

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: P197078

Luminaire Tested: **NAV-AF-02-D-UNV-SL3-8030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197078
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-02-D-UNV-SL3-8030-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8437 lumens
Efficiency: N/A
Efficacy: 74.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G2

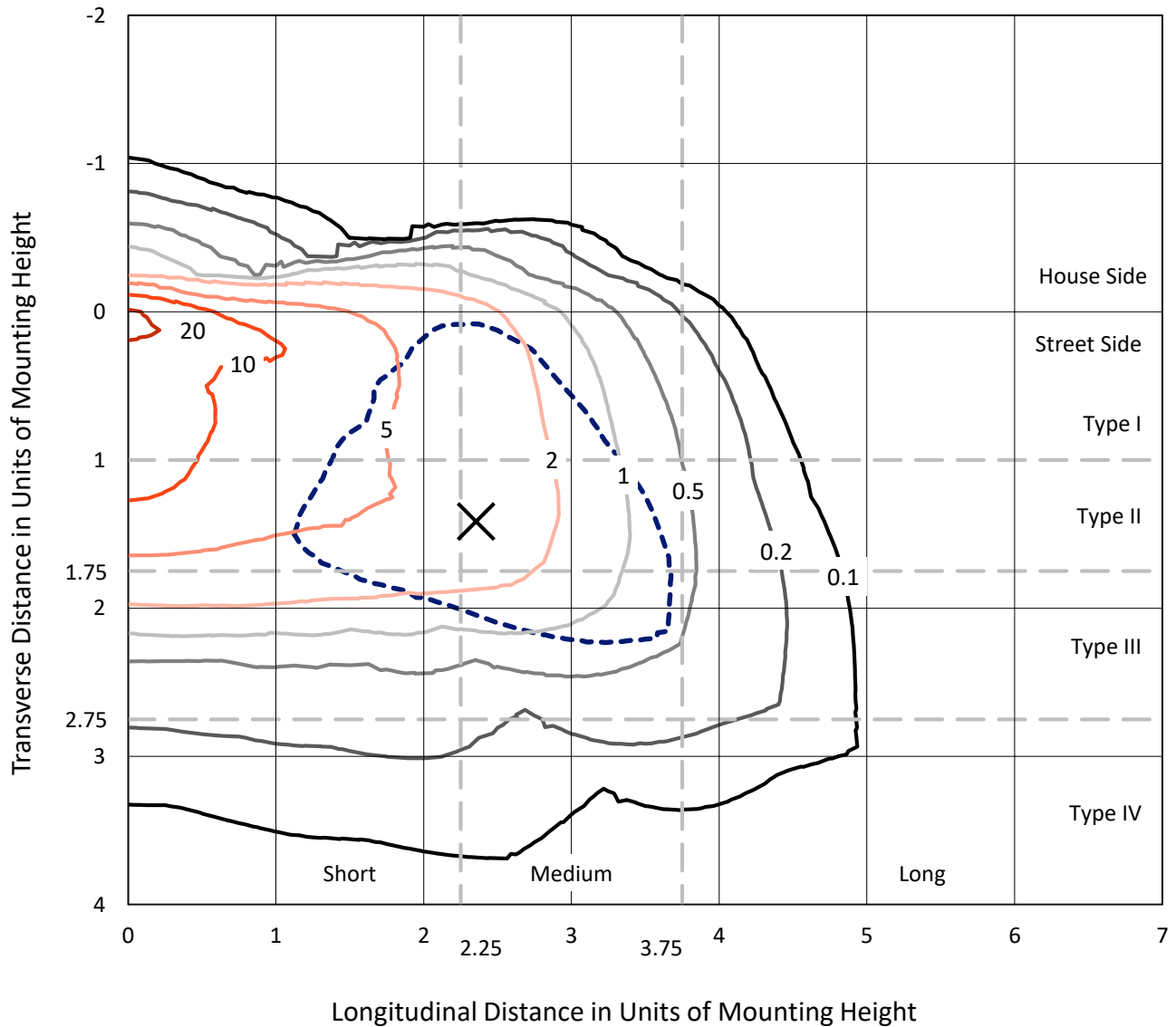
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

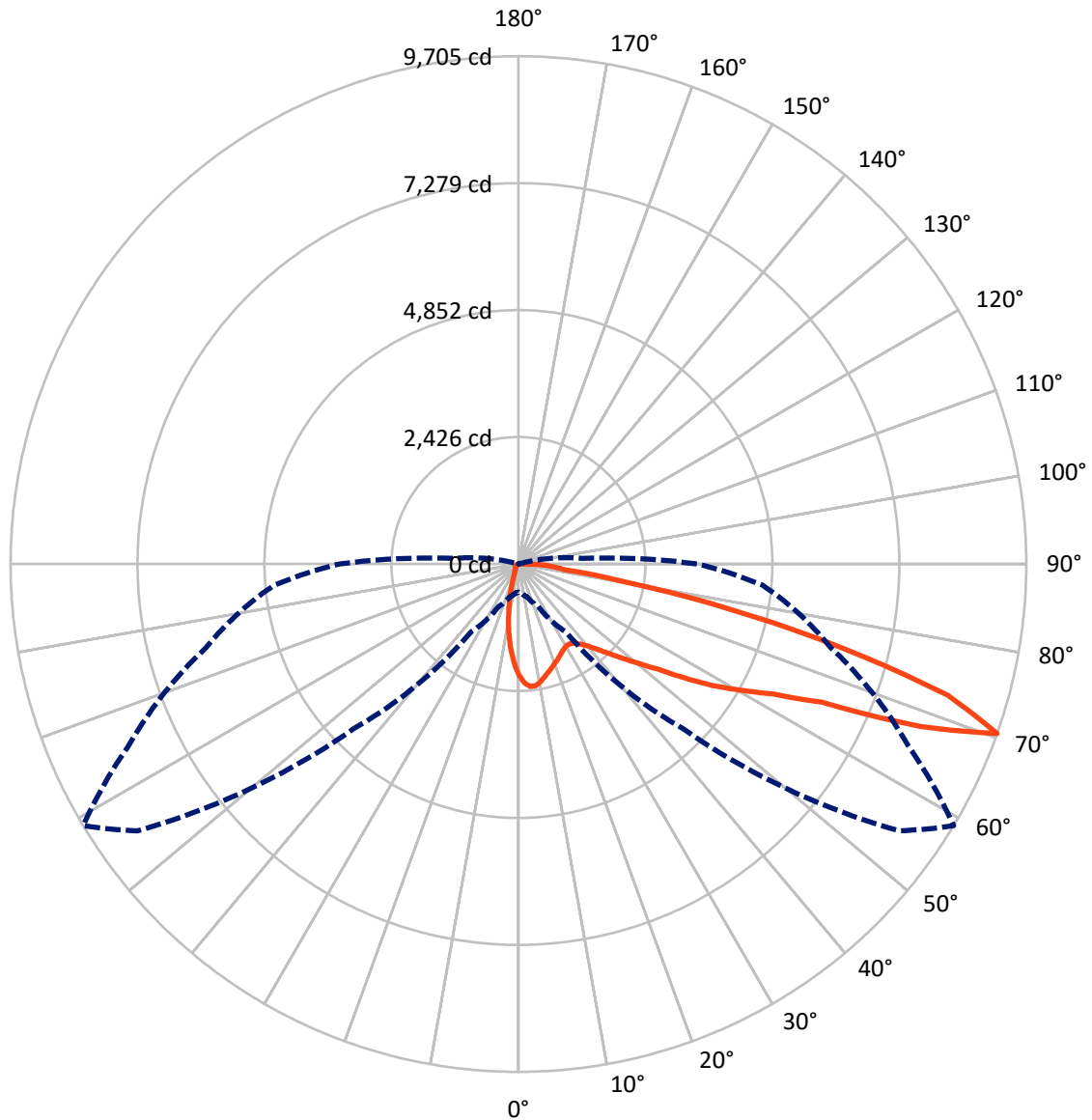


Based on 10 foot mounting height. Maximum calculated value = 22.7 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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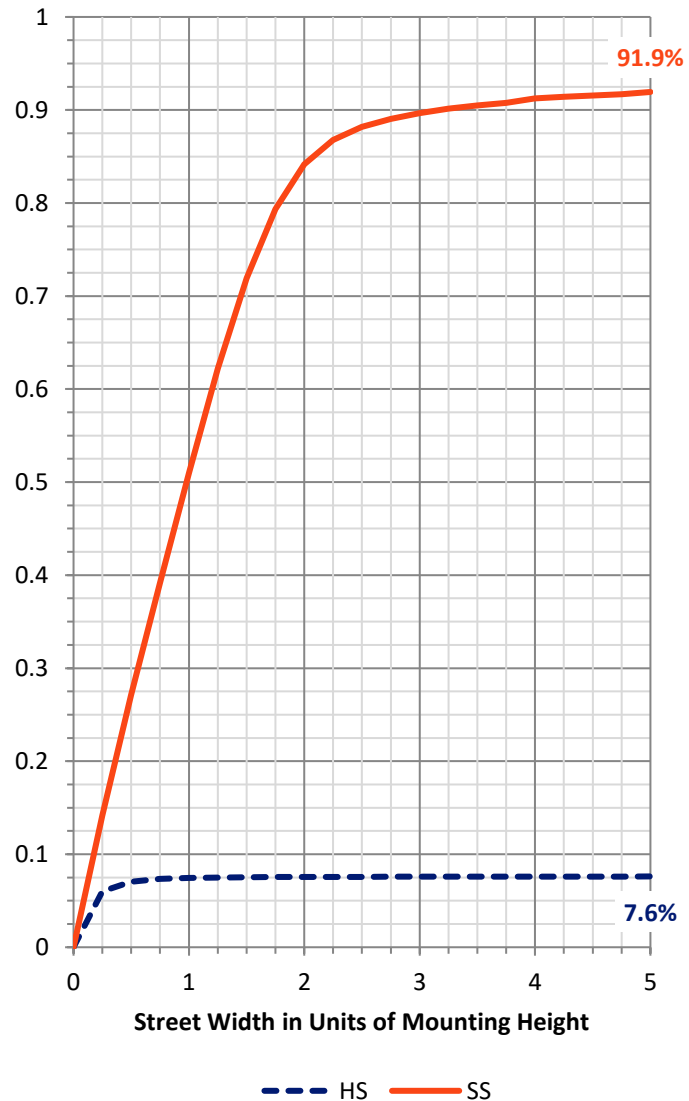
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	648.6	0.0	648.6
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	7788.4	0.0	7788.4
	% Fixture	92.3	0.0	92.3
Total	Lumens	8437.0	0.0	8437.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.4	2.1
10°-20°	368.0	4.4
20°-30°	498.1	5.9
30°-40°	718.8	8.5
40°-50°	1193.8	14.1
50°-60°	1826.0	21.6
60°-70°	2271.2	26.9
70°-80°	1255.5	14.9
80°-90°	130.2	1.5
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°	8437.0	100.0
0°-180°	8437.0	100.0



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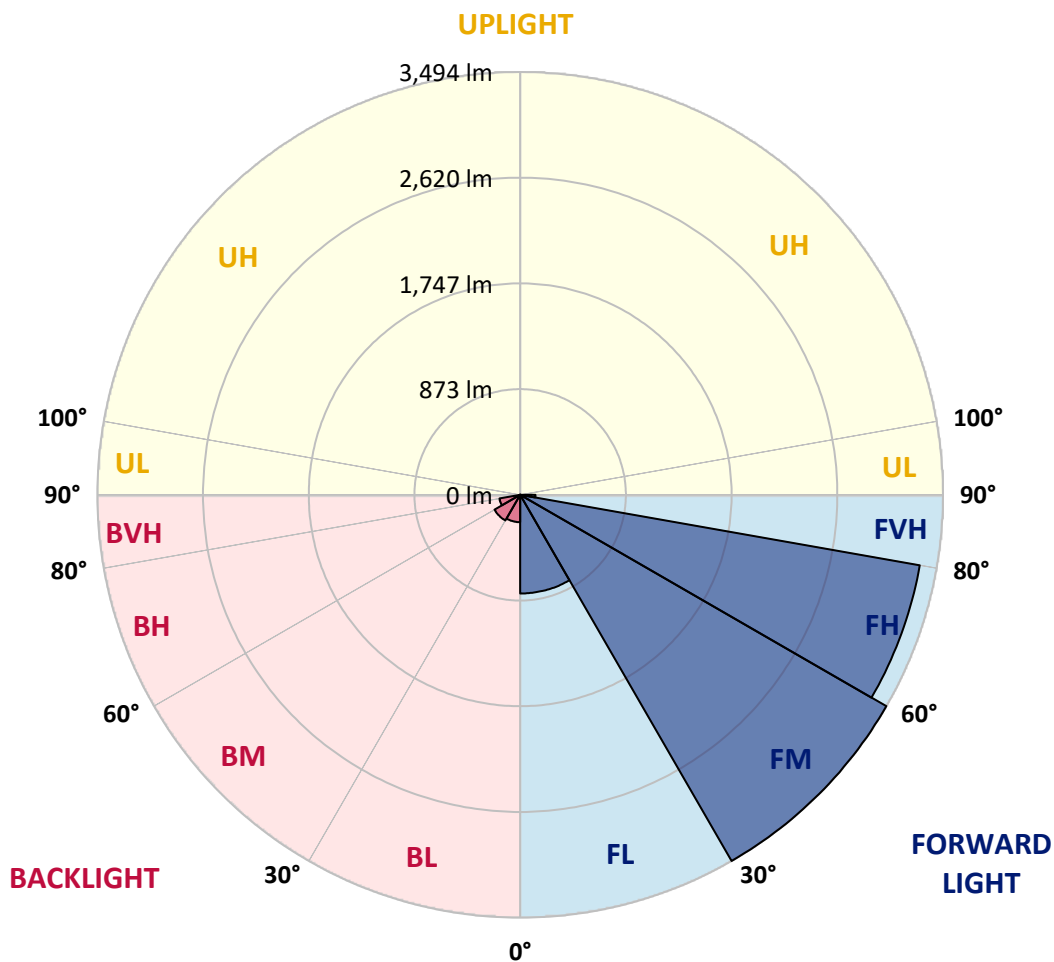
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	815.5	9.7			
FM	(30°-60°)	3493.9	41.4			
FH	(60°-80°)	3352.7	39.7			G2/5000
FVH	(80°-90°)	126.4	1.5			G2/225
BL	(0°-30°)	226.0	2.7	B1/500		
BM	(30°-60°)	244.8	2.9	B1/1000		
BH	(60°-80°)	174.0	2.1	B1/500		G1/500
BVH	(80°-90°)	3.8	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	2133.4	2133.4	2133.4	2133.4	2133.4	2133.4	2133.4	2133.4	2133.4	2133.4	2133.4
2.5°	2411.5	2407.7	2391.8	2388.6	2370.8	2335.2	2293.8	2277.3	2243.5	2190.1	2130.9
5°	2451.6	2453.6	2454.8	2447.8	2445.3	2416.0	2370.2	2350.4	2305.3	2217.4	2109.2
7.5°	2301.4	2306.5	2322.4	2329.4	2360.0	2371.4	2361.9	2349.2	2313.5	2209.8	2057.7
10°	2143.0	2152.5	2169.7	2181.1	2218.7	2249.2	2288.1	2291.3	2283.6	2184.3	1999.8
12.5°	2006.8	2015.7	2034.8	2057.7	2095.9	2135.3	2193.2	2213.6	2239.1	2167.8	1958.4
15°	1889.6	1892.2	1910.7	1939.3	1989.6	2043.7	2112.4	2142.3	2192.0	2161.4	1926.6
17.5°	1787.2	1787.8	1799.9	1826.0	1887.1	1958.4	2038.6	2078.0	2141.1	2152.5	1898.6
20°	1719.7	1719.1	1719.7	1733.7	1787.8	1872.5	1969.8	2011.2	2092.0	2141.7	1869.9
22.5°	1696.8	1693.6	1679.0	1673.9	1708.3	1782.7	1899.2	1953.3	2048.1	2138.5	1848.9
25°	1724.8	1722.9	1691.7	1662.4	1665.6	1712.1	1827.3	1893.5	2013.8	2150.0	1843.8
27.5°	1815.2	1811.4	1763.6	1706.3	1670.1	1678.3	1773.8	1843.2	1986.4	2178.0	1850.8
30°	1933.6	1934.2	1883.3	1813.9	1728.6	1681.5	1745.2	1810.7	1967.9	2220.0	1866.1
32.5°	2065.3	2064.7	2028.4	1948.2	1839.4	1740.1	1757.9	1813.3	1970.5	2281.7	1895.4
35°	2201.5	2194.5	2182.4	2111.8	1984.5	1842.6	1815.8	1856.6	1997.2	2363.2	1945.0
37.5°	2358.7	2356.2	2368.3	2293.8	2164.0	1993.4	1917.7	1945.0	2064.7	2483.5	2025.2
40°	2608.8	2594.8	2600.6	2499.4	2366.4	2196.4	2060.2	2067.2	2172.2	2642.6	2151.9
42.5°	3085.6	3028.9	2922.6	2733.0	2589.1	2421.7	2246.7	2234.6	2324.4	2835.4	2318.6
45°	3655.2	3590.3	3322.3	2990.7	2811.9	2663.6	2477.1	2444.6	2511.5	3065.2	2533.7
47.5°	4130.6	4060.6	3705.5	3259.9	3038.5	2913.1	2732.3	2694.1	2735.5	3331.9	2792.1
50°	4292.9	4254.1	3942.2	3484.0	3266.9	3193.1	3052.5	2988.8	2999.0	3619.5	3093.8
52.5°	4218.5	4205.1	3996.3	3637.4	3478.3	3502.4	3403.2	3336.3	3324.9	3934.0	3427.3
55°	4061.3	4054.9	3953.1	3722.7	3664.7	3785.7	3895.1	3837.2	3729.0	4268.1	3702.9
57.5°	3836.6	3860.8	3934.0	3886.9	3893.9	4084.8	4352.1	4382.0	4220.4	4534.1	3907.2
60°	3236.4	3301.3	3636.7	4063.2	4389.7	4582.5	4841.6	4897.6	4636.6	4716.2	4143.4
62.5°	2392.5	2485.4	2963.4	3746.8	4662.7	5528.9	5492.6	5467.8	5033.8	4959.9	4573.0
65°	1405.3	1514.1	1918.3	2927.7	4250.9	6137.4	6708.3	6364.6	5639.0	5466.6	5257.2
67.5°	700.1	700.7	883.4	1545.3	3141.6	5712.9	8482.7	8284.2	6926.0	6213.1	5527.0
70°	538.4	553.1	653.6	898.0	1588.6	4449.5	8889.4	9704.7	8219.2	6180.0	4689.4
72.5°	456.3	465.9	581.7	781.6	1187.6	2442.7	7695.4	8578.2	7843.1	5221.5	3456.6
75°	328.4	336.1	514.9	709.0	1093.4	1211.8	5278.8	6362.1	5884.7	3673.0	1902.4
77.5°	81.5	80.8	179.5	575.4	978.2	1009.4	3028.9	4079.7	3376.4	1504.0	488.8
80°	36.3	35.0	40.7	120.9	910.1	952.8	1332.1	2060.2	1295.2	243.8	149.6
82.5°	25.5	24.2	25.5	44.6	304.2	884.0	805.1	893.0	474.2	83.4	63.6
85°	8.3	7.6	14.0	37.6	85.3	509.8	785.4	667.0	352.6	35.6	42.6
87.5°	1.3	1.3	5.1	20.4	24.8	169.9	460.8	462.1	158.5	21.0	19.1
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°	2133.4	2133.4	2133.4	2133.4	2133.4	2133.4	2133.4	2133.4	2133.4	2133.4	2133.4
2.5°	2101.0	2063.4	2010.6	1957.8	1910.0	1861.0	1821.5	1803.1	1794.8	1783.4	1758.5
5°	2052.6	1984.5	1868.6	1754.7	1648.4	1546.6	1459.4	1409.8	1356.3	1353.8	1327.7
7.5°	1974.9	1878.2	1695.5	1518.6	1356.3	1201.0	1067.3	980.8	921.6	884.7	859.2
10°	1888.4	1764.3	1522.4	1273.6	1052.7	845.2	673.4	561.4	493.3	458.9	439.2
12.5°	1819.6	1663.7	1351.8	1038.7	761.8	523.8	364.1	282.6	246.3	232.3	225.9
15°	1760.4	1571.4	1192.1	828.7	508.5	301.0	210.7	183.9	178.2	178.2	177.6
17.5°	1700.6	1482.3	1036.8	622.5	320.1	197.3	166.1	162.3	162.9	164.8	164.8
20°	1644.0	1397.7	887.2	443.6	210.0	157.8	150.8	149.6	151.5	154.0	153.4
22.5°	1598.2	1323.2	747.2	304.9	161.7	143.2	138.7	136.8	138.1	140.0	139.4
25°	1565.7	1259.6	618.6	212.6	140.7	130.5	125.4	122.8	121.6	122.8	122.2
27.5°	1546.0	1206.1	497.7	159.8	126.0	117.7	111.4	106.3	103.1	103.1	101.8
30°	1533.2	1155.8	390.1	132.4	113.9	105.0	96.1	89.1	84.0	82.7	82.1
32.5°	1532.6	1112.5	291.5	117.1	102.5	92.3	81.5	72.6	66.8	65.6	64.9
35°	1548.5	1077.5	214.5	105.7	92.3	80.2	68.1	58.6	53.5	53.5	52.8
37.5°	1589.9	1057.2	162.3	96.7	84.0	70.0	57.3	48.4	43.9	45.2	45.2
40°	1666.9	1053.3	132.4	89.7	77.0	61.1	46.5	39.5	37.6	39.5	39.5
42.5°	1784.6	1073.7	117.7	84.6	70.6	52.2	38.8	33.7	33.1	35.0	35.0
45°	1938.0	1113.8	109.5	80.2	63.6	43.3	32.5	29.3	28.6	31.2	31.2
47.5°	2123.9	1167.9	101.8	75.1	56.6	35.6	27.4	24.8	24.8	27.4	28.0
50°	2344.1	1241.1	94.2	70.0	50.9	29.9	22.9	21.0	21.6	24.2	24.8
52.5°	2597.4	1330.8	87.2	65.6	44.6	24.2	19.1	17.8	18.5	21.0	21.6
55°	2815.7	1409.1	78.9	61.1	36.3	19.7	15.9	15.3	15.9	19.1	19.1
57.5°	3006.0	1484.2	71.3	54.1	28.6	15.9	12.7	12.7	14.0	17.2	17.8
60°	3258.7	1602.6	64.9	45.8	21.6	12.1	10.2	10.8	12.7	15.3	15.9
62.5°	3706.1	1803.7	56.6	38.2	15.9	9.5	8.3	8.9	11.5	14.6	15.3
65°	4266.2	1994.0	47.1	31.8	12.1	7.0	6.4	8.3	11.5	14.6	15.3
67.5°	4208.9	1734.4	36.9	25.5	8.9	5.7	5.1	7.6	10.8	14.6	15.3
70°	3413.3	1215.6	27.4	17.2	7.0	5.1	5.1	7.6	10.8	14.0	14.6
72.5°	2367.6	676.6	21.0	11.5	6.4	5.1	4.5	7.0	10.2	14.0	14.6
75°	1126.5	207.5	16.5	8.3	5.7	4.5	3.8	7.0	10.2	14.0	14.6
77.5°	216.4	52.8	13.4	7.0	5.1	4.5	3.8	6.4	10.2	13.4	14.0
80°	73.2	23.5	10.8	6.4	5.1	4.5	3.8	6.4	9.5	12.7	13.4
82.5°	40.1	13.4	9.5	5.7	5.1	3.8	3.2	5.7	8.9	12.7	13.4
85°	31.2	9.5	7.6	5.7	5.1	3.8	3.2	5.7	8.9	12.1	12.7
87.5°	15.9	7.0	6.4	5.7	5.1	3.8	3.2	5.1	8.3	11.5	12.7
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)