

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: P197325

Luminaire Tested: **NAV-AF-03-D-UNV-T4FT-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197325
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)
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-T4FT-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16343 lumens
Efficiency: N/A
Efficacy: 85.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G3

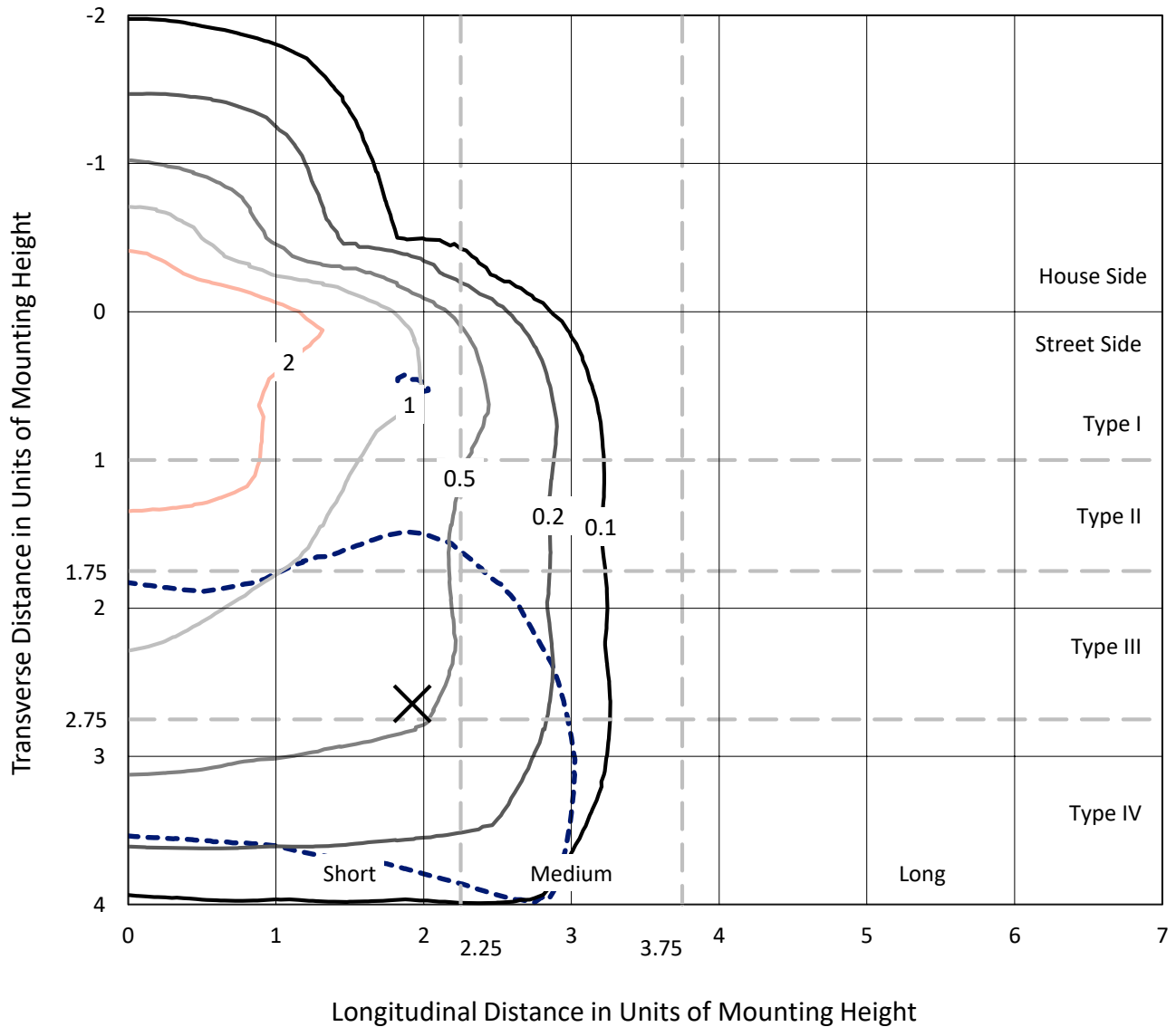
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

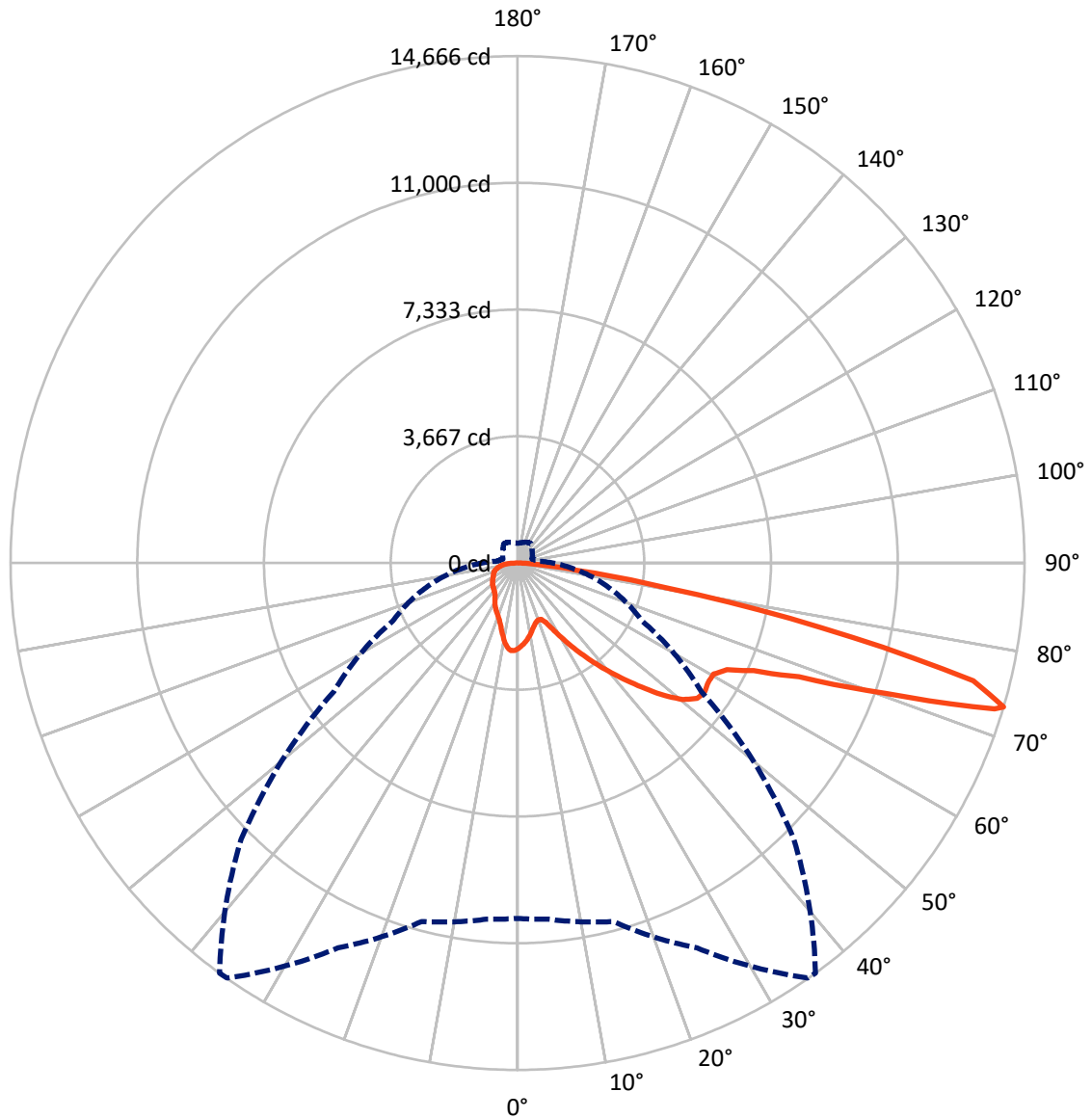
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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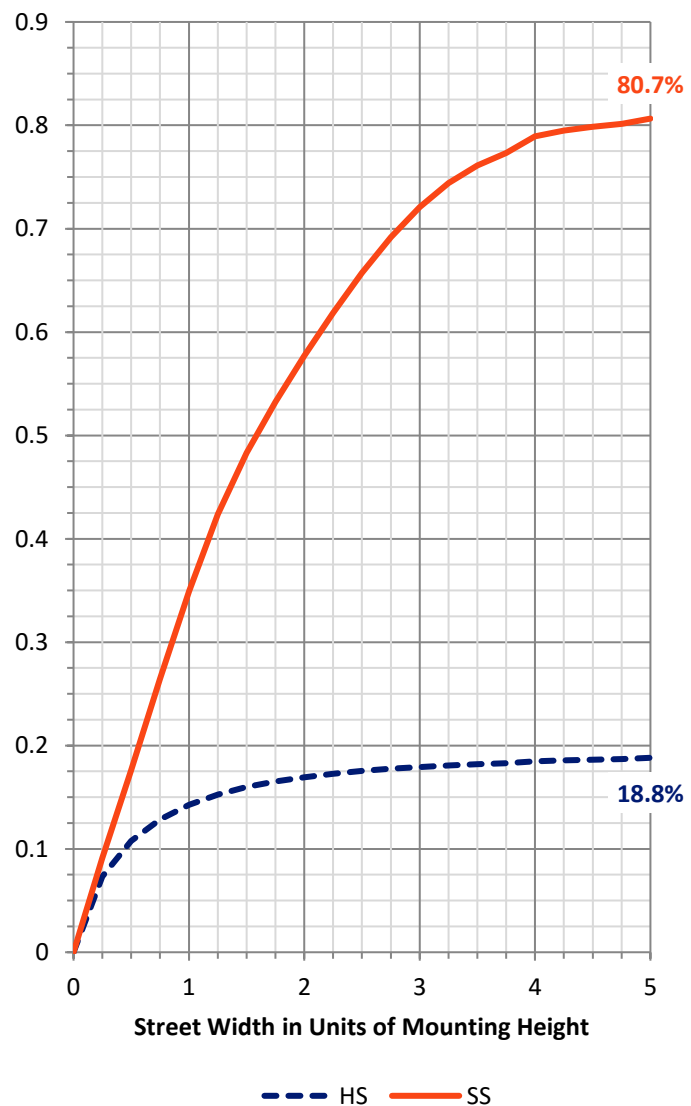
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3151.4	0.0	3151.4
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	13191.6	0.0	13191.6
	% Fixture	80.7	0.0	80.7
Total	Lumens	16343.0	0.0	16343.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.8	1.4
10°-20°	564.7	3.5
20°-30°	905.4	5.5
30°-40°	1497.6	9.2
40°-50°	2317.3	14.2
50°-60°	3102.2	19.0
60°-70°	4052.4	24.8
70°-80°	3310.1	20.3
80°-90°	368.4	2.3
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°	16343.0	100.0
0°-180°	16343.0	100.0

Coefficient of Utilization



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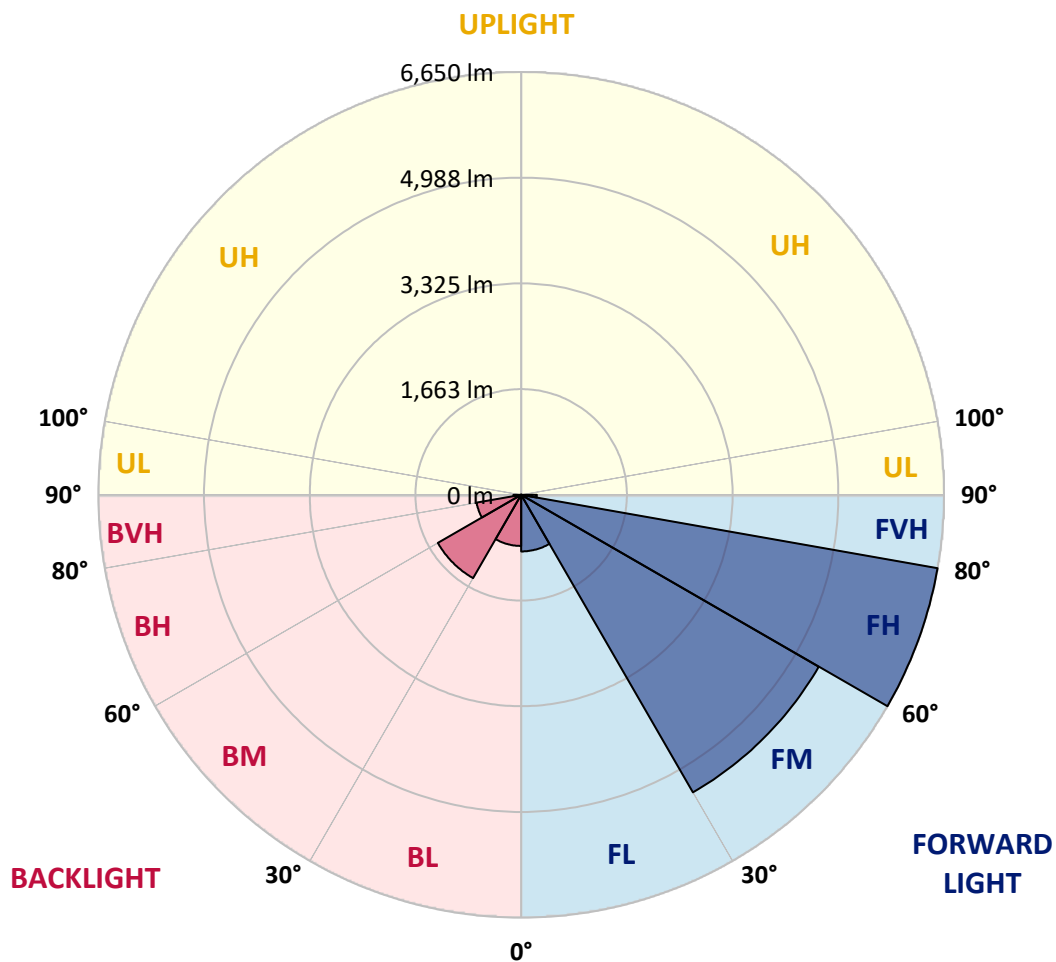
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	890.5	5.4			
FM (30°-60°)	5403.6	33.1			
FH (60°-80°)	6650.4	40.7			G3/7500
FVH (80°-90°)	247.1	1.5			G3/500
BL (0°-30°)	804.4	4.9	B2/1000		
BM (30°-60°)	1513.5	9.3	B2/2500		
BH (60°-80°)	712.2	4.4	B2/1000		G2/1000
BVH (80°-90°)	121.3	0.7			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	2475.5	2475.5	2475.5	2475.5	2475.5	2475.5	2475.5	2475.5	2475.5	2475.5	2475.5
2.5°	2381.0	2387.2	2388.3	2395.5	2395.5	2394.5	2397.6	2410.1	2416.3	2430.8	2443.3
5°	2263.7	2270.9	2274.0	2286.5	2302.1	2303.1	2314.5	2338.4	2361.3	2393.5	2420.5
7.5°	2131.8	2140.1	2148.4	2174.4	2197.2	2199.3	2221.1	2259.5	2289.6	2329.1	2377.9
10°	2004.1	2006.1	2014.5	2047.7	2077.8	2080.9	2112.1	2155.7	2196.2	2251.2	2306.2
12.5°	1899.2	1905.4	1903.3	1928.3	1954.2	1956.3	1997.8	2052.9	2112.1	2174.4	2239.8
15°	1862.8	1861.8	1840.0	1839.0	1850.4	1852.5	1893.0	1957.3	2023.8	2100.6	2184.7
17.5°	1887.8	1879.5	1822.4	1787.0	1779.8	1781.9	1812.0	1882.6	1953.2	2041.4	2142.2
20°	2024.8	1992.6	1858.7	1773.5	1749.7	1749.7	1767.3	1824.4	1902.3	2005.1	2131.8
22.5°	2349.8	2300.0	2014.5	1862.8	1778.7	1770.4	1756.9	1800.5	1886.7	2010.3	2174.4
25°	2759.0	2735.1	2300.0	2100.6	1927.2	1900.2	1810.9	1826.5	1918.9	2066.4	2290.7
27.5°	3138.0	3096.4	2674.9	2446.4	2201.4	2159.8	1970.8	1907.5	1995.8	2170.2	2458.9
30°	3359.1	3331.1	3060.1	2842.0	2550.3	2497.3	2226.3	2067.4	2132.8	2341.5	2697.7
32.5°	3600.1	3583.4	3446.4	3248.0	2928.2	2867.0	2556.5	2328.0	2342.6	2568.9	2985.3
35°	3833.7	3855.5	3777.6	3632.2	3335.3	3278.2	2999.9	2668.6	2601.1	2824.4	3292.7
37.5°	4114.0	4119.2	4070.4	3975.9	3763.1	3716.3	3486.9	3032.1	2882.5	3096.4	3589.7
40°	4673.7	4591.7	4400.6	4325.9	4199.2	4170.1	3908.4	3365.4	3144.2	3375.8	3870.0
42.5°	5279.1	5151.4	4852.3	4729.8	4678.9	4651.9	4259.4	3587.6	3389.3	3655.1	4145.2
45°	5767.1	5663.3	5370.5	5218.9	5225.1	5181.5	4565.7	3785.9	3655.1	3935.4	4452.6
47.5°	6247.9	6074.5	5746.4	5724.6	5797.3	5732.9	4858.6	3984.3	3932.3	4240.7	4759.9
50°	6279.1	6121.2	5988.3	6162.8	6287.4	6207.4	5124.4	4243.8	4220.0	4610.4	5156.6
52.5°	5900.1	5877.2	6079.7	6373.6	6580.2	6508.5	5341.4	4510.7	4513.8	5072.5	5639.4
55°	5762.0	5732.9	5975.9	6337.2	6616.5	6574.0	5503.4	4811.8	4839.9	5633.2	6157.6
57.5°	5994.5	5921.9	5969.6	6268.7	6531.4	6506.5	5671.6	5146.2	5197.1	6279.1	6636.3
60°	6716.2	6567.7	6314.4	6370.4	6534.5	6520.0	5912.5	5519.0	5604.1	6951.9	6939.5
62.5°	7797.2	7629.0	7112.9	6863.7	6827.3	6799.3	6310.2	5976.9	6019.5	7437.9	6762.9
65°	8983.0	8802.3	8188.6	7780.6	7566.6	7506.4	6951.9	6529.3	6262.4	7436.9	6075.5
67.5°	10314.2	10123.1	9511.5	9122.1	8890.6	8787.8	7993.4	6975.8	6183.5	6807.6	4861.7
70°	11677.6	11495.9	11215.5	11351.5	11453.3	11296.5	9634.1	7124.3	5616.6	5337.3	3264.7
72.5°	10953.8	10939.3	11152.2	12441.8	14403.3	14434.5	11272.6	6704.8	4339.4	3172.2	1740.3
73°	10282.0	10343.3	10737.8	12280.9	14655.6	14666.0	11304.8	6487.8	3984.3	2733.0	1528.5
75°	5326.9	5742.2	7206.3	9958.0	13570.5	13619.3	9965.3	4911.5	2374.8	1518.1	1030.1
77.5°	1426.7	1408.0	2321.8	4851.3	9047.4	8983.0	6296.7	2377.9	1138.1	952.2	722.7
80°	489.1	495.3	790.2	1774.6	4223.1	4373.6	2733.0	1037.3	748.7	663.5	511.9
82.5°	249.2	257.5	413.3	754.9	1766.3	1728.9	879.5	610.6	501.5	402.9	286.6
85°	132.9	137.1	227.4	391.5	647.9	655.2	309.4	326.1	318.8	228.4	141.2
87.5°	65.4	67.5	109.0	172.4	239.9	231.6	108.0	141.2	156.8	128.8	77.9
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2475.5	2475.5	2475.5	2475.5	2475.5	2475.5	2475.5	2475.5	2475.5	2475.5	2475.5
2.5°	2458.9	2458.9	2472.4	2495.2	2511.8	2527.4	2537.8	2554.4	2563.8	2562.7	2561.7
5°	2442.3	2452.6	2479.6	2507.7	2526.4	2538.8	2538.8	2546.1	2546.1	2543.0	2538.8
7.5°	2403.8	2421.5	2461.0	2485.9	2491.1	2477.6	2450.6	2429.8	2403.8	2390.3	2385.2
10°	2342.6	2365.4	2415.3	2426.7	2399.7	2351.9	2286.5	2230.4	2180.6	2157.7	2150.5
12.5°	2282.4	2312.5	2359.2	2341.5	2277.2	2183.7	2083.0	2006.1	1950.1	1928.3	1921.0
15°	2232.5	2268.9	2305.2	2250.2	2138.0	2008.2	1897.1	1825.5	1782.9	1766.3	1762.1
17.5°	2199.3	2241.9	2254.3	2151.5	1995.8	1850.4	1751.7	1705.0	1686.3	1679.1	1677.0
20°	2201.4	2249.1	2219.0	2056.0	1858.7	1712.3	1646.9	1633.4	1633.4	1633.4	1632.3
22.5°	2258.5	2300.0	2204.5	1966.7	1726.8	1596.0	1567.9	1579.4	1587.7	1587.7	1586.6
25°	2376.8	2399.7	2214.9	1880.5	1603.3	1495.3	1496.3	1518.1	1525.4	1525.4	1523.3
27.5°	2557.5	2538.8	2233.5	1785.0	1481.8	1403.9	1418.4	1438.2	1443.3	1440.2	1439.2
30°	2783.9	2709.1	2249.1	1672.8	1367.5	1318.7	1331.2	1342.6	1338.5	1331.2	1330.2
32.5°	3037.3	2882.5	2239.8	1547.2	1266.8	1230.5	1237.7	1244.0	1237.7	1220.1	1220.1
35°	3288.5	3039.3	2188.9	1410.1	1186.9	1145.3	1144.3	1164.0	1163.0	1142.2	1143.3
37.5°	3508.7	3162.9	2090.3	1284.5	1118.3	1083.0	1087.2	1099.6	1105.9	1077.8	1074.7
40°	3700.8	3248.0	1951.1	1177.5	1063.3	1065.4	1054.0	1034.2	1027.0	1014.5	1012.4
42.5°	3881.5	3307.2	1803.7	1088.2	1035.3	1059.1	1020.7	974.0	954.3	965.7	973.0
45°	4059.0	3373.7	1661.4	1014.5	1000.0	1040.5	987.5	935.6	912.7	917.9	925.2
47.5°	4276.0	3466.1	1490.1	935.6	946.0	1006.2	966.7	910.7	876.4	855.6	849.4
50°	4561.6	3600.1	1267.9	850.4	888.9	968.8	949.1	874.3	836.9	795.4	785.0
52.5°	4918.8	3726.7	1043.6	781.9	842.1	936.6	920.0	843.2	797.5	747.6	739.3
55°	5275.0	3744.4	850.4	722.7	789.2	893.0	884.7	818.2	753.9	713.4	705.1
57.5°	5524.2	3577.2	720.6	672.9	738.3	839.0	852.5	788.1	717.5	686.4	681.2
60°	5528.3	3177.4	641.7	639.6	699.9	792.3	819.3	752.8	694.7	673.9	669.8
62.5°	5089.1	2560.6	590.8	614.7	671.8	753.9	794.4	733.1	689.5	681.2	677.0
65°	4265.7	1891.9	550.3	591.9	645.9	721.7	773.6	726.9	687.4	684.3	681.2
67.5°	3149.4	1296.9	516.1	562.8	616.8	688.4	753.9	717.5	674.9	687.4	683.3
70°	1981.2	866.0	483.9	529.6	578.4	650.0	727.9	700.9	659.4	652.1	638.6
72.5°	1118.3	626.1	445.5	487.0	528.5	599.1	692.6	672.9	624.1	595.0	581.5
73°	1010.3	592.9	436.1	476.6	517.1	588.8	684.3	664.6	613.7	581.5	569.0
75°	739.3	484.9	393.5	434.0	469.3	541.0	644.8	623.0	568.0	529.6	521.3
77.5°	535.8	373.8	338.5	374.9	406.0	474.5	585.6	560.7	506.7	486.0	477.7
80°	386.3	283.5	280.4	315.7	342.7	412.2	522.3	496.3	444.4	505.7	492.2
82.5°	230.5	181.7	205.6	245.1	273.1	345.8	453.8	423.7	373.8	378.0	321.9
85°	110.1	102.8	127.7	160.9	180.7	236.7	378.0	354.1	299.1	245.1	239.9
87.5°	48.8	46.7	61.3	71.6	96.6	142.3	258.6	229.5	217.0	129.8	101.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)