

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: P196732

Luminaire Tested: **NAV-AF-04-D-UNV-T2-7030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196732  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24136)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-04-D-UNV-T2-7030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15217.6 lumens  
Efficiency: N/A  
Efficacy: 118.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B2 - U0 - G2

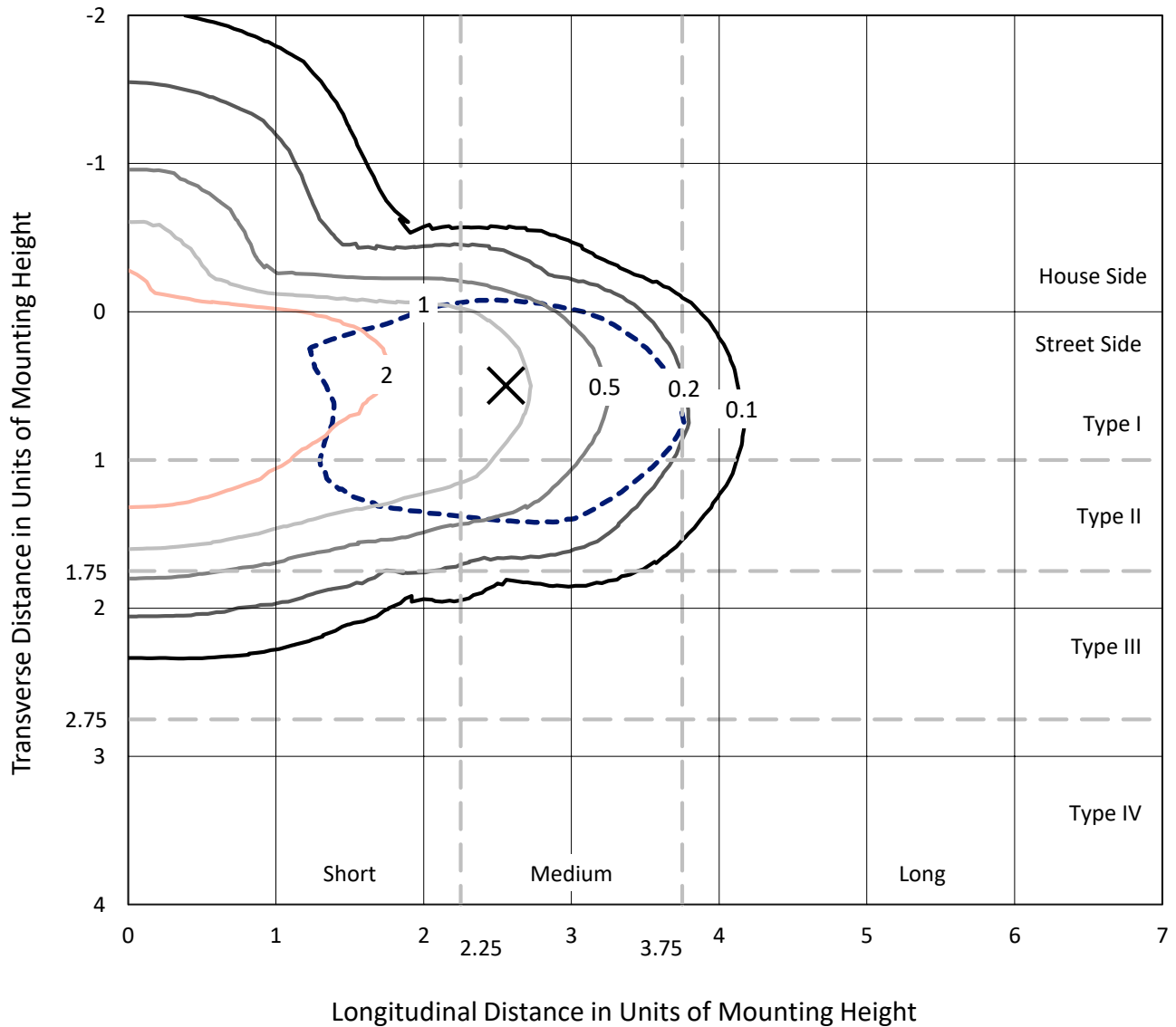
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

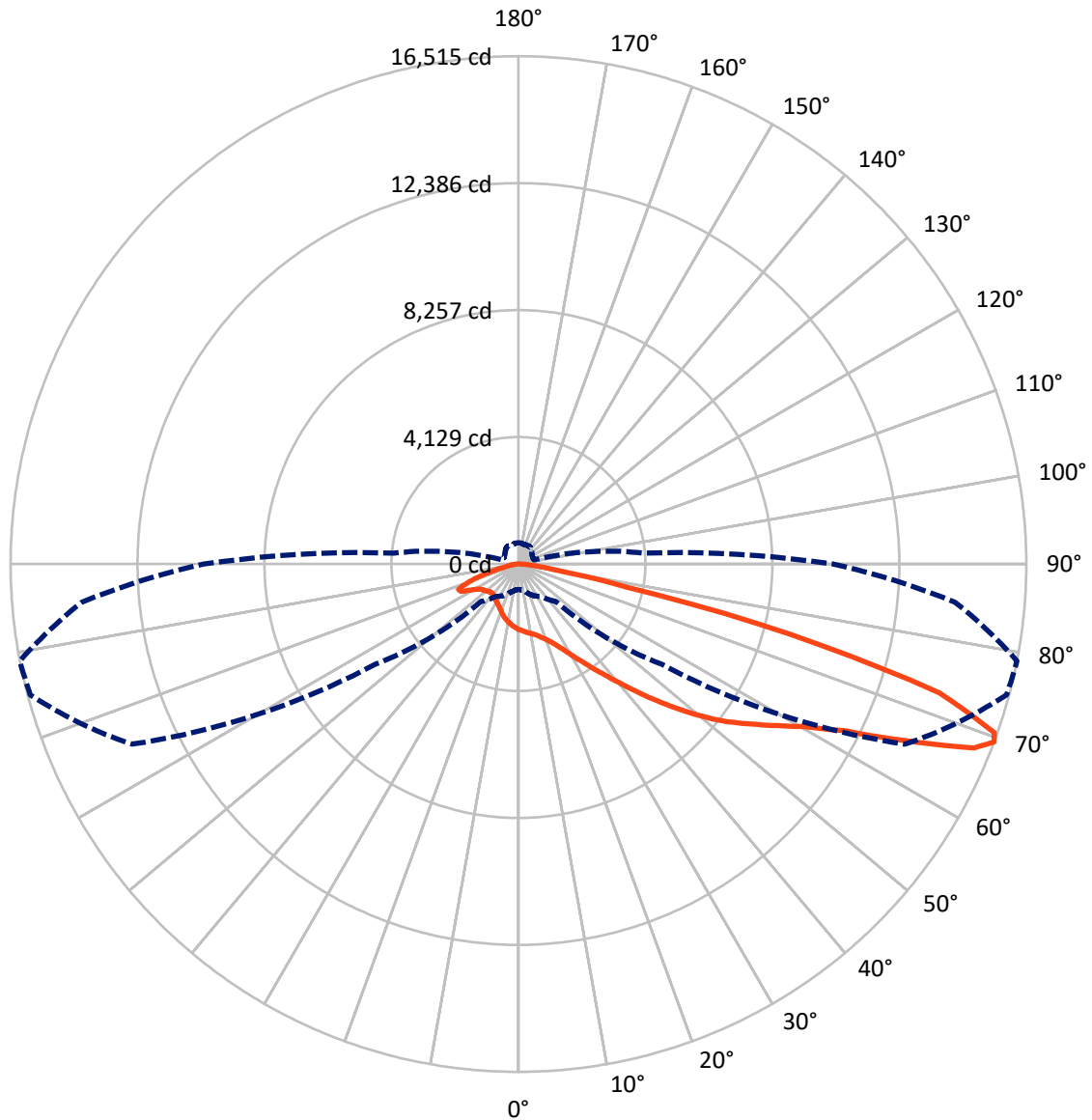
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.1 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2862.7	0.0	2862.7
	% Fixture	18.8	0.0	18.8
<b>Street Side</b>	Lumens	12354.9	0.0	12354.9
	% Fixture	81.2	0.0	81.2
<b>Total</b>	Lumens	15217.6	0.0	15217.6
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	198.0	1.3
10°-20°	567.6	3.7
20°-30°	937.9	6.2
30°-40°	1518.7	10.0
40°-50°	2426.1	15.9
50°-60°	3474.4	22.8
60°-70°	3871.0	25.4
70°-80°	1936.6	12.7
80°-90°	287.4	1.9
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°	15217.6	100.0
0°-180°	15217.6	100.0

**Coefficient of Utilization**



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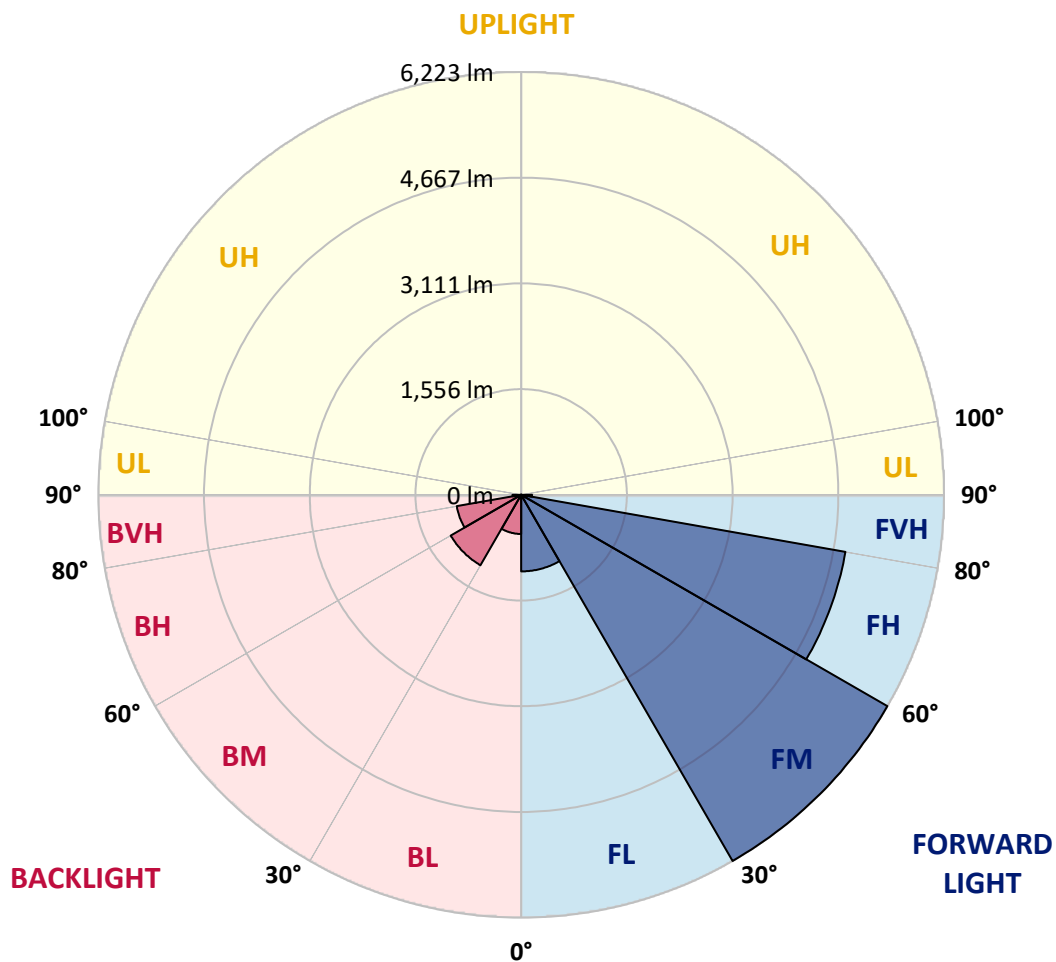
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1126.7	7.4			
FM (30°-60°)	6222.5	40.9			
FH (60°-80°)	4845.1	31.8			G2/5000
FVH (80°-90°)	160.6	1.1			G2/225
BL (0°-30°)	576.7	3.8	B2/1000		
BM (30°-60°)	1196.7	7.9	B2/2500		
BH (60°-80°)	962.5	6.3	B2/1000		G2/1000
BVH (80°-90°)	126.8	0.8			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	2135.5	2135.5	2135.5	2135.5	2135.5	2135.5	2135.5	2135.5	2135.5	2135.5	2135.5
2.5°	2344.6	2339.6	2338.5	2323.7	2315.8	2298.9	2258.9	2218.2	2180.3	2160.4	2139.6
5°	2540.8	2530.8	2525.7	2501.0	2479.0	2441.2	2378.5	2313.7	2246.1	2211.2	2169.4
7.5°	2659.2	2660.1	2660.1	2640.2	2618.4	2572.6	2493.0	2404.4	2303.7	2258.0	2192.3
10°	2669.1	2670.2	2685.0	2690.1	2695.0	2671.2	2597.4	2485.9	2356.5	2296.8	2211.2
12.5°	2570.6	2577.5	2602.4	2638.3	2689.1	2715.0	2683.1	2573.6	2424.3	2351.6	2247.0
15°	2438.1	2445.1	2477.0	2531.7	2613.4	2700.1	2744.8	2674.1	2512.9	2427.2	2299.8
17.5°	2373.4	2381.5	2403.3	2447.1	2526.7	2643.3	2777.7	2781.6	2617.5	2518.9	2362.5
20°	2342.6	2348.5	2376.5	2412.3	2473.0	2584.5	2780.6	2895.2	2741.9	2627.3	2439.2
22.5°	2413.3	2415.2	2429.2	2449.1	2489.9	2575.6	2778.7	3012.6	2897.1	2763.7	2537.8
25°	2620.4	2607.5	2597.4	2572.6	2582.6	2643.3	2810.4	3138.0	3096.3	2942.9	2669.1
27.5°	2865.4	2863.2	2837.4	2779.7	2742.9	2781.6	2901.2	3278.5	3340.2	3170.9	2841.4
30°	3138.0	3139.0	3112.1	3041.4	2966.8	2970.8	3045.5	3440.7	3631.9	3445.7	3053.5
32.5°	3423.7	3441.6	3392.0	3321.3	3230.7	3201.8	3252.5	3636.8	3969.4	3770.2	3299.3
35°	3765.3	3768.3	3713.5	3609.9	3519.3	3473.6	3520.4	3881.8	4358.7	4151.6	3599.0
37.5°	4119.7	4121.7	4065.0	3932.6	3818.1	3788.1	3839.9	4179.3	4770.8	4585.6	3951.5
40°	4409.3	4430.4	4385.5	4261.1	4145.7	4127.7	4202.3	4535.9	5297.4	5099.3	4370.6
42.5°	4737.9	4761.8	4708.1	4578.6	4487.1	4481.0	4597.6	4942.1	5821.2	5693.7	4845.4
45°	5108.3	5142.2	5067.5	4922.1	4844.4	4975.8	4982.9	5392.1	6424.5	6358.8	5380.2
47.5°	5512.5	5540.4	5479.7	5323.3	5238.8	5428.9	5360.2	5878.9	7076.6	7071.6	5958.6
50°	5824.2	5854.9	5861.0	5792.3	5703.7	5727.6	5774.4	6390.6	7726.7	7804.4	6556.8
52.5°	5767.4	5797.3	5931.6	6111.9	6254.2	6192.5	6249.2	6934.2	8354.8	8519.2	7125.4
55°	5309.5	5325.3	5577.2	6005.3	6611.6	6906.3	6910.3	7525.6	8952.2	9182.2	7665.0
57.5°	4484.1	4486.0	4813.6	5444.8	6403.5	7369.3	7953.6	8268.3	9575.5	9914.9	8334.0
60°	3172.9	3180.9	3562.2	4387.6	5657.9	7313.5	9075.7	9597.4	10297.2	10738.3	9196.2
62.5°	1883.6	1901.5	2189.2	2851.3	4202.3	6596.7	9738.8	11961.8	11360.6	11946.0	10576.0
65°	1225.6	1240.5	1412.7	1745.2	2482.9	4799.6	9520.8	14251.7	13372.6	13845.6	12559.3
67.5°	943.8	955.8	1091.2	1292.2	1523.2	2594.5	7612.2	14731.5	15821.8	15969.2	14232.7
69°	829.3	839.2	938.9	1131.9	1282.2	1717.3	5672.8	13860.4	16434.0	16514.6	14253.6
70°	768.6	776.5	870.1	1037.4	1177.9	1370.8	4341.8	12848.9	16210.0	16416.1	13842.5
72.5°	633.1	640.1	706.9	835.3	962.7	976.7	1923.5	9382.3	13649.3	14308.5	11714.0
75°	528.7	532.6	576.5	670.0	779.6	777.6	982.7	5314.4	8329.1	9114.5	7232.9
77.5°	441.1	444.0	472.9	530.7	615.2	612.3	691.9	2293.8	3677.6	3548.2	2489.9
80°	389.3	391.2	406.2	421.0	474.8	471.9	512.8	1053.4	1496.3	1382.9	941.9
82.5°	295.6	299.7	375.3	382.3	368.3	355.4	357.4	613.3	766.6	697.9	505.8
85°	167.2	168.3	240.9	281.8	320.5	240.9	231.9	316.7	378.4	331.5	221.0
87.5°	74.7	77.7	115.5	133.4	173.1	141.4	132.4	134.4	163.3	135.4	87.6
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°	2135.5	2135.5	2135.5	2135.5	2135.5	2135.5	2135.5	2135.5	2135.5	2135.5	2135.5
2.5°	2119.6	2102.7	2062.9	2022.1	1981.2	1955.3	1928.4	1903.6	1893.6	1892.6	1873.7
5°	2128.6	2088.7	1998.2	1898.6	1804.0	1730.3	1668.6	1628.7	1589.9	1582.9	1566.0
7.5°	2131.5	2066.8	1919.4	1760.1	1615.8	1514.3	1452.6	1425.7	1406.7	1401.8	1395.8
10°	2130.5	2039.0	1831.8	1613.9	1449.6	1373.0	1350.0	1356.0	1364.0	1367.9	1367.9
12.5°	2146.5	2026.0	1744.3	1476.4	1342.0	1305.2	1323.1	1353.9	1377.9	1387.8	1389.8
15°	2175.4	2018.0	1647.6	1357.0	1266.5	1275.4	1319.1	1364.0	1397.8	1412.7	1416.6
17.5°	2211.2	2007.1	1536.1	1258.4	1222.6	1253.4	1310.1	1367.0	1407.7	1426.7	1429.6
20°	2251.0	1991.1	1420.7	1184.7	1183.8	1222.6	1279.3	1343.1	1386.8	1407.7	1406.7
22.5°	2304.8	1976.2	1313.2	1131.0	1140.8	1176.7	1223.6	1281.3	1322.1	1341.0	1337.2
25°	2376.5	1962.3	1216.6	1083.2	1092.1	1116.1	1148.9	1192.7	1221.6	1231.6	1224.6
27.5°	2473.0	1951.4	1140.8	1039.4	1038.4	1049.3	1069.2	1093.1	1107.2	1104.1	1093.1
30°	2591.5	1940.3	1085.2	1000.6	986.6	985.6	994.6	1008.6	1017.5	999.6	990.7
32.5°	2724.0	1921.5	1035.4	966.7	941.9	932.8	936.8	955.8	992.6	974.7	967.7
35°	2880.2	1899.6	985.6	929.9	911.0	894.1	897.0	937.9	1049.3	1036.5	1029.4
37.5°	3068.3	1879.7	939.8	890.0	889.1	868.2	866.1	914.9	1064.3	1036.5	1030.5
40°	3294.3	1875.7	898.9	846.2	862.2	854.2	847.2	877.2	981.5	924.9	914.0
42.5°	3567.2	1893.6	869.1	804.4	831.4	850.2	837.3	844.2	887.0	836.3	827.3
45°	3885.7	1942.4	847.2	767.5	798.4	847.2	832.3	826.3	833.3	805.5	799.4
47.5°	4257.1	2029.0	832.3	736.7	767.5	839.2	830.3	818.4	815.4	799.4	795.5
50°	4654.3	2145.6	822.4	708.9	739.6	825.4	829.3	812.4	807.4	800.5	798.4
52.5°	5048.6	2271.9	810.3	684.9	716.8	808.4	830.3	806.5	799.4	795.5	793.4
55°	5440.8	2403.3	788.6	664.1	700.0	788.6	829.3	798.4	790.5	790.5	790.5
57.5°	5949.6	2603.4	759.7	647.2	678.0	762.6	816.3	789.5	778.6	779.6	780.5
60°	6684.3	2939.0	727.7	628.2	649.1	732.7	796.5	773.5	760.7	764.6	765.6
62.5°	7911.9	3525.4	684.0	601.4	619.3	700.9	770.6	751.7	739.6	746.7	747.7
65°	9548.6	4235.2	626.2	567.5	588.4	665.1	737.7	725.8	712.8	729.8	728.8
67.5°	10547.2	4443.2	565.5	531.6	558.6	627.2	696.8	691.9	683.0	712.8	710.8
69°	10219.6	4066.9	530.7	508.7	537.7	601.4	671.1	669.0	662.1	690.9	689.0
70°	9710.9	3715.5	508.7	493.9	526.6	585.4	654.1	654.1	647.2	672.1	667.0
72.5°	7800.3	2755.7	458.1	455.9	488.8	541.6	608.2	613.3	609.3	618.3	613.3
75°	4579.7	1660.6	408.2	414.2	443.0	494.8	557.6	561.5	557.6	556.5	557.6
77.5°	1588.0	744.7	360.4	369.4	394.2	447.0	501.7	509.7	503.8	496.8	498.8
80°	621.2	433.1	308.6	321.6	342.5	393.3	446.0	451.0	442.1	441.1	433.1
82.5°	373.3	263.9	240.0	260.8	286.7	341.4	385.2	383.3	376.3	417.2	365.4
85°	162.2	146.3	175.3	196.1	209.1	255.8	325.6	316.7	299.7	263.9	257.9
87.5°	65.7	75.7	96.5	116.5	125.4	165.3	223.0	215.0	218.1	179.1	178.2
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)