



DECEMBER 2003

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

WILMINGTON, DE

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

DECEMBER 2003
WILMINGTON, DE

DATE	TEMPERATURE °F						DEG DAYS BASE 65°		WEATHER	SNOW/ICE ON GND (IN)		PRECIPITATION (INCHES)		PRESSURE (INCHES OF HG)		WIND SPEED = MPH DIR = TENS OF DEGREES						DATE			
	MAXIMUM	MINIMUM	AVERAGE	DEP FROM NORMAL	AVERAGE DEW PT	AVERAGE WET BULB	HEATING	COOLING		0700 LST	1300 LST	2400 LST	2400 LST	AVERAGE STATION	AVERAGE SEA LEVEL	RESULTANT SPEED	RES DIR	AVERAGE SPEED	MAXIMUM						
																			5-SEC		2-MIN				
1	2	3	4	5	6	7	8	9	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
01	53	33	43	2	26	37	22	0			0.0	0.00	29.88	29.96	11.0	28	13.0	43	28	33	29	01			
02	41	26	34	-6	14	28	31	0	SN		T	T	30.19	30.27	13.3	30	14.8	41	29	36	28	02			
03	35	21	28	-12	12	23	37	0			0.0	0.00	30.45	30.54	6.7	30	7.3	23	31	20	31	03			
04	39	23	31	-9	20	28	34	0			0.0	0.00	30.35	30.44	2.6	22	3.1	15	24	12	22	04			
05	36	28	32	-7	30	32	33	0	RA SN FG+ BR		3.9	0.51	29.99	30.08	14.5	04	15.4	37	05	29	05	05			
06	31	26	29	-10	23	26	36	0	SN FG+ FZFG BR UP		1.6	0.20	29.80	29.89	15.5	33	16.3	30	32	24	32	06			
07	29	22	26	-13	15	23	39	0	SN UP HZ		T	T	29.86	29.95	16.0	30	16.1	38	31	32	31	07			
08	33	19*	26*	-13	16	24	39	0			0.0	0.00	30.08	30.17	7.0	30	7.7	18	32	15	29	08			
09	37	23	30	-8	23	29	35	0			0.0	0.00	30.17	30.25	1.5	06	3.0	7	07	7	08	09			
10	58	31	45	7	39	41	20	0	RA BR		0.0	0.48	29.91	29.99	8.0	08	9.2	32	12	23	12	10			
11	58	37	48	10	42	46	17	0	RA BR		0.0	0.83	29.38	29.46	8.7	27	21.8	51*	28	43*	29	11			
12	40	29	35	-2	21	30	30	0			0.0	0.00	30.00	30.08	11.8	28	12.0	29	29	23	29	12			
13	35	25	30	-7	16	26	35	0			0.0	0.00	30.32	30.41	4.4	34	7.6	17	06	15	06	13			
14	43	31	37	0	30	34	28	0	RA FZRA SN BR UP		1.0	0.97	29.89	29.97	10.3	03	14.1	28	05	24	04	14			
15	41	31	36	0	27	33	29	0			0.0	0.00	29.80	29.88	15.6	28	16.1	41	28	32	29	15			
16	45	27	36	0	31	34	29	0			0.0	0.00			5.6	16	7.2	22	17	17	16	16			
17	49	31	40	4	36	39	25	0	RA SN FG+ BR		T	0.66	29.60	29.68	7.6	27	12.5	37	29	29	28	17			
18	35	29	32	-4	18	27	33	0			0.0	0.00	29.65	29.73	12.3	25	12.5	31	27	25	27	18			
19	36	25	31	-4	21	27	34	0			0.0	0.00	29.71	29.80	7.2	28	7.8	16	27	14	27	19			
20	39	25	32	-3	20	28	33	0			0.0	0.00	29.93	30.02	9.0	28	9.5	26	30	21	30	20			
21	40	25	33	-2	19	28	32	0			0.0	0.00	30.19	30.28	7.9	22	8.5	20	22	16	21	21			
22	50	32	41	6	23	35	24	0			0.0	0.00	30.05	30.14	5.7	21	6.1	18	24	15	23	22			
23	59*	39	49*	15	35	41	16	0			0.0	0.00	29.97	30.06	7.9	16	8.2	26	19	22	20	23			
24	55	36	46	12	46	47	19	0	RA FG+ BR		0.0	1.24	29.73	29.81	2.7	22	8.9	29	28	23	28	24			
25	41	30	36	2	23	31	29	0			0.0	0.00	29.90	29.99	10.2	26	10.7	28	27	23	27	25			
26	42	28	35	1	22	31	30	0			0.0	0.00	30.05	30.13	11.6	26	12.4	30	26	23	26	26			
27	50	32	41	7	25	34	24	0			0.0	0.00	30.14	30.23	8.7	31	9.2	24	31	20	31	27			
28	47	24	36	3	28	33	29	0	BR		0.0	0.00	30.27	30.35	0.2	25	3.5	8	13	7	16	28			
29	54	25	40	7	32	36	25	0	BR		0.0	0.00	30.05	30.14	3.1	19	3.8	15	20	13	20	29			
30	52	31	42	9	33	40	23	0	RA FG+ BR		0.0	0.04	29.92	30.00	12.0	26	14.2	38	28	31	28	30			
31	47	27	37	4	26	33	28	0			0.0	0.00	30.18	30.27	6.0	23	6.3	16	21	15	21	31			
< MONTHLY AVERAGES										TOTALS->				<- MONTHLY AVERAGES											
- .9										- .3				- .6											
DEPARTURE FROM NORMAL														1.53											
DEGREE DAYS										GREATEST 24-HR PRECIPITATION: 1.31 DATE :10-11				SEA LEVEL PRESSURE DATE TIME											
MONTHLY TOTAL DEPARTURE										GREATEST 24-HR SNOWFALL: 3.9 DATE :05				MAXIMUM : 30.59 03 0951											
SEASON TO DATE TOTAL DEPARTURE										GREATEST SNOW DEPTH: 5 DATE :07+				MINIMUM : 29.23 11 0851											
HEATING: 898 26 1715 -70										NUMBER OF DAYS WITH				MAXIMUM TEMP ≥ 90: 0				MINIMUM TEMP ≤ 32: 27				PRECIPITATION ≥ 0.01 INCH : 8			
COOLING: 0 0 1022 -103														MAXIMUM TEMP ≤ 32 : 2				MINIMUM TEMP ≤ 0 : 0				PRECIPITATION ≥ 0.10 INCH : 7			
														THUNDERSTORMS : 0				HEAVY FOG : 5				SNOWFALL ≥ 1.0 INCH : 3			

SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

WILMINGTON, DE

DECEMBER 2003

ILG

WBAN # 13781

DATE	FOR HOUR (LST) ENDING AT												DATE	FOR HOUR (LST) ENDING AT												DATE	Sum if Different (See Note)	2400 LST	
	1	2	3	4	5	6	7	8	9	10	11	12		13	14	15	16	17	18	19	20	21	22	23	24			Water	Equiv.
01													01												01		0.00		
02													02												02		T		
03													03		T	T									03		0.00		
04													04												04		0.00		
05													05	0.04	0.02	0.01	0.03	0.05	0.01	0.01	T			T	05		0.51		
06													06												06	0.18	0.20		
07		T											07		T										07		T		
08		T											08		T										08		0.00		
09													09												09		0.00		
10													10			T	0.04	0.08	0.18	0.10	0.05	0.01		T	10	0.02	0.48		
11													11	T											11		0.83		
12		T											12												12		0.00		
13													13												13		0.00		
14													14			T	0.02	0.03	0.09	0.05					14	0.87	0.97		
15													15	0.04	0.01	0.08	0.19	0.22	0.04	0.01	0.06	0.02	0.01		15		0.00		
16													16												16		0.00		
17													17	0.02	0.02	0.02	0.01	0.02	0.01						17		0.66		
18													18												18		0.00		
19													19												19		0.00		
20													20												20		0.00		
21													21												21		0.00		
22													22												22		0.00		
23													23												23		0.00		
24													24		0.06	0.11	0.11	0.17	0.11	T	0.11	0.08	0.01	T	24		1.24		
25													25	0.02	0.07	0.36	0.01								25		0.00		
26													26												26		0.00		
27													27												27		0.00		
28													28												28		0.00		
29													29												29	T	0.00		
30													30												30		0.00		
31													31												31	T	0.04		
																												0.00	

MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)	.11	.17	.20	.21	.28	.36	.40	.42	.44	.47	.49	.55
Ending Date	24	24	24	24	24	24	24	11	11	11	17	17
Ending Time (Hour/Min)	1423	1427	1429	1432	1423	1432	1432	0400	0400	0400	0840	0854

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 occurrence 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		
	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 DECEMBER 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
	TOTAL MINUTES	PERCENT POSSIBLE	SR–SS		MN–MN		MINIMUM	MAXIMUM	
			CEILOMETER	SATELLITE	CEILOMETER	SATELLITE			
01							10.00	10.00	
02							10.00	10.00	
03							10.00	10.00	
04							10.00	10.00	
05							.25	10.00	
06							.25	10.00	
07							1.75	10.00	
08							10.00	10.00	
09							8.00	10.00	
10							.00	10.00	
11							2.50	10.00	
12							10.00	10.00	
13							10.00	10.00	
14							.75	10.00	
15							10.00	10.00	
16							7.00	10.00	
17							.25	10.00	
18							10.00	10.00	
19							10.00	10.00	
20							9.00	10.00	
21							10.00	10.00	
22							10.00	10.00	
23							10.00	10.00	
24							.13	10.00	
25							10.00	10.00	
26							10.00	10.00	
27							10.00	10.00	
28							4.00	10.00	
29							1.75	10.00	
30							.25	10.00	
31							10.00	10.00	
MONTHLY AVGS							6.79	10.00	
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 3 9 20									

OBSERVATIONS AT 3-HOURLY INTERVALS

WILMINGTON, DE

DECEMBER 2003

ILG

WBAN # 13781

Table with 36 columns and 744 rows. Columns include Hour (LST), Sky Cover, Ceiling (100's of ft), Observation Time (LST), Eff Clld Amt (OKtas), Visibility (Miles), Weather, Temperature (F) [Dry Bulb, Dew Point, Wet Bulb], Relative Humidity (Pct), Wind (Mph, Direction, Tens of Deg), Pressure (Inches, Hg) [Station, Sea Level], and SATELLITE. Rows are organized by 3-hour intervals (0704, 0705, 0706, 0707, 0708, 0709) for each day (DEC 01 to DEC 12). Each row contains meteorological data for that specific hour.

OBSERVATIONS AT 3-HOURLY INTERVALS

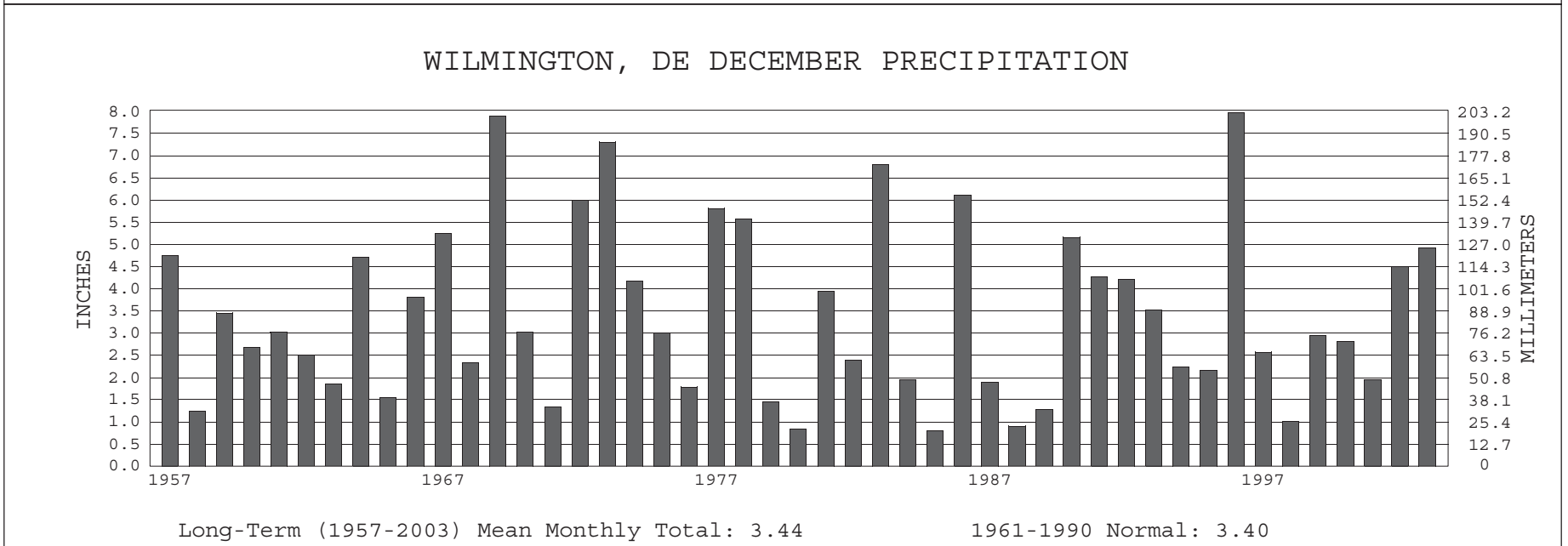
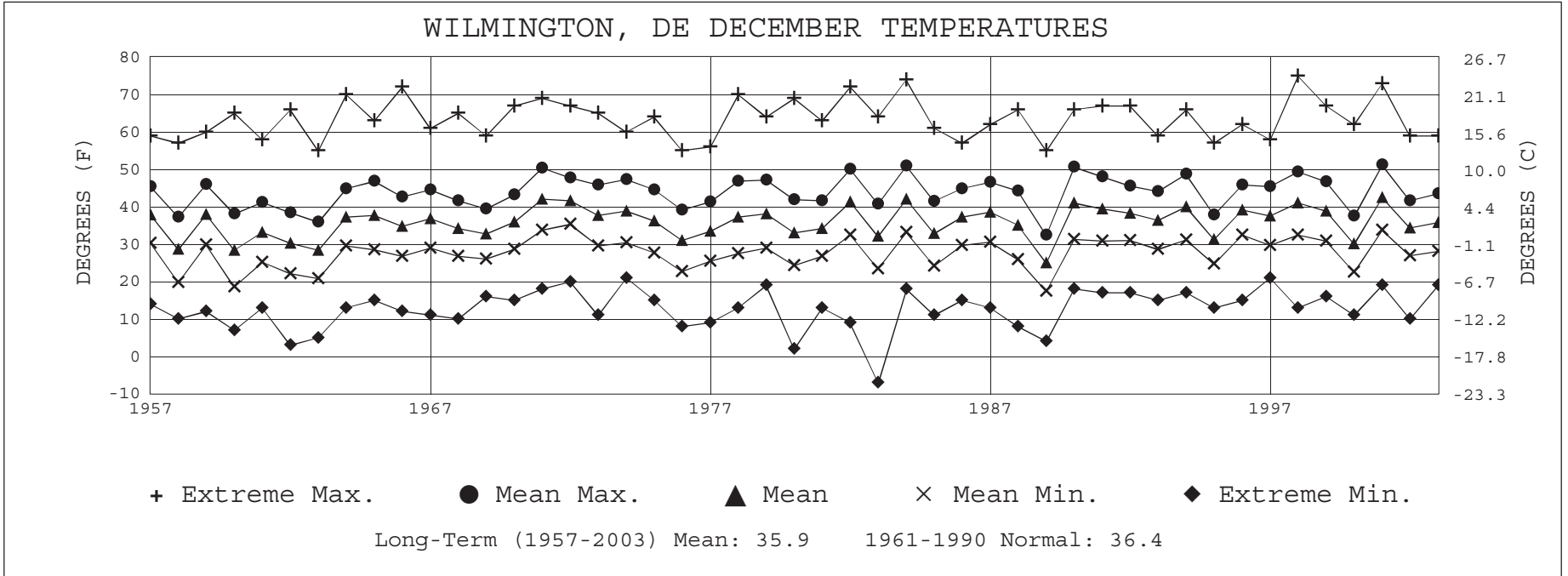
WILMINGTON, DE

DECEMBER 2003

ILG

WBAN # 13781

HOUR (LST)	SATELLITE		WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SATELLITE		WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)			
	SKY COVER	CEILING 100'S OF FT		OBSERVATION TIME (LST)	EFF CLD AMT Oktas	VISIBILITY (MILES)		DRY BULB	DEW POINT	WET BULB	SPEED (MPH)		DIRECTION TENS OF DEG	STATION		SEA LEVEL	SKY COVER	CEILING 100'S OF FT		OBSERVATION TIME (LST)	EFF CLD AMT Oktas	VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB
SUNRISE: 0721 DEC 25 SUNSET: 1644												SUNRISE: 0723 DEC 31 SUNSET: 1648													
01	CLR	NC			35	27	32	72	8	30	29.80	29.89	01	CLR	NC			35	24	31	64	5	24	30.21	30.30
04	CLR	NC			32	27	30	82	5	22	29.81	29.90	04	CLR	NC			31	24	29	76	6	23	30.25	30.34
07	CLR	NC			30	25	28	82	8	26	29.84	29.93	07	CLR	NC			29	24	27	82	8	24	30.27	30.36
10	CLR	NC			36	25	32	64	12	26	29.87	29.96	10	CLR	NC			37	26	33	65	6	24	30.31	30.40
13	BKN	038			40	25	34	55	18	29	29.86	29.95	13	CLR	NC			45	27	38	49	8	23	30.18	30.27
16	BKN	060			39	18	32	43	16	27	29.91	30.00	16	CLR	NC			47	24	38	41	14	20	30.08	30.17
19	CLR	NC			34	20	29	56	8	25	29.98	30.07	19	CLR	NC			41	25	35	53	5	23	30.11	30.20
22	OVC	070			34	19	29	54	12	25	30.02	30.11	22	CLR	NC			38	28	34	6	22	30.08	30.16	
SUNRISE: 0722 DEC 26 SUNSET: 1644												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 Visibility = 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													
SUNRISE: 0722 DEC 27 SUNSET: 1645												AVERAGES													
SUNRISE: 0722 DEC 28 SUNSET: 1646												RESULTANT WIND (MPH)													
SUNRISE: 0722 DEC 29 SUNSET: 1646												SPEED													
SUNRISE: 0722 DEC 30 SUNSET: 1647												DIRECTION													
01	CLR	NC			37	19	31	48	12	31	30.05	30.14	01												
04	CLR	NC			35	20	30	54	10	30	30.06	30.16	02												
07	CLR	NC			33	23	30	67	7	29	30.10	30.19	03												
10	CLR	NC			41	26	35	55	15	32	30.16	30.25	04												
13	CLR	NC			48	28	40	46	10	31	30.12	30.21	05												
16	CLR	NC			48	28	40	46	9	33	30.15	30.24	06												
19	CLR	NC			38	28	34	68	7	29	30.19	30.28	07												
22	CLR	NC			37	27	33	67	3	32	30.21	30.31	08												
01	CLR	NC			32	27	30	82	5	31	30.22	30.32	09												
04	CLR	NC			27	23	26	85	5	27	30.26	30.35	10												
07	CLR	NC			27	24	26	89	5	31	30.29	30.39	11												
10	CLR	NC			40	28	35	63	0	00	30.35	30.44	12												
13	CLR	NC			46	30	39	54	0	00	30.26	30.35	13												
16	CLR	NC			45	25	37	46	6	13	30.24	30.33	14												
19	CLR	NC			38	33	36	83	5	17	30.25	30.34	15												
22	CLR	NC		6.00BR	30	30	30	100	0	00	30.23	30.32	16												
SUNRISE: 0723 DEC 29 SUNSET: 1646												SUNRISE: 0723 DEC 30 SUNSET: 1647													
01	OVC	001		1.75BR	28	27	28	96	5	30	30.19	30.28	17												
04	CLR	NC		8.00	29	27	28	92	3	17	30.17	30.26	18												
07	CLR	NC		8.00	27	27	27	100	0	00	30.13	30.22	19												
10	CLR	NC		6.00BR	38	35	37	89	5	26	30.14	30.23	20												
13	CLR	NC		10.00	50	34	43	54	10	20	30.02	30.11	21												
16	CLR	NC		10.00	52	36	45	55	3	15	29.98	30.07	22												
19	CLR	NC		10.00	41	35	38	79	6	15	29.97	30.06	23												
22	CLR	NC		10.00	39	36	38	89	0	00	29.92	30.01	24												
01	CLR	NC		0.50FG	34	34	34	100	0	00	29.82	29.90	25												
04	CLR	NC		10.00	50	44	47	80	10	19	29.72	29.80	26												
07	OVC	075		-RA	52	50	51	93	13	20	29.70	29.79	27												
10	OVC	095			52	39	46	61	17	26	29.81	29.90	28												
13	FEW	NC			49	29	41	46	18	27	29.88	29.96	29												
16	CLR	NC			45	25	37	46	21	29	29.98	30.06	30												
19	CLR	NC			39	25	34	57	13	29	30.12	30.20	31												
22	SCT	NC			36	25	32	64	7	26	30.18	30.27	32												





DECEMBER 2003

WILMINGTON, DE

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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.

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