

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: LUMARK

Report Number: P270405

Luminaire Tested: **NAV-AF-03-D-UNV-5NQ-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270405
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-03-D-UNV-5NQ-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V
NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16177.7 lumens
Efficiency: N/A
Efficacy: 97.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B3 - U0 - G2

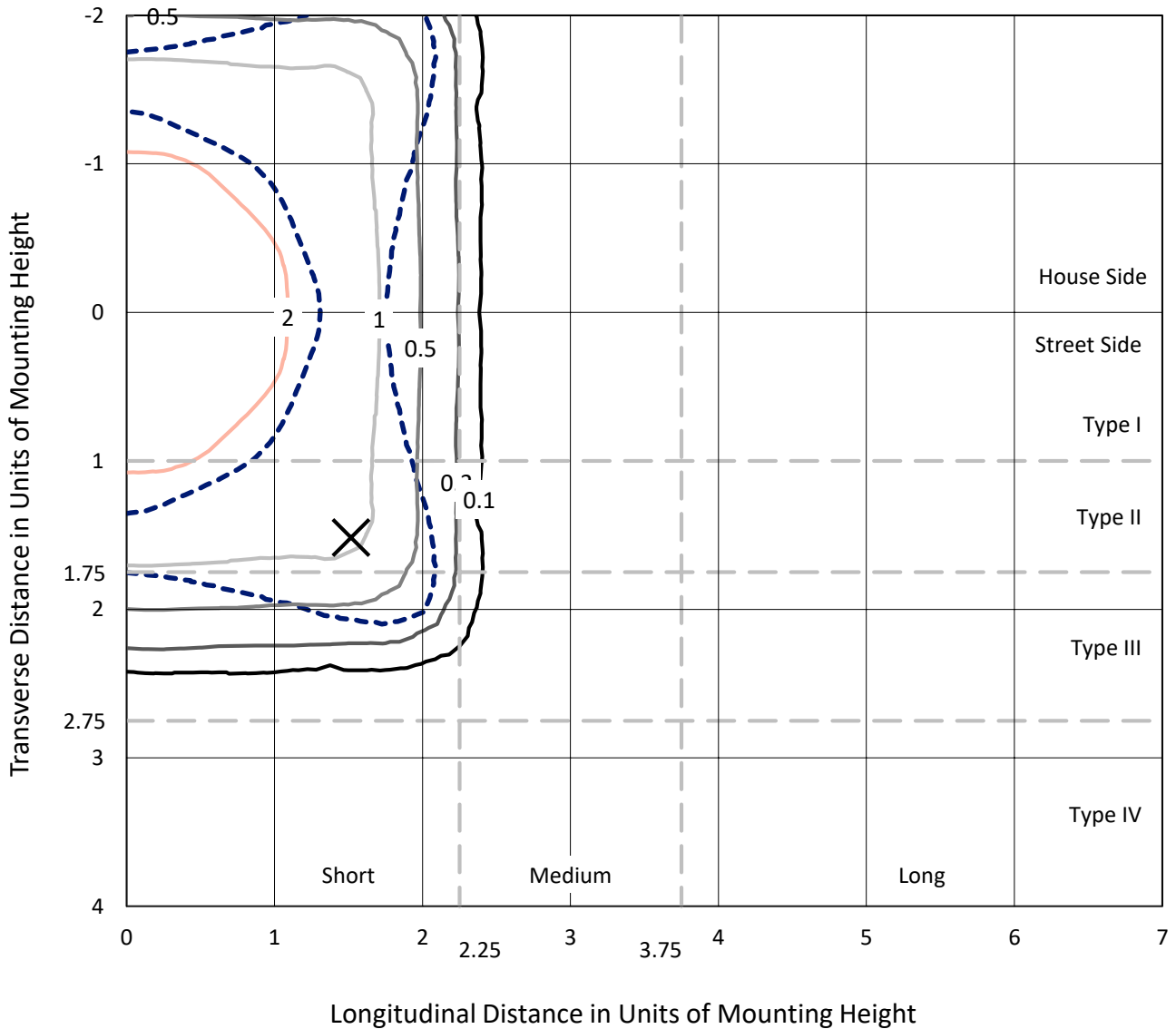
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

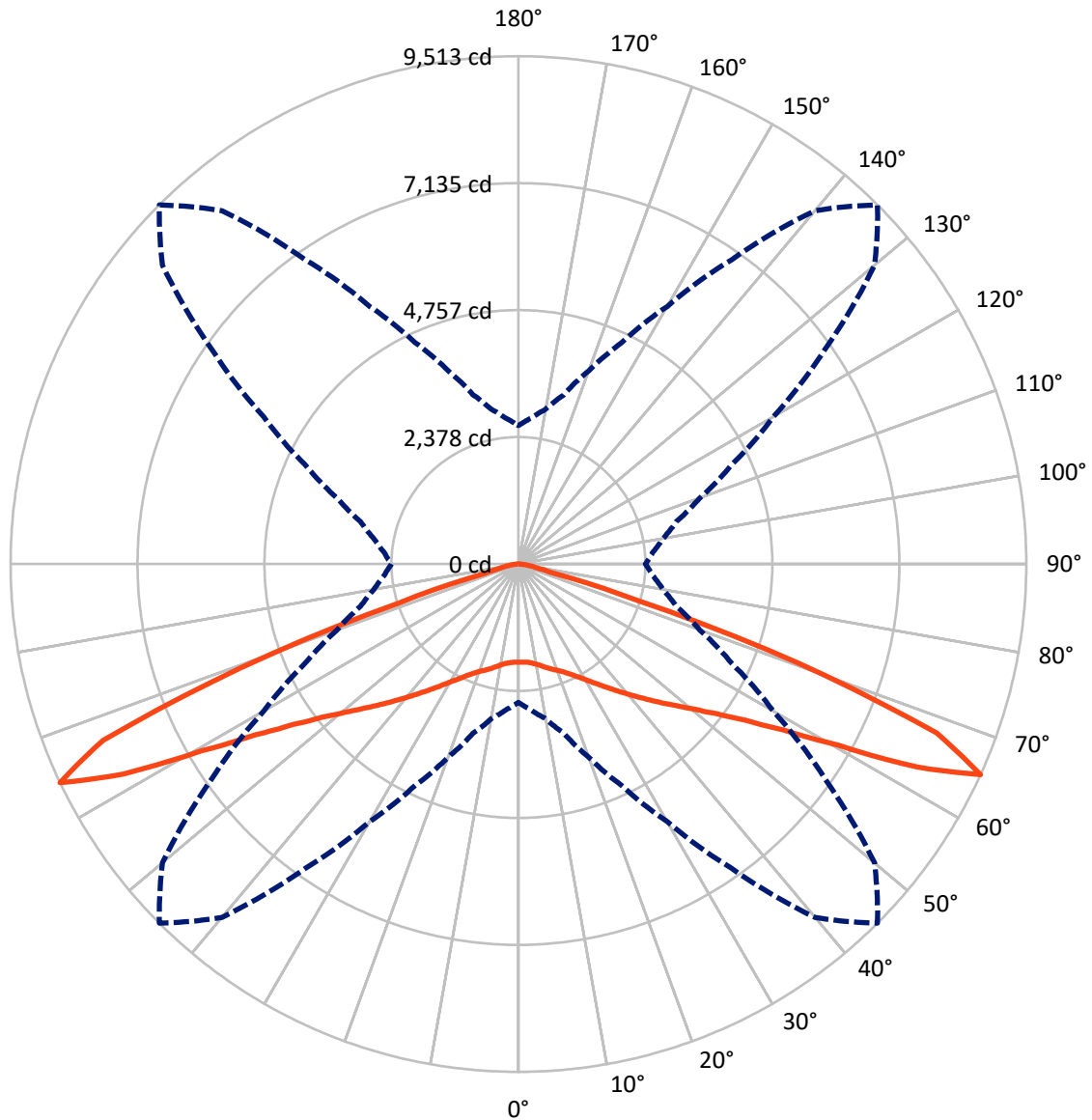
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.9 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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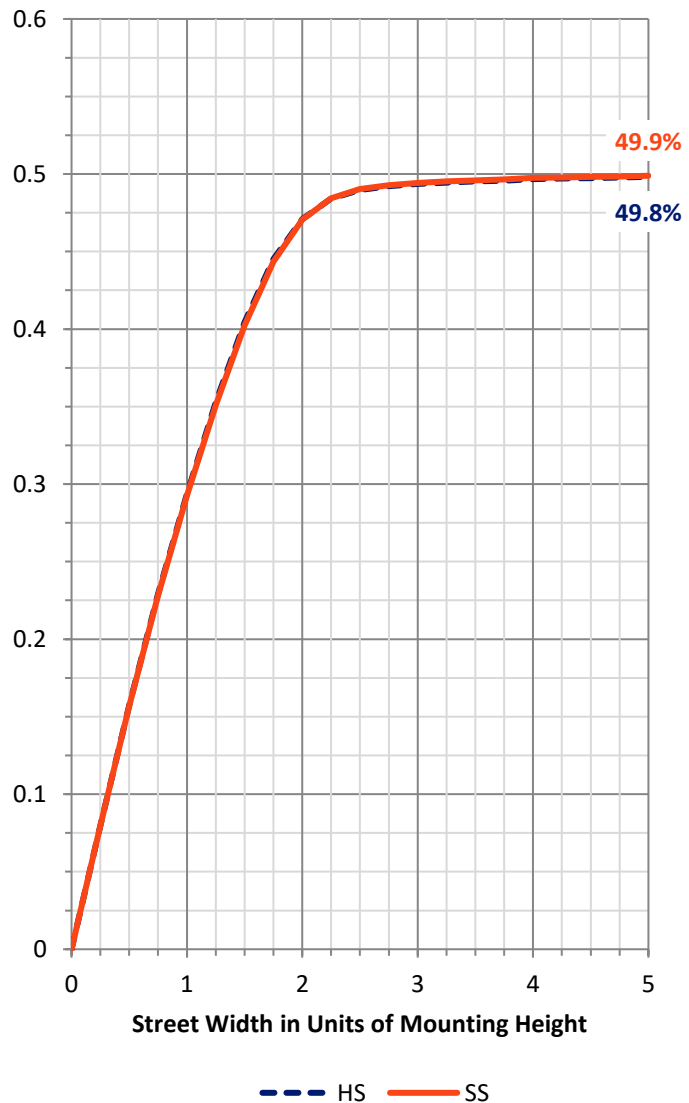
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8088.9	0.0	8088.9
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	8088.9	0.0	8088.9
	% Fixture	50.0	0.0	50.0
Total	Lumens	16177.7	0.0	16177.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.2	1.1
10°-20°	574.3	3.6
20°-30°	1071.4	6.6
30°-40°	1806.6	11.2
40°-50°	2934.4	18.1
50°-60°	4597.7	28.4
60°-70°	4340.0	26.8
70°-80°	584.9	3.6
80°-90°	89.1	0.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	16177.7	100.0
0°-180°	16177.7	100.0



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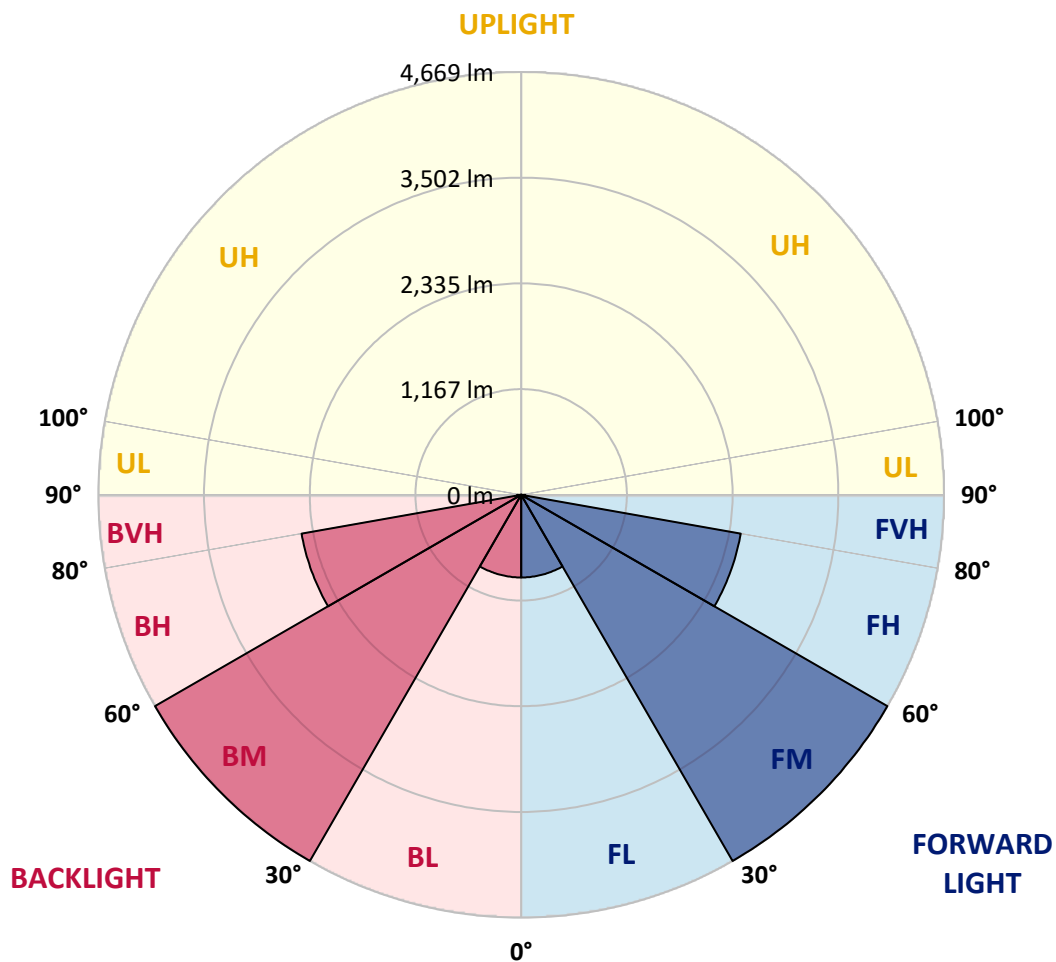
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	912.5	5.6			
FM (30°-60°)	4669.4	28.9			
FH (60°-80°)	2462.5	15.2			G2/5000
FVH (80°-90°)	44.6	0.3			G1/100
BL (0°-30°)	912.5	5.6	B2/1000		
BM (30°-60°)	4669.4	28.9	B3/5000		
BH (60°-80°)	2462.5	15.2	B3/2500		G2/5000
BVH (80°-90°)	44.6	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1840.2	1840.2	1840.2	1840.2	1840.2	1840.2	1840.2	1840.2	1840.2	1840.2	1840.2
2.5°	1855.3	1855.3	1858.4	1857.3	1853.4	1850.2	1847.3	1843.2	1841.2	1839.2	1838.2
5°	1865.4	1865.4	1868.5	1867.3	1864.4	1860.4	1858.4	1855.3	1852.2	1850.2	1851.2
7.5°	1890.7	1891.7	1892.5	1891.7	1888.5	1885.5	1881.5	1880.5	1876.5	1873.4	1875.5
10°	1928.9	1928.9	1929.9	1930.8	1928.9	1921.8	1921.8	1919.8	1915.7	1911.8	1912.9
12.5°	1971.2	1971.2	1972.1	1972.1	1972.1	1968.1	1969.3	1968.1	1963.2	1961.1	1963.2
15°	2012.6	2013.6	2013.6	2015.5	2015.5	2016.5	2020.6	2020.6	2018.6	2017.6	2017.6
17.5°	2060.9	2062.9	2063.9	2066.9	2068.0	2070.0	2073.9	2075.1	2076.1	2073.0	2073.9
20°	2125.4	2126.4	2129.4	2130.4	2134.5	2134.5	2136.4	2135.5	2133.5	2129.4	2129.4
22.5°	2198.0	2199.9	2206.0	2206.0	2211.1	2208.0	2209.0	2206.0	2200.9	2199.1	2197.0
25°	2292.7	2295.7	2300.7	2298.8	2300.7	2295.7	2295.7	2295.7	2292.7	2289.7	2288.6
27.5°	2412.6	2407.5	2412.6	2408.5	2407.5	2403.5	2404.6	2402.5	2399.6	2398.6	2394.5
30°	2537.6	2531.6	2534.6	2535.6	2533.6	2532.5	2528.5	2525.4	2520.5	2521.5	2518.5
32.5°	2680.7	2674.7	2677.7	2678.7	2676.7	2678.7	2677.7	2670.7	2664.6	2668.5	2668.5
35°	2851.0	2847.0	2855.1	2858.0	2851.9	2849.0	2844.9	2836.8	2827.9	2833.9	2835.0
37.5°	3055.6	3050.6	3056.7	3064.7	3053.6	3047.5	3031.4	3019.4	3013.3	3016.2	3020.3
40°	3268.3	3269.2	3286.4	3288.3	3276.3	3269.2	3253.1	3234.9	3217.8	3217.8	3222.8
42.5°	3491.9	3494.9	3515.1	3522.2	3518.1	3505.0	3482.9	3460.7	3438.5	3442.6	3448.7
45°	3744.9	3740.9	3762.0	3779.2	3776.1	3772.2	3751.0	3710.5	3690.4	3689.5	3699.6
47.5°	4010.9	4018.9	4041.1	4070.4	4069.4	4059.4	4032.1	3994.9	3957.6	3960.5	3972.7
50°	4321.3	4332.4	4369.7	4398.9	4403.0	4400.0	4367.6	4324.4	4272.0	4275.0	4291.2
52.5°	4599.5	4615.6	4659.0	4719.4	4756.7	4773.9	4752.7	4712.4	4659.0	4661.9	4679.1
55°	4851.4	4876.5	4941.1	5023.9	5098.3	5167.9	5199.1	5198.1	5158.7	5167.9	5190.0
57.5°	5009.7	5044.9	5142.6	5275.7	5423.8	5563.9	5684.8	5798.7	5823.9	5871.3	5871.3
60°	4796.9	4879.7	5009.7	5237.4	5528.7	5843.0	6183.8	6515.2	6728.9	6897.2	6806.5
62.5°	4005.9	4127.8	4310.2	4610.6	5064.0	5625.5	6309.6	7080.6	7884.9	8376.6	8015.8
65°	2592.0	2745.2	2943.7	3281.2	3852.7	4575.2	5571.9	6957.7	8640.6	9513.4	8707.2
67.5°	1026.9	1130.7	1251.7	1491.5	1987.3	2696.8	3815.5	5524.7	7629.8	8453.2	7549.3
70°	490.7	507.9	531.1	582.6	706.4	953.3	1532.9	2722.0	4679.1	5546.9	4567.3
72.5°	354.7	357.7	368.8	386.0	422.3	472.7	574.5	832.4	1613.4	2346.2	1615.4
75°	269.1	273.2	279.2	288.3	307.4	331.6	369.8	443.5	552.3	636.9	551.3
77.5°	204.5	208.5	213.6	222.7	232.8	249.9	264.0	293.2	339.6	357.7	355.8
80°	149.2	156.2	164.3	172.4	179.4	187.4	188.5	202.6	228.8	245.9	240.8
82.5°	94.7	100.8	121.9	131.1	132.1	134.0	132.9	134.0	148.1	160.3	156.2
85°	60.5	64.5	75.5	85.7	83.6	87.7	87.7	85.7	79.6	68.5	81.7
87.5°	30.3	31.3	36.3	45.4	43.4	38.3	37.3	37.3	27.2	23.1	25.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1840.2	1840.2	1840.2	1840.2	1840.2	1840.2	1840.2	1840.2
2.5°	1835.1	1837.2	1834.2	1834.2	1833.1	1835.1	1832.2	1832.2
5°	1849.3	1852.2	1851.2	1851.2	1853.4	1855.3	1854.3	1853.4
7.5°	1874.5	1876.5	1878.4	1879.6	1881.5	1880.5	1882.5	1881.5
10°	1912.9	1910.8	1913.7	1910.8	1911.8	1909.7	1910.8	1910.8
12.5°	1961.1	1958.1	1956.1	1954.1	1954.1	1950.0	1950.0	1951.1
15°	2016.5	2011.6	2007.5	2005.5	2003.5	2003.5	2000.4	2002.4
17.5°	2071.0	2065.9	2058.8	2058.8	2056.0	2053.9	2051.8	2056.8
20°	2128.4	2123.5	2119.3	2118.4	2112.4	2110.3	2111.2	2117.3
22.5°	2195.0	2192.0	2192.0	2189.9	2185.8	2182.8	2182.8	2189.9
25°	2284.6	2278.6	2279.5	2280.5	2278.6	2278.6	2276.6	2281.7
27.5°	2394.5	2389.4	2392.5	2394.5	2392.5	2395.5	2392.5	2396.5
30°	2523.5	2520.5	2523.5	2526.6	2521.5	2521.5	2519.4	2522.5
32.5°	2677.7	2673.6	2675.6	2675.6	2668.5	2662.5	2654.5	2660.5
35°	2847.0	2842.0	2846.0	2849.0	2840.9	2835.0	2822.7	2827.9
37.5°	3033.3	3035.5	3040.5	3053.6	3051.5	3041.5	3032.4	3036.5
40°	3242.1	3252.1	3274.2	3283.3	3281.2	3271.3	3259.1	3261.1
42.5°	3477.9	3491.0	3514.1	3529.3	3522.2	3508.2	3493.0	3499.0
45°	3734.9	3754.9	3785.2	3800.3	3791.2	3776.1	3754.9	3766.1
47.5°	4006.9	4047.3	4087.6	4107.7	4104.6	4083.5	4056.2	4059.4
50°	4332.4	4385.9	4437.3	4457.4	4442.3	4410.0	4371.7	4370.8
52.5°	4737.5	4795.1	4837.4	4832.3	4795.1	4744.6	4701.3	4699.3
55°	5243.4	5262.6	5256.5	5213.3	5147.7	5069.1	5013.7	5004.5
57.5°	5855.2	5790.7	5696.0	5564.9	5417.8	5268.6	5167.9	5130.6
60°	6602.9	6311.8	5973.1	5616.4	5290.8	5046.9	4892.8	4799.0
62.5°	7220.8	6377.2	5620.3	5000.5	4493.7	4192.4	3981.7	3851.8
65°	7009.0	5509.6	4413.1	3613.9	3060.6	2749.3	2526.6	2378.4
67.5°	5414.9	3681.4	2561.7	1775.7	1346.4	1139.8	995.7	902.0
70°	2730.0	1411.9	855.5	603.7	515.9	479.8	455.5	441.3
72.5°	801.2	535.1	444.4	393.0	361.7	339.6	325.5	318.4
75°	443.5	361.7	319.4	290.2	270.1	254.9	245.9	239.8
77.5°	305.3	263.1	241.9	222.7	206.6	195.6	188.5	182.4
80°	213.6	192.4	183.4	173.4	161.2	152.2	142.1	138.1
82.5°	142.1	132.9	131.1	123.0	115.9	105.8	87.7	81.7
85°	83.6	82.6	82.6	79.6	74.6	65.4	52.5	52.5
87.5°	29.3	30.3	31.3	33.2	32.2	27.2	22.2	21.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)