012			10.00		67	66	66	97	8	08	29.81	29.90
04	OVC	006			5.00	RA BR	67	67	67	100	13	04	29.77	29.86
07	OVC	023			8.00		68	68	68	100	12	05	29.77	29.86
10	OVC	008			8.00		70	69	69	97	12	03	29.77	29.85
13	OVC	019			10.00	-RA	74	70	71	88	12	02	29.76	29.85
16	OVC	043			10.00		75	71	72	88	7	36	29.74	29.83
19	BKN	035			10.00		75	70	72	84	6	08	29.74	29.83
22	OVC	120			10.00		73	70	71	90	5	35	29.77	29.86
					SUNRISE: 0440	**JUL 04**			**SUNSET: 1934**					
01	CLR	NC			10.00		70	70	70	100	0	00	29.78	29.87
04	CLR	NC			4.00	BR	69	69	69	100	0	00	29.78	29.87
07	CLR	NC			4.00	BR	72	71	71	97	3	24	29.83	29.92
10	CLR	NC			8.00		83	72	75	70	10	26	29.83	29.91
13	CLR	NC			9.00		88	71	76	57	14	23	29.81	29.89
16	CLR	NC			9.00		89	69	75	52	13	23	29.78	29.86
19	CLR	NC			6.00	HZ	83	72	75	70	9	25	29.79	29.87
22	CLR	NC			5.00	HZ	78	71	73	79	7	22	29.78	29.87
					SUNRISE: 0440	**JUL 05**			**SUNSET: 1933**					
01	CLR	NC			5.00	BR	75	72	73	90	5	23	29.81	29.90
04	CLR	NC			4.00	BR	74	72	73	94	7	22	29.82	29.90
07	CLR	NC			2.50	BR	77	73	74	88	6	24	29.83	29.91
10	CLR	NC			5.00	HZ	86	73	77	65	13	24	29.83	29.91
13	CLR	NC			8.00		90	71	77	54	17	28	29.82	29.90
16	BKN	055			9.00		86	70	75	59	29	31	29.81	29.90
19	CLR	NC			10.00		82	70	74	67	0	00	29.79	29.87
22	CLR	NC			10.00		79	73	75	82	5	23	29.81	29.90
					SUNRISE: 0441	**JUL 06**			**SUNSET: 1933**					
01	FEW	NC			9.00		75	72	73	90	6	22	29.80	29.88
04	CLR	NC			6.00	BR	73	72	72	96	0	00	29.80	29.89
07	CLR	NC			6.00	BR	76	73	74	91	3	25	29.84	29.93
10	CLR	NC			10.00		87	72	77	61	12	32	29.85	29.94
13	SCT	NC			10.00		88	71	76	57	9	28	29.84	29.92
16	BKN	046			9.00	VCTS	88	73	77	61	0	00	29.81	29.90
19	CLR	NC			5.00	BR	78	75	76	90	3	19	29.85	29.93
22	CLR	NC			5.00	BR	76	75	75	97	5	22	29.87	29.95

HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE: OBSERVATION TIME (LST)	SATELLITE: EFF CLD AMT Oktas	VISIBILITY (MILES)	WEATHER	TEMPERATURE ℉: DRY BULB	TEMPERATURE ℉: DEW POINT	TEMPERATURE ℉: WET BULB	RELATIVE HUMIDITY (PCT)	WIND: SPEED (MPH)	WIND: DIRECTION TENS OF DEG	PRESSURE (INCHES,HG): STATION	PRESSURE (INCHES,HG): SEA LEVEL
					SUNRISE: 0442	**JUL 07**			**SUNSET: 1933**					
01	CLR	NC			10.00		72	72	72	100	0	00	29.84	29.92
04	CLR	NC			7.00		70	70	70	100	0	00	29.86	29.95
07	CLR	NC			7.00		73	71	72	94	5	29	29.89	29.97
10	CLR	NC			10.00		80	71	74	74	10	28	29.89	29.97
13	FEW	NC			10.00		86	70	75	59	10	23	29.84	29.92
16	CLR	NC			10.00		86	72	76	63	12	22	29.80	29.88
19	CLR	NC			10.00		82	73	76	74	13	22	29.82	29.91
22	CLR	NC			10.00		77	73	74	88	7	23	29.85	29.93
					SUNRISE: 0442	**JUL 08**			**SUNSET: 1933**					
01	CLR	NC			10.00		75	74	74	96	6	23	29.84	29.93
04	CLR	NC			10.00		74	71	72	91	7	28	29.84	29.92
07	CLR	NC			10.00		78	68	71	71	7	29	29.86	29.94
10	FEW	NC			10.00		84	71	75	65	15	27	29.91	29.99
13	CLR	NC			10.00		87	70	75	57	10	30	29.86	29.94
16	CLR	NC			10.00		85	70	75	61	12	24	29.86	29.94
19	CLR	NC			10.00		83	71	75	67	9	23	29.82	29.90
22	CLR	NC			10.00		79	72	74	79	5	25	29.85	29.93
					SUNRISE: 0443	**JUL 09**			**SUNSET: 1932**					
01	CLR	NC			10.00		77	71	73	82	7	24	29.83	29.92
04	CLR	NC			10.00		75	72	73	90	3	35	29.82	29.91
07	CLR	NC			10.00		78	69	72	74	8	25	29.86	29.94
10	CLR	NC			10.00		82	68	73	63	14	28	29.85	29.93
13	FEW	NC			10.00		87	69	75	55	16	26	29.81	29.89
16	CLR	NC			10.00		85	70	75	61	9	32	29.78	29.87
19	BKN	060			10.00	-RA	80	71	74	74	8	01	29.80	29.89
22	OVC	110			10.00		71	69	70	94	8	03	29.86	29.94
					SUNRISE: 0443	**JUL 10**			**SUNSET: 1932**					
01	OVC	100			10.00		69	65	66	87	10	07	29.85	29.93
04	OVC	020			8.00	-RA	68	65	66	90	9	05	29.86	29.94
07	OVC	013			10.00		67	66	66	97	8	02	29.88	29.97
10	OVC	009			7.00	-RA	67	66	66	97	7	01	29.91	30.00
13	OVC	010			10.00		69	67	68	93	13	05	29.87	29.96
16	OVC	012			10.00		70	67	68	90	9	11	29.85	29.93
19	OVC	007			10.00		69	67	68	93	12	08	29.80	29.89
22	OVC	005			10.00		68	67	67	96	10	10	29.80	29.89
					SUNRISE: 0444	**JUL 11**			**SUNSET: 1932**					
01	OVC	003			7.00	-RA	68	68	68	100	7	11	29.72	29.81
04	OVC	005			5.00	BR	70	70	70	100	3	04	29.66	29.75
07	OVC	003			2.50	BR	71	71	71	100	0	00	29.67	29.76
10	CLR	NC			10.00		78	72	74	82	7	21	29.69	29.77
13	FEW	NC			10.00		82	69	73	65	14	22	29.68	29.77
16	OVC	070			10.00		74	69	71	85	8	20	29.67	29.76
19	CLR	NC			10.00		79	71	74	77	7	21	29.69	29.78
22	SCT	NC			10.00		74	60	65	62	6	25	29.77	29.85
					SUNRISE: 0445	**JUL 12**			**SUNSET: 1931**					
01	SCT	NC			10.00		70	59	63	68	5	22	29.80	29.88
04	CLR	NC			10.00		66	60	62	81	7	24	29.80	29.88
07	CLR	NC			10.00		71	62	65	73	6	22	29.84	29.93
10	CLR	NC			10.00		80	61	68	52	16	22	29.87	29.95
13	CLR	NC			10.00		83	61	69	48	16	24	29.85	29.93
16	BKN	080			10.00		84	61	69	46	15	23	29.82	29.91
19	BKN	065			10.00		79	63	69	58	10	22	29.86	29.94
22	OVC	060			10.00		68	64	66	87	7	20	29.92	30.01

OBSERVATIONS AT 3–HOURLY INTERVALS

WILMINGTON, DE

JULY 2003 ILG WBAN # 13781

HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE OBSERVATION TIME (LST)	SATELLITE EFF CLD AMT Oktas	VISIBILITY (MILES)	WEATHER	TEMPERATURE ℉ DRY BULB	TEMPERATURE ℉ DEW POINT	TEMPERATURE ℉ WET BULB	RELATIVE HUMIDITY (PCT)	WIND SPEED (MPH)	WIND DIRECTION TENS OF DEG	PRESSURE (INCHES,HG) STATION	PRESSURE (INCHES,HG) SEA LEVEL
					SUNRISE: 0446	**JUL 13**			**SUNSET: 1931**					
01	BKN	090			10.00		66	66	66	100	8	23	29.93	30.01
04	CLR	NC			8.00		65	65	65	100	3	23	29.92	30.01
07	CLR	NC			10.00		68	63	65	84	5	35	30.00	30.08
10	CLR	NC			10.00		77	57	65	50	6	33	30.04	30.13
13	CLR	NC			10.00		80	59	67	49	7	26	30.03	30.11
16	CLR	NC			10.00		82	59	68	46	8	29	30.02	30.11
19	CLR	NC			10.00		76	60	66	58	5	30	30.03	30.12
22	CLR	NC			10.00		73	61	66	66	0	00	30.08	30.16
					SUNRISE: 0446	**JUL 14**			**SUNSET: 1930**					
01	CLR	NC			10.00		69	64	66	84	0	00	30.06	30.15
04	OVC	110			10.00		71	66	68	84	6	13	30.07	30.15
07	OVC	025			5.00	-RA BR	67	66	66	97	7	09	30.10	30.19
10	OVC	013			10.00		70	67	68	90	8	07	30.14	30.23
13	BKN	022			10.00		76	67	70	74	8	10	30.12	30.20
16	CLR	NC			10.00		76	65	69	69	12	11	30.09	30.17
19	FEW	NC			10.00		75	64	68	69	6	07	30.06	30.15
22	FEW	NC			10.00		70	65	67	84	7	12	30.10	30.19
					SUNRISE: 0447	**JUL 15**			**SUNSET: 1930**					
01	CLR	NC			10.00		67	65	66	93	0	00	30.09	30.18
04	OVC	004			8.00		64	64	64	100	3	31	30.07	30.16
07	CLR	NC			9.00		69	65	66	87	5	04	30.07	30.16
10	FEW	NC			10.00	HZ	74	67	69	79	5	VR	30.08	30.17
13	CLR	NC			10.00		79	66	71	65	12	16	30.03	30.12
16	CLR	NC			10.00		79	66	71	65	13	15	29.96	30.05
19	CLR	NC			10.00		75	67	70	76	17	15	29.94	30.03
22	OVC	012			10.00		73	71	72	94	12	15	29.95	30.04
					SUNRISE: 0448	**JUL 16**			**SUNSET: 1929**					
01	OVC	044			9.00		71	70	70	96	9	17	29.92	30.01
04	OVC	010			10.00		71	70	70	96	9	17	29.86	29.95
07	BKN	012			7.00		75	73	74	94	12	18	29.85	29.93
10	BKN	065			8.00		81	73	75	77	12	22	29.85	29.93
13	SCT	NC			10.00		86	67	73	53	13	29	29.84	29.93
16	FEW	NC			10.00		87	65	72	48	13	25	29.84	29.93
19	CLR	NC			10.00		82	63	70	53	9	24	29.86	29.95
22	CLR	NC			10.00		76	66	70	72	5	28	29.90	29.98
					SUNRISE: 0448	**JUL 17**			**SUNSET: 1929**					
01	CLR	NC			10.00		72	61	65	69	9	35	29.95	30.03
04	CLR	NC			10.00		66	58	61	75	8	36	29.99	30.07
07	CLR	NC			10.00		70	61	64	73	6	31	30.02	30.11
10	CLR	NC			10.00		75	60	66	60	10	28	30.01	30.10
13	CLR	NC			10.00		80	58	66	47	9	29	29.99	30.08
16	CLR	NC			10.00		83	58	67	43	13	26	29.97	30.06
19	CLR	NC			10.00		78	59	66	52	7	30	29.96	30.05
22	CLR	NC			10.00		72	61	65	69	5	28	29.97	30.06
					SUNRISE: 0449	**JUL 18**			**SUNSET: 1928**					
01	CLR	NC			10.00		65	61	63	87	5	30	29.97	30.06
04	CLR	NC			10.00		64	61	62	90	5	29	29.95	30.04
07	CLR	NC			10.00		72	63	66	73	0	00	29.96	30.05
10	CLR	NC			10.00		81	67	72	62	6	22	29.94	30.03
13	CLR	NC			10.00		83	61	69	48	9	22	29.90	29.99
16	BKN	027			10.00	-RA	79	65	70	62	8	22	29.88	29.97
19	FEW	NC			10.00		77	69	72	77	6	22	29.85	29.94
22	BKN	085			8.00		74	70	71	88	5	25	29.87	29.95

HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE OBSERVATION TIME (LST)	SATELLITE EFF CLD AMT Oktas	VISIBILITY (MILES)	WEATHER	TEMPERATURE ℉ DRY BULB	TEMPERATURE ℉ DEW POINT	TEMPERATURE ℉ WET BULB	RELATIVE HUMIDITY (PCT)	WIND SPEED (MPH)	WIND DIRECTION TENS OF DEG	PRESSURE (INCHES,HG) STATION	PRESSURE (INCHES,HG) SEA LEVEL
					SUNRISE: 0450	**JUL 19**			**SUNSET: 1927**					
01	BKN	022			7.00		70	68	69	93	5	02	29.86	29.95
04	OVC	055			6.00	BR	68	66	67	93	6	36	29.86	29.95
07	BKN	095			10.00		68	62	64	81	9	35	29.89	29.98
10	CLR	NC			10.00		76	56	64	50	14	02	29.92	30.01
13	CLR	NC			10.00		82	57	67	43	8	34	29.92	30.00
16	CLR	NC			10.00		82	55	66	40	9	32	29.88	29.96
19	CLR	NC			10.00		76	55	63	48	5	29	29.90	29.98
22	CLR	NC			10.00		70	60	64	71	5	32	29.93	30.02
					SUNRISE: 0451	**JUL 20**			**SUNSET: 1927**					
01	CLR	NC			10.00		63	60	61	90	5	30	29.93	30.02
04	CLR	NC			10.00		63	59	61	87	0	00	29.92	30.01
07	CLR	NC			10.00		66	61	63	84	3	30	29.95	30.04
10	CLR	NC			10.00		79	58	66	49	5	23	29.96	30.05
13	BKN	060			10.00		83	58	67	43	10	19	29.92	30.01
16	SCT	NC			10.00		82	63	70	53	14	14	29.89	29.98
19	CLR	NC			10.00		78	62	68	58	14	15	29.89	29.98
22	CLR	NC			10.00		74	63	67	69	10	17	29.90	29.98
					SUNRISE: 0452	**JUL 21**			**SUNSET: 1926**					
01	FEW	NC			8.00		71	65	67	81	8	18	29.87	29.95
04	OVC	010			4.00	BR	71	70	70	96	8	17	29.83	29.92
07	OVC	008			3.00	BR	75	73	74	94	9	17	29.83	29.91
10	OVC	023			5.00	HZ	80	74	76	82	8	21	29.80	29.88
13	FEW	NC			6.00	HZ	89	74	78	61	14	21	29.75	29.83
16	SCT	NC			6.00	HZ	88	72	77	59	17	18	29.69	29.78
19	CLR	NC			6.00	HZ	83	72	75	70	17	17	29.66	29.75
22	CLR	NC			8.00		80	74	76	82	9	15	29.72	29.80
					SUNRISE: 0452	**JUL 22**			**SUNSET: 1925**					
01	FEW	NC			7.00		78	75	76	90	9	16	29.69	29.78
04	BKN	026			6.00	BR	78	74	75	87	8	20	29.66	29.75
07	BKN	027			4.00	HZ	79	74	75	85	12	21	29.69	29.77
10	FEW	NC			6.00	HZ	82	72	75	72	15	20	29.70	29.78
13	CLR	NC			7.00		87	73	77	63	13	23	29.66	29.75
16	FEW	NC			7.00		86	73	77	65	15	20	29.64	29.72
19	CLR	NC			10.00		81	69	73	67	12	19	29.64	29.72
22	OVC	026			8.00	-TSRA	75	72	73	90	0	00	29.71	29.79
					SUNRISE: 0453	**JUL 23**			**SUNSET: 1925**					
01	BKN	070			7.00	-RA	73	73	73	100	0	00	29.68	29.76
04	OVC	080			6.00	-RA BR	71	71	71	100	5	26	29.72	29.80
07	OVC	025			6.00	BR	71	71	71	100	7	19	29.75	29.84
10	OVC	018			9.00	-RA	75	72	73	90	9	23	29.79	29.88
13	BKN	065			9.00		77	73	74	88	10	21	29.79	29.88
16	SCT	NC			10.00		79	69	72	72	12	19	29.77	29.86
19	FEW	NC			10.00		77	70	72	79	13	17	29.78	29.87
22	CLR	NC			10.00		75	71	72	88	9	17	29.82	29.90
					SUNRISE: 0454	**JUL 24**			**SUNSET: 1924**					
01	SCT	NC			9.00		74	72	73	94	10	16	29.80	29.89
04	OVC	060			8.00		70	70	70	100	7	20	29.80	29.89
07	FEW	NC			8.00		71	70	70	96	10	24	29.86	29.95
10	CLR	NC			10.00		77	67	70	71	9	22	29.91	29.99
13	BKN	040			10.00		78	64	69	62	12	26	29.93	30.02
16	SCT	NC			10.00		81	63	69	54	12	24	29.93	30.01
19	CLR	NC			10.00		77	63	68	62	8	21	29.97	30.06
22	CLR	NC			10.00		73	65	68	76	6	20	30.03	30.12

OBSERVATIONS AT 3–HOURLY INTERVALS

WILMINGTON, DE

JULY 2003 ILG WBAN # 13781

HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE: OBSERVATION TIME (LST)	SATELLITE: EFF CLD AMT Oktas	VISIBILITY (MILES)	WEATHER	TEMPERATURE ℉: DRY BULB	TEMPERATURE ℉: DEW POINT	TEMPERATURE ℉: WET BULB	RELATIVE HUMIDITY (PCT)	WIND: SPEED (MPH)	WIND: DIRECTION TENS OF DEG	PRESSURE (INCHES,HG): STATION	PRESSURE (INCHES,HG): SEA LEVEL
					SUNRISE: 0455	JUL 25			SUNSET: 1923					
01	CLR	NC			9.00		69	65	66	87	6	24	30.04	30.13
04	CLR	NC			9.00		66	62	64	87	7	25	30.07	30.16
07	CLR	NC			10.00		70	62	65	76	9	31	30.13	30.22
10	CLR	NC			10.00		81	60	68	49	5	30	30.17	30.25
13	FEW	NC			10.00		83	60	69	46	5	VR	30.16	30.24
16	FEW	NC			10.00		84	58	68	41	5	30	30.14	30.23
19	FEW	NC			10.00		81	61	68	51	7	24	30.15	30.23
22	CLR	NC			10.00		74	63	67	69	5	20	30.17	30.26
					SUNRISE: 0456	JUL 26			SUNSET: 1922					
01	CLR	NC			10.00		67	64	65	91	6	30	30.18	30.27
04	CLR	NC			9.00		65	64	64	97	3	27	30.18	30.27
07	CLR	NC			7.00		71	69	70	94	5	18	30.21	30.29
10	CLR	NC			10.00		82	70	74	67	15	22	30.19	30.27
13	FEW	NC			10.00		86	65	72	50	12	21	30.13	30.22
16	CLR	NC			10.00		87	64	72	46	13	23	30.09	30.17
19	CLR	NC			10.00		82	67	72	60	8	20	30.06	30.14
22	CLR	NC			10.00		78	68	71	71	12	20	30.04	30.12
					SUNRISE: 0457	JUL 27			SUNSET: 1921					
01	CLR	NC			9.00		76	70	72	82	8	20	30.00	30.09
04	CLR	NC			8.00		76	71	73	85	9	22	29.98	30.07
07	CLR	NC			4.00	BR	74	73	73	97	7	18	29.98	30.06
10	CLR	NC			7.00		81	73	75	77	9	22	29.93	30.01
13	CLR	NC			9.00		85	72	76	65	12	23	29.87	29.95
16	CLR	NC			9.00		87	71	76	59	16	22	29.79	29.88
19	CLR	NC			9.00		84	72	76	67	10	21	29.76	29.84
22	OVC	075			9.00	VCTS	82	74	76	77	8	24	29.78	29.87
					SUNRISE: 0458	JUL 28			SUNSET: 1920					
01	CLR	NC			7.00		75	72	73	90	6	27	29.72	29.80
04	CLR	NC			7.00		76	71	73	85	7	27	29.74	29.83
07	FEW	NC			5.00	HZ	76	71	73	85	3	VR	29.78	29.86
10	CLR	NC			10.00		80	70	73	71	7	33	29.80	29.88
13	CLR	NC			10.00		83	66	72	57	7	VR	29.79	29.88
16	BKN	085			10.00	-RA	79	67	71	67	5	30	29.77	29.85
19	OVC	060			10.00		77	70	72	79	5	26	29.77	29.85
22	OVC	070			10.00	-RA	71	66	68	84	3	22	29.79	29.87
					SUNRISE: 0459	JUL 29			SUNSET: 1919					
01	OVC	100			10.00		68	63	65	84	7	01	29.79	29.87
04	OVC	110			10.00		67	62	64	84	7	34	29.81	29.90
07	CLR	NC			10.00		69	59	63	70	8	01	29.85	29.94
10	CLR	NC			10.00		75	60	66	60	3	VR	29.89	29.98
13	BKN	047			10.00		80	61	68	52	0	00	29.89	29.98
16	CLR	NC			10.00		79	61	68	54	6	17	29.90	29.98
19	CLR	NC			10.00		74	68	70	82	14	15	29.92	30.01
22	CLR	NC			10.00		70	65	67	84	3	12	29.98	30.06
					SUNRISE: 0459	JUL 30			SUNSET: 1918					
01	CLR	NC			10.00		66	66	66	100	3	28	30.00	30.09
04	CLR	NC			10.00		64	64	64	100	5	36	30.02	30.10
07	FEW	NC			7.00		68	66	67	93	3	02	30.05	30.14
10	CLR	NC			10.00		74	59	65	60	10	09	30.09	30.18
13	BKN	033			10.00		77	63	68	62	12	13	30.09	30.17
16	CLR	NC			10.00		77	63	68	62	10	11	30.07	30.15
19	OVC	055			10.00		74	63	67	69	10	11	30.07	30.16
22	OVC	040			10.00		72	64	67	76	6	07	30.09	30.18

HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE: OBSERVATION TIME (LST)	SATELLITE: EFF CLD AMT Oktas	VISIBILITY (MILES)	WEATHER	TEMPERATURE ℉: DRY BULB	TEMPERATURE ℉: DEW POINT	TEMPERATURE ℉: WET BULB	RELATIVE HUMIDITY (PCT)	WIND: SPEED (MPH)	WIND: DIRECTION TENS OF DEG	PRESSURE (INCHES,HG): STATION	PRESSURE (INCHES,HG): SEA LEVEL
					SUNRISE: 0500	JUL 31			SUNSET: 1918					
01	OVC	026			10.00		68	67	67	96	7	03	30.06	30.15
04	OVC	015			10.00		70	67	68	90	8	05	30.07	30.15
07	OVC	024			10.00		71	67	68	87	13	04	30.08	30.16
10	SCT	NC			10.00		77	68	71	74	10	04	30.08	30.16
13	OVC	029			10.00		79	70	73	74	8	06	30.05	30.14
16	OVC	031			10.00		78	70	73	76	12	04	30.03	30.12
19	OVC	020			10.00		75	69	71	82	9	06	30.02	30.11
22	OVC	010			10.00		71	69	70	94	8	04	30.03	30.12

3–HOURLY OBSERVATION NOTES

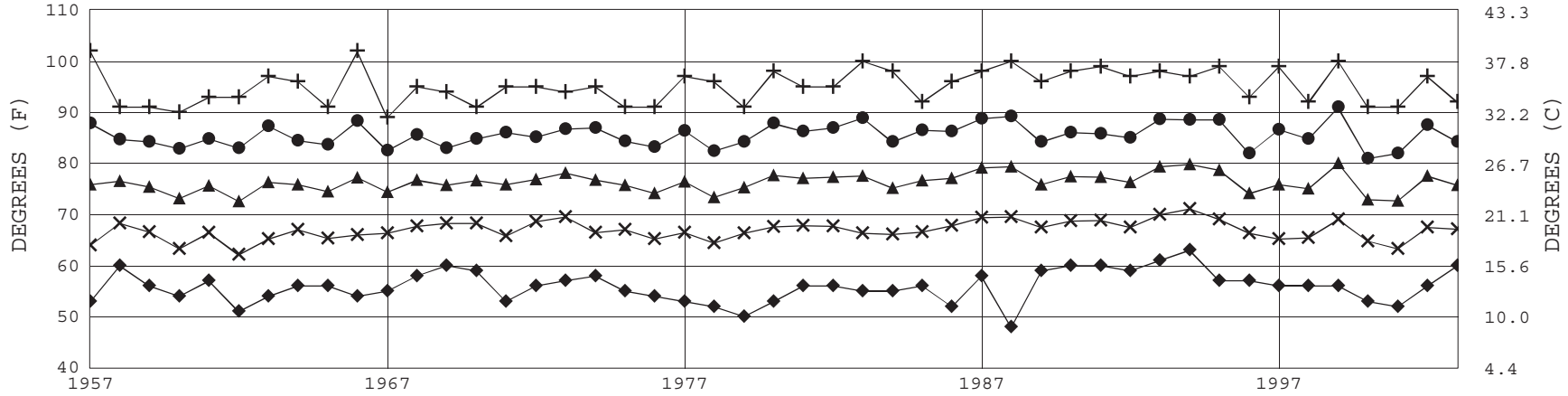
Sky Cover is the amount of the sky obscured. CLR or SKC = 0, FEW = 1/8–2/8, SCT = 3/8–4/8, BKN = 5/8–7/8, OVC = 8/8, VV = Vertical Visibilty = 8/8.
Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet. NC= No ceiling detected.
& = Original observation contained additional weather elements.
See page 3 for additional notes.

SUMMARY BY HOUR

HOUR (LST)	AVERAGES: CEILOMETER	AVERAGES: EFF CLD AMT	AVERAGES: DRY BULB	AVERAGES: DEW POINT	AVERAGES: WET BULB	AVERAGES: RELATIVE HUMIDITY	AVERAGES: PRESSURE (INCHES,HG): STATION	AVERAGES: PRESSURE (INCHES,HG): SEA LEVEL	AVERAGES: VISIBILITY (MILES)	AVERAGES: WIND SPEED (MPH)	RESULTANT WIND (MPH): SPEED	RESULTANT WIND (MPH): DIRECTION
01			70	67	68	89	29.89	29.98	9.13	5	1	22
02			70	67	68	90	29.89	29.97	8.55	5	1	25
03			69	67	68	92	29.88	29.97	8.05	5	1	23
04			69	67	68	92	29.89	29.97	7.90	5	1	28
05			69	66	67	93	29.90	29.98	7.65	5	1	28
06			70	67	68	93	29.91	29.99	7.08	4	1	27
07			72	67	69	87	29.91	30.00	7.48	6	1	27
08			74	67	70	79	29.92	30.01	8.06	8	2	25
09			76	67	70	75	29.92	30.00	8.65	8	3	26
10			78	67	71	70	29.93	30.01	9.06	9	4	25
11			80	67	71	65	29.92	30.01	9.06	9	3	25
12			81	66	71	61	29.91	30.00	9.32	10	4	24
13			82	66	72	60	29.90	29.99	9.61	10	5	24
14			83	66	72	58	29.89	29.98	9.65	10	5	23
15			83	66	72	58	29.88	29.97	9.52	11	6	22
16			82	66	71	60	29.87	29.96	9.65	11	5	22
17			81	66	71	61	29.87	29.96	9.65	10	5	21
18			80	66	71	64	29.87	29.95	9.52	10	5	20
19			78	67	71	70	29.87	29.96	9.35	9	5	19
20			77	67	70	74	29.88	29.97	9.45	7	4	18
21			75	67	70	78	29.90	29.98	9.39	8	4	18
22			74	68	70	81	29.90	29.99	9.45	6	3	19
23			72	67	69	85	29.90	29.99	9.15	7	3	19
24			71	67	69	87	29.90	29.98	9.06	7	2	18

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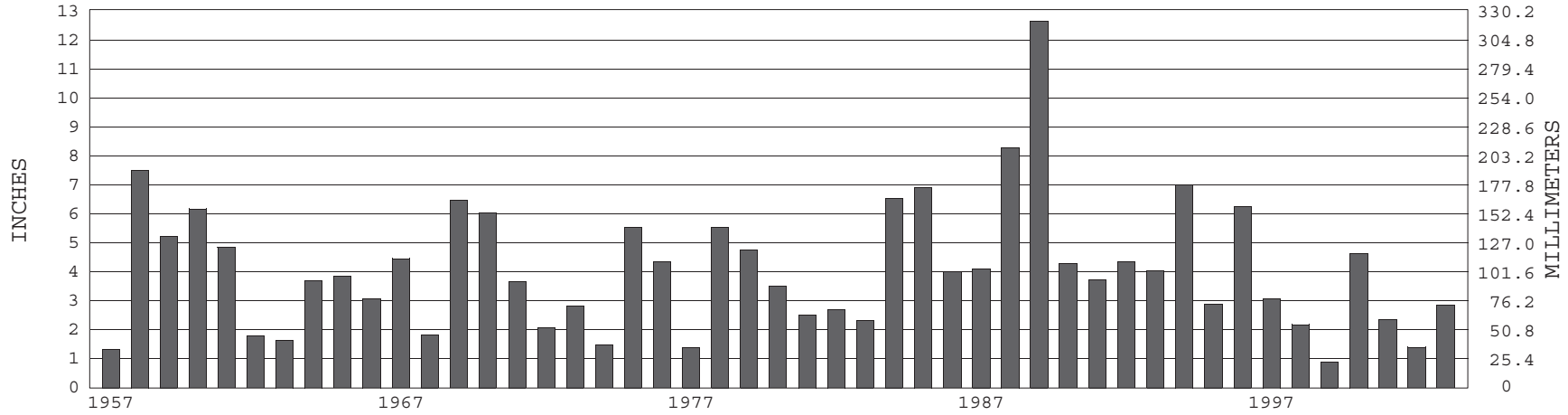
WILMINGTON, DE JULY TEMPERATURES



+ Extreme Max. ● Mean Max. ▲ Mean × Mean Min. ◆ Extreme Min.

Long-Term (1957-2003) Mean: 76.3 1961-1990 Normal: 76.6

WILMINGTON, DE JULY PRECIPITATION



Long-Term (1957-2003) Mean Monthly Total: 4.10 1961-1990 Normal: 4.28

JULY 2003

WILMINGTON, DE

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

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