SEPTEMBER 1999
LOCAL CLIMATOLOGICAL DATA
NOAA, National Climatic Data Center

WILMINGTON, DE
NEW CASTLE COUNTY APRT (ILG)
Lat: 39°40' N Long: 75°36' W Elev (Ground): 74 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	79	62	71	−1	53	60	0	6					0.00	30.03	30.11	12.6	03	13.1	26	03	22	04	01
02	82	61	72	0	56	63	0	7					0.00	29.96	30.05	9.3	03	10.2	23	05	20	04	02
03	84	58	71	−1	61	66	0	6	RA				T	29.95	30.03	7.4	04	8.8	18	03	15	04	03
04	79	71	75	3	71	72	0	10	RA				0.02	29.98	30.06	12.9	05	13.0	29	04	23	04	04
05	82	73	78	7	72	73	0	13	RA BR				0.70	29.92	30.00	12.4	07	13.1	31	11	24	11	05
06	84	74	79	8	73	74	0	14	RA BR				T	29.86	29.94	11.2	12	11.9	25	12	21	13	06
07	83	72	78	7	72	73	0	13	RA BR HZ				0.18	29.76	29.84	8.6	17	9.8	33	13	25	14	07
08	85*	72	79*	8	71	73	0	14	RA BR HZ				T	29.75	29.83	5.0	18	5.8	17	20	14	20	08
09	82	70	76	6	70	71	0	11	TS TSRA RA BR HZ				0.23	29.75	29.84	4.2	14	6.6	23	12	18	12	09
10	80	63	72	2	66	68	0	7	RA BR HZ				0.10	29.71	29.79	2.4	32	6.3	18	09	15	08	10
11	78	58	68	−2	52	59	0	3					0.00	29.91	30.00	7.4	30	7.6	26	30	17	31	11
12	80	54	67	−2	55	61	0	2					0.00	30.10	30.18	0.9	17	4.1	11	13	10	12	12
13	77	58	68	−1	60	63	0	3	BR HZ				0.00	30.08	30.16	5.3	15	6.4	17	14	15	14	13
14	79	64	72	3	65	67	0	7	BR				0.00	30.01	30.09	6.4	14	8.1	18	14	16	16	14
15	70	67	69	0	65	66	0	4	RA BR HZ				0.35	29.94	30.02	7.8	04	8.6	21	08	17	07	15
16	68	58	63	−5	61	62	2	0	RA FG BR				8.29	29.42	29.50	17.8	34	23.0	46*	31	37*	03	16
17	72	55	64	−4	50	56	1	0	RA				T	29.87	29.95	14.5	29	14.7	36	29	28	29	17
18	74	49	62	−5	51	56	3	0					0.00	30.04	30.12	5.5	30	6.6	17	28	15	28	18
19	73	51	62	−5	56	59	3	0	BR HZ				0.00	30.04	30.13	4.6	16	5.7	20	15	14	16	19
20	74	57	66	−1	60	62	0	1	RA BR				0.05	29.91	30.00	7.7	15	8.2	21	15	17	16	20
21	66	52	59	−7	59	59	6	0	RA BR				2.07	29.76	29.85	6.8	35	7.0	22	36	17	35	21
22	62	47	55*	−11	46	50	10	0	RA				0.21	29.73	29.81	12.2	32	13.0	29	31	24	31	22
23	71	47*	59	−7	47	53	6	0					0.00	29.84	29.92	7.5	24	8.8	21	24	16	22	23
24	76	53	65	0	54	58	0	0					0.00	29.83	29.92	6.7	20	6.9	21	23	15	22	24
25	78	52	65	0	56	60	0	0	BR				0.00	29.91	29.99	3.4	31	5.1	18	27	15	29	25
26	75	58	67	3	56	60	0	2					0.00	30.16	30.24	6.8	08	8.3	18	04	16	05	26
27	72	63	68	4	63	65	0	3	RA BR				T	30.22	30.31	4.9	08	5.8	15	06	13	05	27
28	78	64	71	8	64	66	0	6	BR				0.00	30.18	30.27	7.6	14	8.6	17	14	15	16	28
29	77	66	72	9	65	67	0	7	RA BR				0.01	29.94	30.02	11.6	15	11.7	28	15	22	14	29
30	70	49	60	−3	51	56	5	0	RA BR				0.47	29.75	29.84	10.6	27	14.0	44	30	33	30	30
	76.3	59.9	68.1		60.0	63.3	1.2	4.6	< MONTHLY AVERAGES	TOTALS−>			12.68	29.91	29.99	1.2	05	9.4	<− MONTHLY AVERAGES				
	−1.4	1.7	0.1		<−−−−−−−−−−−−− DEPARTURE FROM NORMAL −−−−−−−−−−−−−>								9.25	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3									

DEGREE DAYS

	MONTHLY TOTAL	MONTHLY DEPARTURE	SEASON TO DATE TOTAL	SEASON TO DATE DEPARTURE
HEATING:	36	1	37	2
COOLING:	139	14	1208	177

GREATEST 24−HR PRECIPITATION: 8.43 DATE: 15−16
GREATEST 24−HR SNOWFALL: DATE:
GREATEST SNOW DEPTH: DATE:

	SEA LEVEL PRESSURE	DATE	TIME
MAXIMUM	30.35	27	0851
MINIMUM	29.13	16	1551

NUMBER OF DAYS WITH →

MAXIMUM TEMP ≥ 90:	0	MINIMUM TEMP ≤ 32:	0
MAXIMUM TEMP ≤ 32:	0	MINIMUM TEMP ≤ 0:	0
THUNDERSTORMS:	1	HEAVY FOG:	0
PRECIPITATION ≥ 0.01 INCH:	12		
PRECIPITATION ≥ 0.10 INCH:	9		
SNOWFALL ≥ 1.0 INCH:			

SEPTEMBER 1999
WILMINGTON, DE

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

WILMINGTON, DE

SEPTEMBER 1999 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													02		0.00
03													03						T							03		T
04							T						04	0.02	T					T						04		0.02
05													05	0.01	0.01	0.35	0.20	0.10	0.02	0.01						05		0.70
06	T			T									06													06		T
07	0.02	T	0.14	T	0.02								07													07		0.18
08						T	T						08													08		T
09													09		0.03	0.01					0.18		T		0.01	09		0.23
10	0.02	0.04	T		0.01	T	0.01	T	0.01			0.01	10													10		0.10
11													11													11		0.00
12													12													12		0.00
13													13													13		0.00
14													14													14		0.00
15		T					T	0.02	0.03		0.01	0.01	15	0.02	0.04	0.04	0.01	0.05	0.03	0.04	0.02	T		0.01	T	15	0.33	0.35
16	0.03	0.09	0.12	0.25	0.34	0.54	0.59	0.72	0.61	0.30	0.69	1.14	16	1.09	0.78	0.62	0.35		T	0.02	T	T				16	8.28	8.29
17			T										17													17		T
18													18													18		0.00
19													19													19		0.00
20													20											T	0.03	20	0.03	0.05
21	0.08	0.52	0.65	0.14	0.01	0.15	0.11	0.04	0.03	0.03	0.04	0.03	21	0.02	T	T			T	0.01	0.14	0.07			T	21		2.07
22	0.10	0.04	0.01	T	0.07	T	0.01						22													22	0.23	0.21
23													23													23		0.00
24													24													24		0.00
25													25													25		0.00
26													26													26		0.00
27													27		T											27		T
28													28													28		0.00
29													29											T	0.01	29		0.01
30	0.02	0.05	0.18	0.10	0.11	T		0.01					30													30		0.47

MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)												
Ending Date												
Ending Time (Hour/Min)												

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 1961−1990

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
SEPTEMBER 1999

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 at constant pressure by evaporation of moisture into it, to 100% relative humidity.

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							10.00	10.00	
03							10.00	10.00	
04							9.00	10.00	
05							1.25	10.00	
06							5.00	10.00	
07							3.00	9.00	
08							1.50	9.00	
09							1.75	10.00	
10							2.00	10.00	
11							10.00	10.00	
12							10.00	10.00	
13							1.75	10.00	
14							5.00	10.00	
15							1.50	10.00	
16							1.00	10.00	
17							10.00	10.00	
18							10.00	10.00	
19							3.00	10.00	
20							4.00	10.00	
21							1.25	10.00	
22							8.00	10.00	
23							10.00	10.00	
24							7.00	10.00	
25							5.00	10.00	
26							10.00	10.00	
27							4.00	10.00	
28							2.00	10.00	
29							3.00	10.00	
30							5.00	10.00	
MONTHLY AVGS							5.50	9.93	

SUNSHINE (MINUTES)

Total: Possible:
Percent Possible:

NUMBER OF DAYS WITH:

SKY CONDITION

CLR	PTLY CLDY	CLOUDY	MISSING
			30

MINIMUM VISIBILITY (MILES)

<=0.25	<=3.0	>=7.0
0	12	12

OBSERVATIONS AT 3–HOURLY INTERVALS

WILMINGTON, DE

SEPTEMBER 1999 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 °F: DRY BULB	TEMPERATURE °F: DEW POINT	TEMPERATURE °F: WET BULB	RELATIVE HUMIDITY (PCT)	WIND: SPEED (MPH)	WIND: DIRECTION TENS OF DEG	PRESSURE (INCHES,HG): STATION	PRESSURE (INCHES,HG): SEA LEVEL
					SUNRISE: 0530	**SEP 01**			**SUNSET: 1834**					
01	CLR	NC			10.00		64	55	59	73	12	01	30.05	30.13
04	CLR	NC			10.00		63	56	59	78	14	02	30.02	30.10
07	CLR	NC			10.00		63	52	57	68	10	03	30.04	30.13
10	CLR	NC			10.00		71	49	59	46	15	04	30.06	30.14
13	CLR	NC			10.00		75	54	63	48	22	03	30.03	30.12
16	CLR	NC			10.00		78	53	63	42	20	06	30.00	30.09
19	CLR	NC			10.00		73	50	60	44	13	05	30.00	30.09
22	CLR	NC			10.00		66	53	59	63	6	01	30.00	30.09
					SUNRISE: 0531	**SEP 02**			**SUNSET: 1832**					
01	CLR	NC			10.00		67	45	55	45	8	36	29.98	30.06
04	CLR	NC			10.00		65	51	57	61	9	36	29.96	30.04
07	CLR	NC			10.00		68	55	61	63	10	35	29.99	30.08
10	CLR	NC			10.00		76	60	66	58	14	04	29.99	30.08
13	CLR	NC			10.00		82	58	67	44	15	04	29.95	30.04
16	CLR	NC			10.00		80	57	66	45	12	04	29.93	30.02
19	CLR	NC			10.00		74	57	64	56	7	05	29.94	30.02
22	CLR	NC			10.00		67	57	61	71	5	31	29.93	30.02
					SUNRISE: 0532	**SEP 03**			**SUNSET: 1831**					
01	CLR	NC			10.00		62	56	59	81	7	34	29.95	30.03
04	CLR	NC			10.00		59	56	57	90	8	32	29.93	30.02
07	CLR	NC			10.00		65	59	61	81	5	35	29.95	30.04
10	CLR	NC			10.00		79	62	68	56	13	04	29.95	30.04
13	CLR	NC			10.00		84	62	70	48	8	04	29.94	30.03
16	FEW	NC			10.00		80	66	71	62	13	04	29.93	30.02
19	CLR	NC			10.00		76	66	70	72	9	06	29.94	30.02
22	CLR	NC			10.00		73	67	69	81	8	05	29.95	30.03
					SUNRISE: 0533	**SEP 04**			**SUNSET: 1829**					
01	OVC	005			10.00		72	67	69	84	9	05	29.95	30.03
04	OVC	007			10.00		72	69	70	91	12	05	29.95	30.03
07	OVC	009			10.00		72	69	70	91	12	04	29.98	30.07
10	OVC	011			10.00		76	71	73	85	15	04	30.00	30.09
13	OVC	027			10.00		76	73	74	91	8	05	30.00	30.09
16	FEW	NC			10.00		77	72	74	85	18	04	29.95	30.04
19	OVC	016			10.00		75	72	73	90	14	05	29.96	30.05
22	OVC	014			10.00		75	71	72	88	13	06	29.98	30.06
					SUNRISE: 0534	**SEP 05**			**SUNSET: 1828**					
01	OVC	021			10.00		74	71	72	91	16	05	29.96	30.04
04	OVC	013			10.00		74	70	71	88	16	06	29.94	30.02
07	OVC	009			7.00		73	70	71	90	17	05	29.95	30.04
10	OVC	009			7.00		78	72	74	82	18	06	29.93	30.01
13	BKN	036			9.00	-RA	81	73	75	77	18	10	29.90	29.98
16	OVC	014			1.25	+RA BR	74	73	73	97	10	10	29.88	29.96
19	OVC	015			10.00		74	73	73	97	10	09	29.88	29.97
22	OVC	027			9.00		75	73	74	94	9	10	29.91	29.99
					SUNRISE: 0535	**SEP 06**			**SUNSET: 1826**					
01	OVC	009			7.00		74	73	73	97	8	08	29.89	29.98
04	OVC	025			7.00		74	73	73	97	12	10	29.89	29.97
07	OVC	027			5.00	BR	74	73	73	97	9	08	29.89	29.98
10	BKN	014			8.00		79	73	75	82	10	15	29.90	29.98
13	BKN	024			10.00		82	73	76	74	12	13	29.86	29.94
16	FEW	NC			10.00		79	73	75	82	14	13	29.81	29.90
19	OVC	014			9.00		77	73	74	88	13	12	29.79	29.88
22	OVC	010			8.00		76	73	74	91	18	12	29.80	29.89
					SUNRISE: 0536	**SEP 07**			**SUNSET: 1825**					
01	OVC	021			6.00	-RA BR	75	73	74	94	18	13	29.75	29.84
04	OVC	016			9.00		73	71	72	94	13	15	29.73	29.82
07	OVC	006			5.00	BR	72	71	71	97	12	17	29.76	29.85
10	OVC	009			5.00	BR	75	73	74	94	6	16	29.76	29.85
13	BKN	019			7.00		79	72	74	79	7	21	29.75	29.84
16	FEW	NC			7.00		83	70	74	65	10	21	29.73	29.81
19	CLR	NC			6.00	HZ	78	73	75	85	7	15	29.74	29.83
22	CLR	NC			5.00	BR	75	74	74	96	8	14	29.77	29.86
					SUNRISE: 0537	**SEP 08**			**SUNSET: 1823**					
01	BKN	009			3.00	BR	74	73	73	97	0	00	29.76	29.85
04	CLR	NC			3.00	BR	74	73	73	97	3	12	29.71	29.80
07	OVC	012			1.50	BR	74	73	73	97	5	18	29.77	29.85
10	FEW	NC			5.00	HZ	78	71	73	79	6	19	29.77	29.85
13	BKN	045			7.00		82	71	75	69	12	14	29.74	29.83
16	SCT	NC			9.00		84	68	73	59	9	19	29.71	29.80
19	CLR	NC			8.00		78	68	71	71	6	22	29.72	29.81
22	CLR	NC			5.00	HZ	75	69	71	82	6	17	29.77	29.85
					SUNRISE: 0537	**SEP 09**			**SUNSET: 1821**					
01	OVC	090			5.00	BR	74	70	71	88	0	00	29.77	29.85
04	CLR	NC			4.00	BR	71	68	69	90	5	14	29.76	29.84
07	OVC	004			2.00	BR	73	72	72	96	0	00	29.77	29.85
10	OVC	012			4.00	BR	77	73	74	88	9	15	29.77	29.86
13	FEW	NC			2.00	HZ	81	75	77	82	10	14	29.74	29.83
16	CLR	NC			10.00		78	65	70	64	10	12	29.71	29.79
19	OVC	013			10.00		74	69	71	85	6	04	29.73	29.82
22	OVC	028			7.00		70	67	68	90	7	30	29.76	29.85
					SUNRISE: 0538	**SEP 10**			**SUNSET: 1820**					
01	OVC	110			5.00	-RA BR	69	68	68	96	12	10	29.73	29.82
04	OVC	006			9.00		70	69	69	97	0	00	29.72	29.80
07	SCT	NC			2.00	-RA BR	69	68	68	96	8	10	29.71	29.80
10	CLR	NC			5.00	BR	71	69	70	94	0	00	29.72	29.80
13	FEW	NC			6.00	HZ	77	68	71	74	10	31	29.67	29.75
16	FEW	NC			5.00	HZ	79	65	70	62	8	01	29.65	29.74
19	CLR	NC			10.00		74	63	67	69	5	25	29.69	29.78
22	BKN	065			10.00		69	59	63	70	7	29	29.75	29.84
					SUNRISE: 0539	**SEP 11**			**SUNSET: 1818**					
01	CLR	NC			10.00		64	54	58	70	10	29	29.76	29.85
04	CLR	NC			10.00		62	53	57	73	10	31	29.80	29.89
07	CLR	NC			10.00		63	55	58	76	7	29	29.89	29.97
10	CLR	NC			10.00		72	52	61	50	12	29	29.93	30.02
13	CLR	NC			10.00		77	49	61	37	14	29	29.92	30.01
16	CLR	NC			10.00		77	50	62	39	9	31	29.92	30.01
19	CLR	NC			10.00		71	51	60	49	6	25	29.97	30.05
22	CLR	NC			10.00		64	55	59	73	3	25	30.01	30.10
					SUNRISE: 0540	**SEP 12**			**SUNSET: 1816**					
01	CLR	NC			10.00		59	56	57	90	5	32	30.02	30.11
04	CLR	NC			10.00		56	54	55	93	5	31	30.05	30.14
07	CLR	NC			10.00		60	56	58	86	3	28	30.11	30.20
10	CLR	NC			10.00		76	54	63	47	5	VR	30.13	30.22
13	CLR	NC			10.00		79	54	64	42	7	13	30.12	30.21
16	CLR	NC			10.00		79	54	64	42	8	18	30.08	30.16
19	CLR	NC			10.00		75	56	64	52	3	14	30.08	30.17
22	CLR	NC			10.00		66	58	61	75	5	18	30.12	30.21

OBSERVATIONS AT 3–HOURLY INTERVALS

WILMINGTON, DE

SEPTEMBER 1999 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 °F: DRY BULB	TEMPERATURE °F: DEW POINT	TEMPERATURE °F: WET BULB	RELATIVE HUMIDITY (PCT)	WIND: SPEED (MPH)	WIND: DIRECTION TENS OF DEG	PRESSURE (INCHES,HG): STATION	PRESSURE (INCHES,HG): SEA LEVEL
					SUNRISE: 0541	**SEP 13**			**SUNSET: 1815**					
01	CLR	NC			10.00		64	58	60	81	0	00	30.10	30.19
04	CLR	NC			5.00	BR	58	57	57	97	3	33	30.09	30.18
07	FEW	NC			2.50	BR	62	60	61	93	0	00	30.10	30.19
10	CLR	NC			10.00		74	62	67	67	8	15	30.11	30.19
13	CLR	NC			10.00		76	57	65	52	9	14	30.08	30.16
16	CLR	NC			10.00		76	59	66	56	12	15	30.04	30.12
19	CLR	NC			10.00		71	62	66	73	12	14	30.03	30.12
22	BKN	055			10.00		67	62	64	84	6	14	30.06	30.14
					SUNRISE: 0542	**SEP 14**			**SUNSET: 1813**					
01	SCT	NC			10.00		64	62	63	93	5	04	30.03	30.12
04	SCT	NC			8.00		66	64	65	93	5	06	30.01	30.09
07	BKN	031			5.00	BR	66	64	65	93	3	01	30.03	30.11
10	CLR	NC			10.00		74	66	69	76	6	14	30.03	30.11
13	FEW	NC			10.00		78	63	68	60	14	15	30.01	30.10
16	SCT	NC			10.00		76	63	68	64	12	15	29.96	30.05
19	BKN	055			10.00		74	66	69	76	14	15	29.98	30.07
22	BKN	100			10.00		71	66	68	84	6	14	29.99	30.07
					SUNRISE: 0543	**SEP 15**			**SUNSET: 1812**					
01	OVC	095			10.00		70	66	67	87	0	00	29.99	30.07
04	OVC	075			8.00		69	63	65	81	5	36	29.96	30.05
07	OVC	065			10.00		69	61	64	76	8	06	29.99	30.08
10	OVC	041			5.00	HZ					6	03	29.99	
13	OVC	029			4.00	-RA BR	69	67	68	93	9	01	29.94	30.03
16	OVC	012			3.00	-RA BR	69	67	68	93	9	05	29.91	30.00
19	OVC	032			1.50	-RA BR	68	67	67	96	12	03	29.90	29.99
22	OVC	005			7.00	-RA	68	67	67	96	12	08	29.86	
					SUNRISE: 0544	**SEP 16**			**SUNSET: 1810**					
01	OVC	011			10.00	-RA	67	66	66	97	12	03	29.79	29.88
04	OVC	013			4.00	+RA BR	68	67	67	96	18	03	29.68	29.77
07	OVC	015			1.50	+RA BR	67	65	66	93	29	03	29.53	29.61
10	OVC	020			3.00	RA BR	66	64	65	93	23	36	29.40	29.49
13	OVC	017			1.25	+RA BR	62	62	62	100	22	34	29.21	29.28
16	OVC	013			2.50	RA BR	62	60	61	93	29	34	29.05	29.13
19	OVC	013			10.00		59	57	58	93	25	29	29.26	29.35
22	OVC	055			10.00		61	53	57	75	28	29	29.45	29.54
					SUNRISE: 0545	**SEP 17**			**SUNSET: 1808**					
01	BKN	110			10.00		61	52	56	72	22	29	29.60	29.69
04	CLR	NC			10.00		60	50	55	70	23	29	29.71	29.79
07	CLR	NC			10.00		60	49	54	67	22	29	29.81	29.90
10	CLR	NC			10.00		66	50	57	56	20	29	29.89	29.98
13	CLR	NC			10.00		70	50	59	49	16	29	29.89	29.98
16	CLR	NC			10.00		71	48	58	44	16	30	29.89	29.98
19	CLR	NC			10.00		63	49	55	60	8	27	29.94	30.03
22	CLR	NC			10.00		57	50	53	78	6	30	30.01	30.10
					SUNRISE: 0546	**SEP 18**			**SUNSET: 1807**					
01	CLR	NC			10.00		52	49	50	89	6	25	30.03	30.12
04	CLR	NC			10.00		51	47	49	86	8	30	30.04	30.12
07	CLR	NC			10.00		55	50	52	83	7	31	30.07	30.16
10	CLR	NC			10.00		69	49	58	49	10	36	30.08	30.17
13	CLR	NC			10.00		71	50	59	47	8	30	30.03	30.12
16	CLR	NC			10.00		73	51	61	46	8	29	29.99	30.08
19	CLR	NC			10.00		66	55	60	68	5	23	30.01	30.09
22	CLR	NC			10.00		58	55	56	90	3	26	30.03	30.11

HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE: OBSERVATION TIME (LST)	SATELLITE: EFF CLD AMT Oktas	VISIBILITY (MILES)	WEATHER	TEMPERATURE °F: DRY BULB	TEMPERATURE °F: DEW POINT	TEMPERATURE °F: WET BULB	RELATIVE HUMIDITY (PCT)	WIND: SPEED (MPH)	WIND: DIRECTION TENS OF DEG	PRESSURE (INCHES,HG): STATION	PRESSURE (INCHES,HG): SEA LEVEL
					SUNRISE: 0547	**SEP 19**			**SUNSET: 1805**					
01	CLR	NC			9.00		56	55	55	97	0	00	30.04	30.12
04	CLR	NC			8.00		54	53	53	97	0	00	30.04	30.13
07	CLR	NC			3.00	BR	55	54	54	96	3	31	30.07	30.16
10	CLR	NC			10.00		69	54	60	59	6	22	30.09	30.18
13	CLR	NC			10.00		73	55	62	53	12	12	30.04	30.13
16	CLR	NC			10.00		72	56	63	57	13	15	30.01	30.10
19	CLR	NC			10.00		66	58	61	75	7	16	30.00	30.09
22	CLR	NC			10.00		65	58	61	78	12	16	30.02	30.11
					SUNRISE: 0548	**SEP 20**			**SUNSET: 1803**					
01	FEW	NC			10.00		59	55	57	87	0	00	30.01	30.10
04	CLR	NC			10.00		59	55	57	87	0	00	29.98	30.07
07	CLR	NC			10.00		62	58	60	86	5	18	29.98	30.07
10	CLR	NC			10.00		69	62	65	78	10	13	29.96	30.04
13	FEW	NC			10.00		73	61	66	66	14	14	29.89	29.98
16	CLR	NC			10.00		72	60	65	66	14	15	29.85	29.94
19	CLR	NC			10.00		67	61	63	81	13	14	29.84	29.93
22	OVC	043			10.00		67	62	64	84	10	17	29.84	29.93
					SUNRISE: 0549	**SEP 21**			**SUNSET: 1802**					
01	OVC	013			4.00	RA BR	64	64	64	100	3	25	29.81	29.89
04	OVC	039			4.00	BR	64	64	64	100	3	36	29.76	29.85
07	OVC	050			2.50	-RA BR	63	63	63	100	0	00	29.77	29.86
10	OVC	018			2.50	-RA BR	65	64	64	97	0	00	29.77	29.85
13	OVC	013			10.00		63	61	62	93	14	36	29.73	29.82
16	OVC	015			10.00		58	54	56	87	10	35	29.74	29.83
19	OVC	027			10.00	-RA	54	52	53	93	14	35	29.76	29.85
22	OVC	045			10.00		53	51	52	93	13	34	29.76	29.85
					SUNRISE: 0550	**SEP 22**			**SUNSET: 1800**					
01	OVC	045			8.00	-RA	51	50	51	96	9	31	29.75	29.84
04	OVC	060			10.00		50	48	49	93	12	31	29.73	29.82
07	BKN	120			10.00		50	48	49	93	13	32	29.73	29.82
10	FEW	NC			10.00		57	48	52	72	17	33	29.73	29.82
13	BKN	036			10.00		61	46	53	58	20	34	29.71	29.79
16	CLR	NC			10.00		62	44	53	52	15	32	29.68	29.77
19	CLR	NC			10.00		55	43	49	64	6	30	29.71	29.80
22	CLR	NC			10.00		48	42	45	80	7	28	29.75	29.84
					SUNRISE: 0551	**SEP 23**			**SUNSET: 1758**					
01	CLR	NC			10.00		48	41	45	77	7	28	29.78	29.87
04	CLR	NC			10.00		49	41	45	74	8	27	29.79	29.88
07	CLR	NC			10.00		49	43	46	80	7	25	29.85	29.93
10	CLR	NC			10.00		64	44	54	48	12	27	29.86	29.95
13	CLR	NC			10.00		70	50	59	49	12	21	29.84	29.93
16	CLR	NC			10.00		70	50	59	49	14	22	29.82	29.91
19	CLR	NC			10.00		63	51	56	65	7	18	29.83	29.92
22	CLR	NC			10.00		59	51	55	75	3	19	29.86	29.95
					SUNRISE: 0551	**SEP 24**			**SUNSET: 1757**					
01	CLR	NC			10.00		56	51	53	84	3	23	29.85	29.94
04	CLR	NC			10.00		54	51	52	90	7	18	29.84	29.93
07	CLR	NC			7.00		56	52	54	87	6	18	29.87	29.96
10	CLR	NC			10.00		66	55	60	68	6	23	29.86	29.95
13	CLR	NC			10.00		75	56	64	52	10	21	29.80	29.89
16	CLR	NC			10.00		75	54	63	48	12	21	29.77	29.86
19	CLR	NC			10.00		67	56	61	68	9	19	29.81	29.90
22	CLR	NC			10.00		63	56	59	78	5	17	29.84	29.93

OBSERVATIONS AT 3−HOURLY INTERVALS

WILMINGTON, DE

SEPTEMBER 1999 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 °F: DRY BULB	TEMPERATURE °F: DEW POINT	TEMPERATURE °F: WET BULB	RELATIVE HUMIDITY (PCT)	WIND: SPEED (MPH)	WIND: DIRECTION TENS OF DEG	PRESSURE (INCHES,HG): STATION	PRESSURE (INCHES,HG): SEA LEVEL
					SUNRISE: 0552	**SEP 25**			**SUNSET: 1755**					
01	CLR	NC			10.00		61	57	59	87	0	00	29.83	29.92
04	CLR	NC			7.00		58	56	57	93	0	00	29.82	29.91
07	CLR	NC			5.00	BR	57	55	56	93	0	00	29.86	29.95
10	CLR	NC			10.00		70	59	63	68	5	28	29.90	29.98
13	CLR	NC			10.00		77	57	65	50	13	28	29.88	29.97
16	CLR	NC			10.00		76	57	65	52	10	31	29.90	29.99
19	CLR	NC			10.00		67	52	59	59	5	33	29.96	30.05
22	CLR	NC			10.00		59	54	56	83	3	35	30.02	30.11
					SUNRISE: 0553	**SEP 26**			**SUNSET: 1754**					
01	FEW	NC			10.00		60	53	56	78	7	04	30.06	30.15
04	SCT	NC			10.00		59	52	55	78	9	05	30.11	30.19
07	CLR	NC			10.00		59	50	54	72	13	05	30.15	30.24
10	CLR	NC			10.00		65	54	59	68	9	08	30.20	30.28
13	CLR	NC			10.00		73	59	65	62	7	11	30.17	30.26
16	CLR	NC			10.00		73	62	66	69	6	15	30.15	30.23
19	CLR	NC			10.00		67	57	61	71	9	12	30.15	30.24
22	OVC	019			10.00		64	58	60	81	6	09	30.21	30.30
					SUNRISE: 0554	**SEP 27**			**SUNSET: 1752**					
01	OVC	013			10.00		64	60	62	87	6	06	30.20	30.28
04	OVC	015			9.00		63	60	61	90	9	06	30.19	30.28
07	OVC	015			9.00		64	61	62	90	10	06	30.23	30.32
10	OVC	015			8.00		67	63	65	87	9	07	30.26	30.35
13	OVC	019			10.00		71	66	68	84	5	13	30.22	30.31
16	OVC	022			9.00		71	66	68	84	5	13	30.19	30.28
19	SCT	NC			8.00		70	66	67	87	3	07	30.21	30.29
22	CLR	NC			7.00		67	65	66	93	5	12	30.21	30.30
					SUNRISE: 0555	**SEP 28**			**SUNSET: 1750**					
01	BKN	080			4.00	BR	65	64	64	97	5	06	30.21	30.29
04	BKN	034			4.00	BR	65	63	64	93	7	07	30.19	30.28
07	OVC	080			2.00	BR	66	65	65	96	3	09	30.21	30.30
10	BKN	075			7.00		71	67	68	87	12	14	30.22	30.31
13	BKN	080			10.00		75	62	67	64	12	15	30.19	30.27
16	OVC	080			10.00		73	61	66	66	12	15	30.16	30.24
19	OVC	038			9.00		69	64	66	84	8	14	30.15	30.24
22	FEW	NC			4.00	BR	67	66	66	97	9	16	30.15	30.24
					SUNRISE: 0556	**SEP 29**			**SUNSET: 1749**					
01	OVC	024			6.00	BR	67	65	66	93	6	17	30.13	30.21
04	OVC	070			5.00	BR	67	66	66	97	6	15	30.09	30.18
07	OVC	011			3.00	BR	67	65	66	93	5	15	30.07	30.16
10	BKN	095			10.00		71	66	68	84	13	15	30.04	30.12
13	SCT	NC			10.00		75	63	67	66	16	15	29.96	30.05
16	CLR	NC			10.00		74	63	67	69	15	14	29.86	29.95
19	FEW	NC			10.00		69	65	66	87	12	13	29.80	29.88
22	OVC	090			10.00		70	67	68	90	21	14	29.71	29.80
					SUNRISE: 0557	**SEP 30**			**SUNSET: 1747**					
01	OVC	043			10.00	−RA	70	66	67	87	24	15	29.59	29.67
04	OVC	040			6.00	RA BR	58	56	57	93	10	30	29.61	29.70
07	CLR	NC			10.00		58	56	57	93	10	26	29.68	29.77
10	FEW	NC			10.00		64	51	57	63	22	28	29.71	29.80
13	FEW	NC			10.00		68	49	57	51	20	28	29.75	29.84
16	FEW	NC			10.00		66	45	55	47	20	30	29.79	29.88
19	CLR	NC			10.00		58	46	52	65	5	21	29.85	29.93
22	CLR	NC			10.00		52	46	49	80	7	26	29.90	29.98

HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE: OBSERVATION TIME (LST)	SATELLITE: EFF CLD AMT Oktas	VISIBILITY (MILES)	WEATHER	TEMPERATURE °F: DRY BULB	TEMPERATURE °F: DEW POINT	TEMPERATURE °F: WET BULB	RELATIVE HUMIDITY (PCT)	WIND: SPEED (MPH)	WIND: DIRECTION TENS OF DEG	PRESSURE (INCHES,HG): STATION	PRESSURE (INCHES,HG): SEA LEVEL
					SUNRISE:	**SEP 31**			**SUNSET:**					

3−HOURLY OBSERVATION NOTES

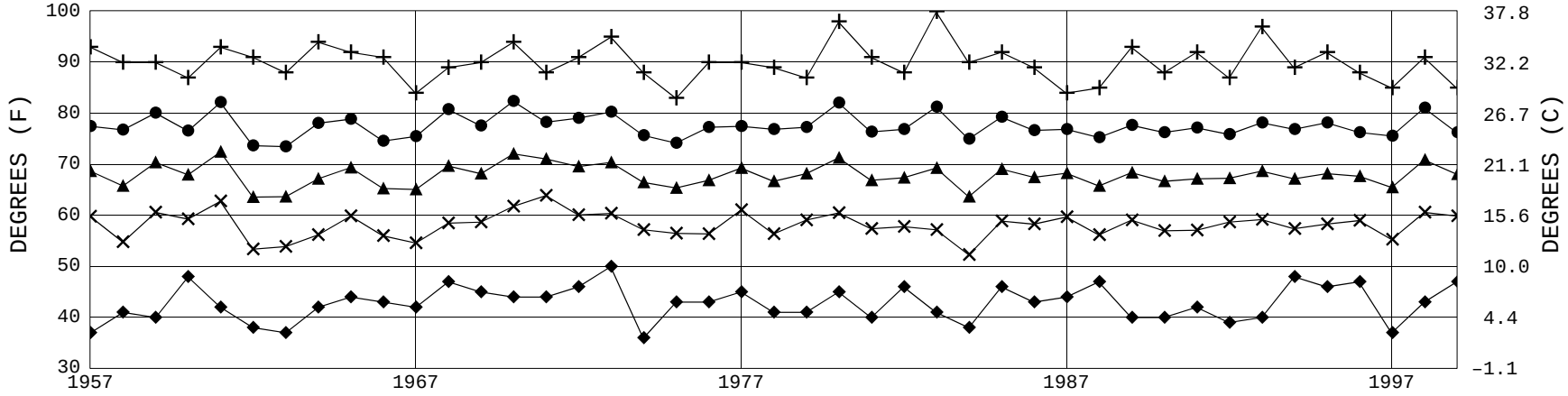
Sky Cover is the amount of the sky obscured. CLR or SKC = 0, FEW = 1/8−2/8, SCT = 3/8−4/8, BKN = 5/8−7/8, OVC = 8/8, VV = Vertical Visibilty = 8/8.
Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet. NC= No ceiling detected.
& = Original observation contained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

SUMMARY BY HOUR

HOUR (LST)	AVERAGES: CEILOMETER	EFF CLD AMT	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY	PRESSURE (INCHES,HG): STATION	PRESSURE (INCHES,HG): SEA LEVEL	VISIBILITY (MILES)	WIND SPEED (MPH)	RESULTANT WIND (MPH): SPEED	RESULTANT WIND (MPH): DIRECTION
01			64	60	62	86	29.91	30.00	8.57	7	2	3
02			64	59	61	86	29.90	29.99	8.17	8	2	2
03			63	59	61	88	29.90	29.99	8.13	7	2	1
04			63	59	61	89	29.90	29.99	8.00	8	3	1
05			63	59	61	90	29.91	30.00	7.72	7	3	2
06			62	58	60	88	29.92	30.01	7.04	7	2	2
07			64	60	61	87	29.93	30.02	6.77	8	3	2
08			66	60	63	83	29.93	30.02	6.82	8	3	2
09			68	60	64	77	29.93	30.02	7.62	10	2	1
10			71	61	65	72	29.93	30.02	8.32	10	2	3
11			73	61	66	69	29.93	30.01	8.43	12	1	1
12			74	61	66	65	29.91	30.00	8.59	12	1	6
13			75	61	66	64	29.90	29.99	8.88	12	1	7
14			75	60	66	63	29.88	29.97	8.93	13	1	11
15			74	60	66	63	29.87	29.96	8.89	13	2	12
16			74	60	65	63	29.87	29.96	8.89	12	1	8
17			73	59	65	64	29.87	29.96	9.48	11	1	13
18			71	60	64	69	29.88	29.97	8.90	9	2	12
19			69	60	64	74	29.89	29.98	9.38	9	2	12
20			68	60	63	78	29.90	29.99	8.83	8	2	10
21			67	60	63	81	29.91	30.00	9.07	8	2	13
22			66	60	62	83	29.91	30.00	9.07	8	2	14
23			65	60	62	84	29.91	30.00	8.93	7	0	0
24			64	59	62	85	29.91	30.00	8.77	7	1	3

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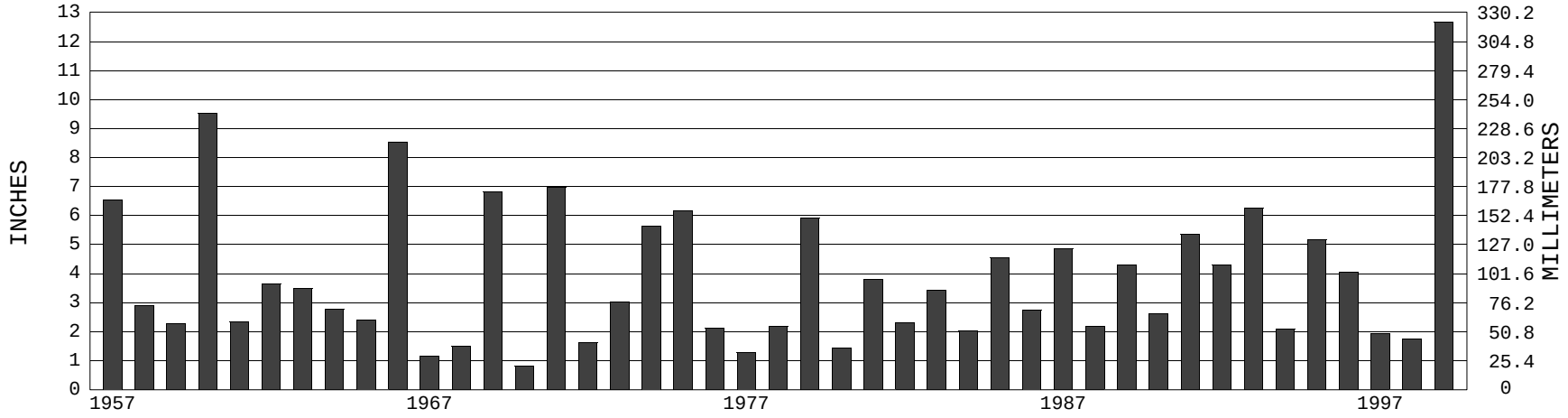
WILMINGTON, DE SEPTEMBER TEMPERATURES



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

Long–Term (1957–1999) Mean: 67.9 1961–1990 Normal: 68.0

WILMINGTON, DE SEPTEMBER PRECIPITATION



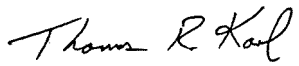
Long–Term (1957–1999) Mean Monthly Total: 3.90 1961–1990 Normal: 3.43

SEPTEMBER 1999
WILMINGTON, DE

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

I certify that this is an official publication of the National Oceanic and Atmospheric Administration (NOAA). It is compiled using information from weather observing sites operated by NOAA—National Weather Service / Department Of Transportation—Federal Aviation Administration and received at the National Climatic Data Center (NCDC), Asheville, North Carolina 28801.



DIRECTOR

NOTICE

Effective July 1, 1996, the National Weather Service & Federal Aviation Administration began using the METAR format for Hourly Observations.

We welcome your questions or comments, please contact us at
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Local Climatological Data is available at www.ncdc.noaa.gov

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