

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: P196743

Luminaire Tested: **NAV-AF-03-D-UNV-T2-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196743  
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-03-D-UNV-T2-7030  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 17148.2 lumens  
Efficiency: N/A  
Efficacy: 103.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B3 - U0 - G3

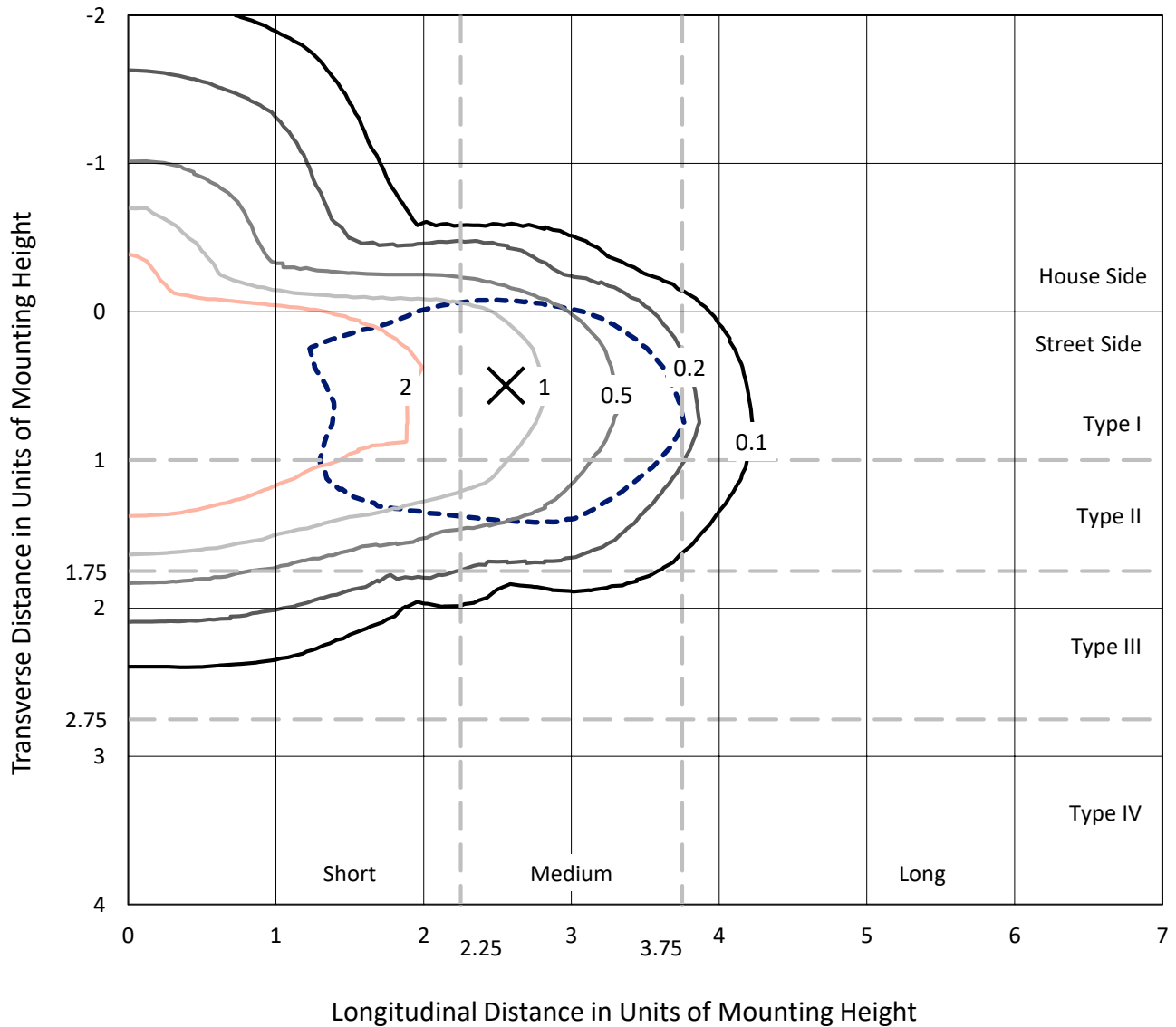
Input Watts (W): 166  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

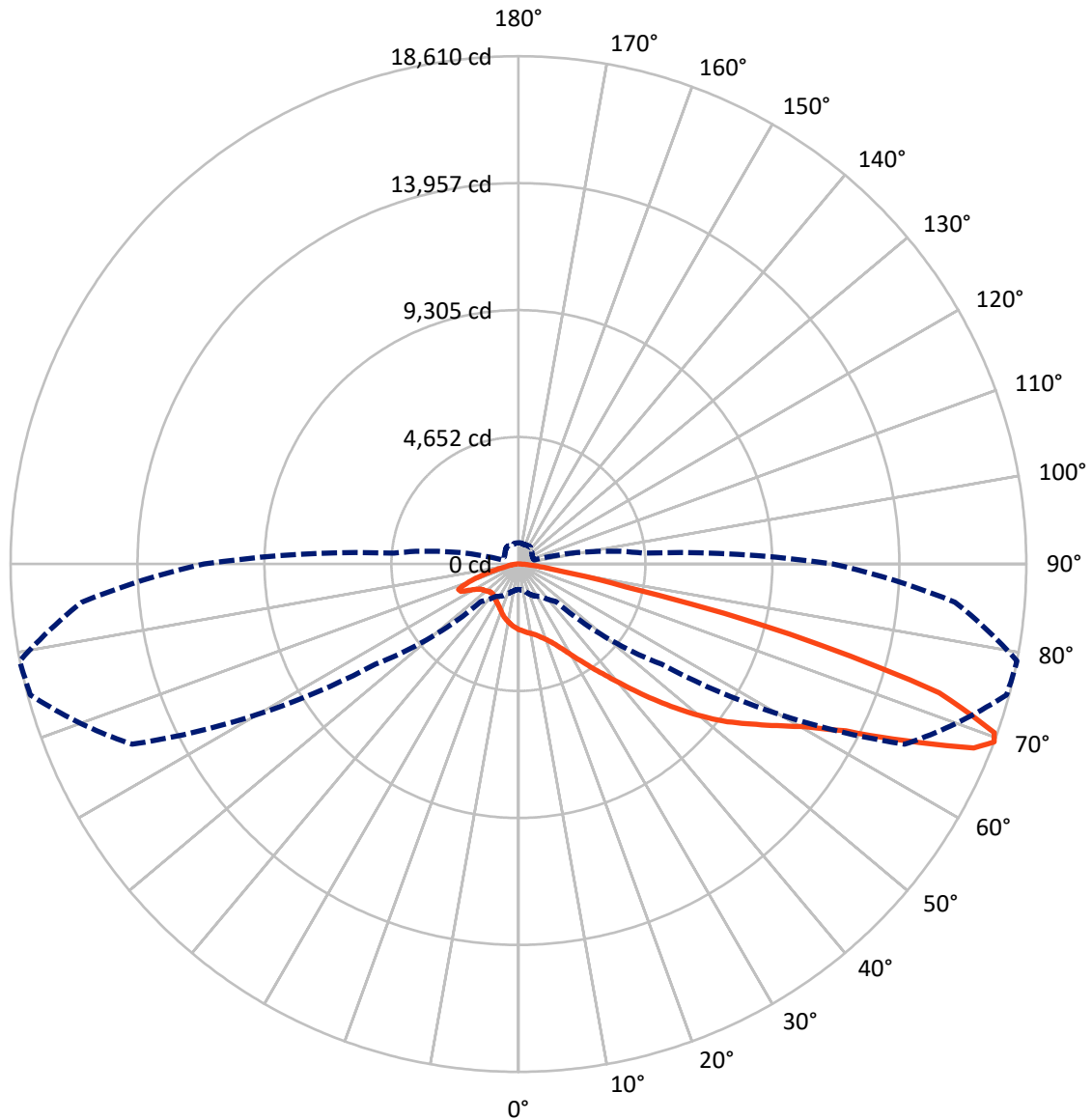
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.7 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	3225.9	0.0	3225.9
	% Fixture	18.8	0.0	18.8
<b>Street Side</b>	Lumens	13922.3	0.0	13922.3
	% Fixture	81.2	0.0	81.2
<b>Total</b>	Lumens	17148.2	0.0	17148.2
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	223.1	1.3
10°-20°	639.6	3.7
20°-30°	1056.9	6.2
30°-40°	1711.4	10.0
40°-50°	2733.9	15.9
50°-60°	3915.2	22.8
60°-70°	4362.1	25.4
70°-80°	2182.3	12.7
80°-90°	323.9	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°	17148.2	100.0
0°-180°	17148.2	100.0

**Coefficient of Utilization**



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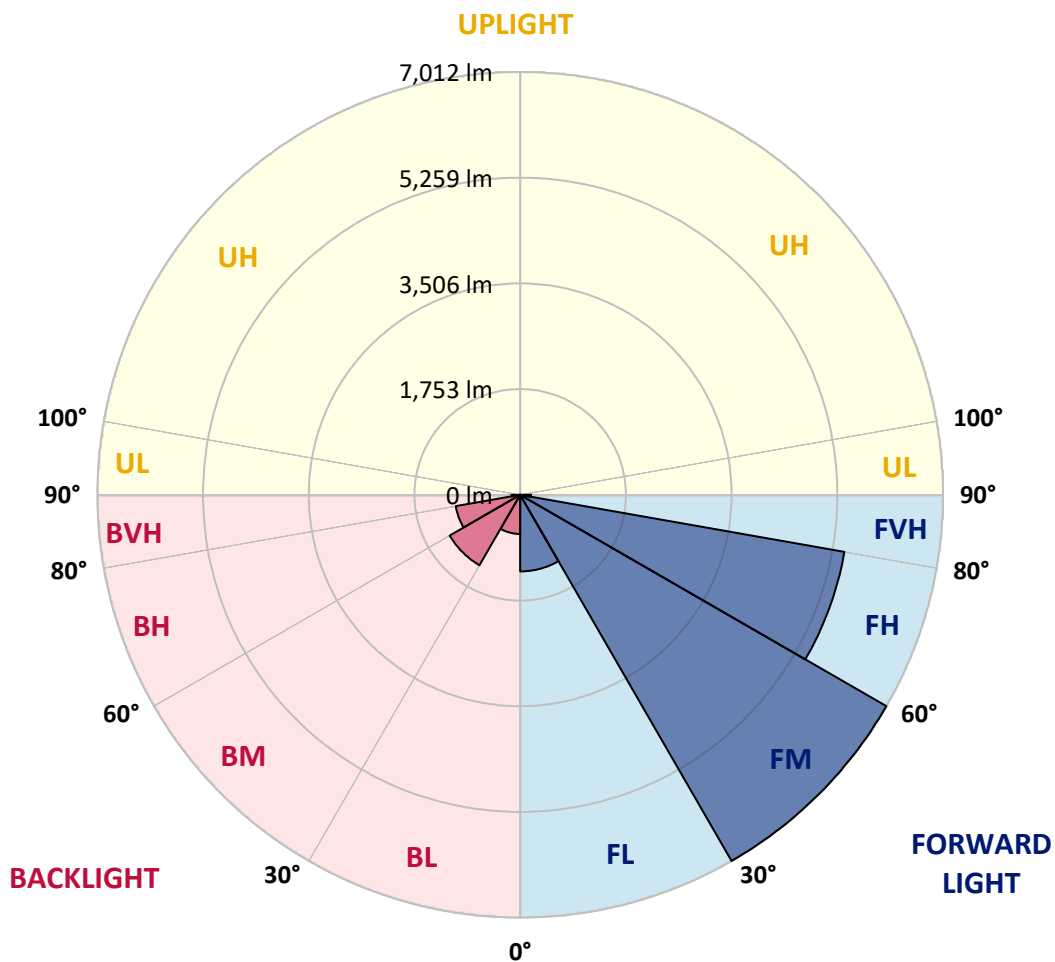
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1269.7	7.4			
FM (30°-60°)	7011.9	40.9			
FH (60°-80°)	5459.8	31.8			G3/7500
FVH (80°-90°)	181.0	1.1			G2/225
BL (0°-30°)	649.9	3.8	B2/1000		
BM (30°-60°)	1348.5	7.9	B2/2500		
BH (60°-80°)	1084.6	6.3	B3/2500		G3/2500
BVH (80°-90°)	142.9	0.8			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	2406.4	2406.4	2406.4	2406.4	2406.4	2406.4	2406.4	2406.4	2406.4	2406.4	2406.4
2.5°	2642.0	2636.4	2635.4	2618.5	2609.5	2590.4	2545.5	2499.6	2456.9	2434.6	2411.0
5°	2863.0	2851.7	2846.2	2818.2	2793.5	2750.8	2680.1	2607.3	2531.0	2491.6	2444.5
7.5°	2996.6	2997.6	2997.6	2975.2	2950.5	2898.9	2809.2	2709.3	2596.0	2544.4	2470.4
10°	3007.8	3008.9	3025.7	3031.3	3037.0	3010.0	2926.9	2801.3	2655.5	2588.2	2491.6
12.5°	2896.7	2904.5	2932.6	2973.0	3030.2	3059.4	3023.4	2900.1	2731.8	2649.9	2532.1
15°	2747.6	2755.3	2791.2	2853.0	2945.0	3042.6	3093.0	3013.4	2831.7	2735.2	2591.5
17.5°	2674.5	2683.5	2708.2	2757.6	2847.3	2978.6	3130.1	3134.5	2949.5	2838.3	2662.2
20°	2639.8	2646.5	2678.0	2718.4	2786.7	2912.5	3133.4	3262.5	3089.7	2960.6	2748.6
22.5°	2719.5	2721.6	2737.4	2759.8	2805.8	2902.4	3131.2	3394.8	3264.6	3114.3	2859.7
25°	2952.8	2938.2	2926.9	2898.9	2910.1	2978.6	3167.1	3536.1	3489.0	3316.2	3007.8
27.5°	3228.8	3226.5	3197.4	3132.3	3090.8	3134.5	3269.1	3694.4	3763.9	3573.3	3201.9
30°	3536.1	3537.3	3507.0	3427.4	3343.3	3347.7	3431.9	3877.3	4092.7	3882.8	3440.8
32.5°	3858.2	3878.3	3822.2	3742.5	3640.5	3608.0	3665.2	4098.2	4473.0	4248.5	3717.9
35°	4243.0	4246.4	4184.6	4067.9	3965.9	3914.2	3966.9	4374.2	4911.6	4678.3	4055.6
37.5°	4642.3	4644.6	4580.7	4431.4	4302.4	4268.8	4327.1	4709.6	5376.1	5167.4	4452.8
40°	4968.8	4992.4	4941.9	4801.6	4671.5	4651.2	4735.6	5111.2	5969.5	5746.3	4925.1
42.5°	5339.1	5365.9	5305.4	5159.6	5056.3	5049.6	5180.8	5569.1	6559.7	6416.0	5460.2
45°	5756.5	5794.6	5710.4	5546.5	5459.1	5607.1	5615.1	6076.1	7239.5	7165.4	6062.7
47.5°	6211.8	6243.3	6174.9	5998.7	5903.4	6117.7	6040.2	6624.7	7974.4	7968.8	6714.4
50°	6562.9	6597.8	6604.5	6527.1	6427.2	6454.2	6506.9	7201.4	8707.0	8794.5	7388.7
52.5°	6499.1	6532.7	6684.2	6887.2	7047.7	6978.1	7042.1	7813.9	9414.9	9599.9	8029.4
55°	5983.0	6000.9	6284.8	6767.2	7450.4	7782.5	7787.0	8480.2	10088.0	10347.2	8637.4
57.5°	5052.9	5055.2	5424.2	6135.6	7215.9	8304.1	8962.7	9317.2	10790.2	11172.9	9391.3
60°	3575.4	3584.5	4014.0	4944.1	6375.8	8241.3	10227.1	10814.9	11603.7	12100.7	10362.8
62.5°	2122.6	2142.8	2467.1	3213.1	4735.6	7433.6	10974.2	13479.5	12801.8	13461.5	11917.8
65°	1381.0	1397.9	1591.9	1966.6	2798.0	5408.6	10728.6	16059.8	15069.1	15602.0	14152.6
67.5°	1063.5	1077.0	1229.6	1456.2	1716.5	2923.7	8578.0	16600.6	17828.9	17995.0	16038.5
69°	934.5	945.7	1057.9	1275.6	1445.0	1935.2	6392.5	15618.8	18518.9	18609.8	16061.9
70°	866.1	875.0	980.5	1169.0	1327.2	1544.8	4892.5	14479.0	18266.5	18498.6	15598.6
72.5°	713.6	721.3	796.5	941.3	1084.8	1100.6	2167.4	10572.6	15381.0	16123.7	13200.0
75°	595.7	600.2	649.5	755.0	878.5	876.1	1107.4	5988.6	9385.7	10270.8	8150.5
77.5°	497.0	500.4	532.8	597.9	693.4	690.0	779.7	2584.8	4144.2	3998.4	2805.8
80°	438.6	440.9	457.7	474.5	535.2	531.8	577.8	1187.0	1686.2	1558.2	1061.4
82.5°	333.2	337.7	423.0	430.8	415.0	400.6	402.7	691.1	863.8	786.4	569.9
85°	188.5	189.6	271.5	317.5	361.2	271.5	261.3	356.7	426.3	373.5	249.1
87.5°	84.1	87.5	130.1	150.3	195.2	159.3	149.2	151.5	184.0	152.5	98.8
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°	2406.4	2406.4	2406.4	2406.4	2406.4	2406.4	2406.4	2406.4	2406.4	2406.4	2406.4
2.5°	2388.5	2369.4	2324.5	2278.5	2232.5	2203.4	2173.0	2145.1	2133.9	2132.7	2111.4
5°	2398.6	2353.7	2251.7	2139.4	2032.9	1949.8	1880.3	1835.4	1791.7	1783.7	1764.7
7.5°	2401.9	2329.1	2163.0	1983.5	1820.8	1706.4	1636.8	1606.5	1585.3	1579.6	1572.9
10°	2400.9	2297.6	2064.2	1818.6	1633.4	1547.1	1521.3	1528.0	1537.0	1541.4	1541.4
12.5°	2418.8	2283.1	1965.6	1663.8	1512.2	1470.7	1491.0	1525.8	1552.7	1563.9	1566.1
15°	2451.3	2274.0	1856.8	1529.1	1427.0	1437.1	1486.5	1537.0	1575.1	1591.9	1596.4
17.5°	2491.6	2261.6	1731.1	1418.0	1377.6	1412.5	1476.4	1540.3	1586.3	1607.6	1611.0
20°	2536.6	2243.7	1600.9	1335.0	1333.9	1377.6	1441.5	1513.5	1562.7	1586.3	1585.3
22.5°	2597.2	2226.9	1479.8	1274.5	1285.7	1326.1	1378.8	1443.9	1489.9	1511.2	1506.6
25°	2678.0	2211.2	1370.9	1220.7	1230.7	1257.7	1294.6	1344.0	1376.5	1387.8	1380.0
27.5°	2786.7	2198.9	1285.7	1171.3	1170.1	1182.5	1204.9	1231.8	1247.5	1244.1	1231.8
30°	2920.3	2186.6	1222.8	1127.4	1111.8	1110.6	1120.8	1136.6	1146.5	1126.4	1116.3
32.5°	3069.4	2165.2	1166.8	1089.4	1061.4	1051.2	1055.7	1077.0	1118.5	1098.3	1090.5
35°	3245.6	2140.6	1110.6	1047.8	1026.5	1007.5	1010.8	1056.9	1182.5	1167.9	1160.0
37.5°	3457.6	2118.1	1059.0	1003.0	1001.8	978.3	976.0	1031.0	1199.3	1167.9	1161.1
40°	3712.3	2113.6	1013.1	953.7	971.6	962.6	954.7	988.4	1106.1	1042.3	1029.9
42.5°	4019.7	2133.9	979.4	906.6	936.8	958.1	943.5	951.3	999.6	942.4	932.3
45°	4378.7	2188.8	954.7	865.0	899.7	954.7	937.9	931.2	939.0	907.6	900.9
47.5°	4797.1	2286.4	937.9	830.2	865.0	945.7	935.7	922.1	918.9	900.9	896.4
50°	5244.8	2417.7	926.6	798.8	833.5	930.1	934.5	915.5	909.8	902.1	899.7
52.5°	5689.0	2560.2	913.2	771.8	807.8	911.0	935.7	908.7	900.9	896.4	894.2
55°	6131.1	2708.2	888.5	748.3	788.7	888.5	934.5	899.7	890.8	890.8	890.8
57.5°	6704.3	2933.7	856.0	729.2	764.0	859.4	920.0	889.7	877.4	878.5	879.5
60°	7532.4	3311.7	820.1	707.9	731.5	825.7	897.4	871.7	857.1	861.6	862.7
62.5°	8915.5	3972.5	770.8	677.6	697.8	789.8	868.3	847.0	833.5	841.4	842.5
65°	10760.0	4772.5	705.7	639.5	662.9	749.4	831.4	817.8	803.3	822.4	821.2
67.5°	11885.2	5007.0	637.2	599.1	629.4	706.8	785.3	779.7	769.6	803.3	801.0
69°	11516.2	4582.9	597.9	573.3	605.9	677.6	756.2	753.9	746.0	778.6	776.4
70°	10942.9	4186.9	573.3	556.4	593.5	659.7	737.1	737.1	729.2	757.2	751.7
72.5°	8789.9	3105.3	516.0	513.8	550.8	610.3	685.5	691.1	686.5	696.6	691.1
75°	5160.7	1871.3	460.0	466.7	499.2	557.6	628.2	632.7	628.2	627.1	628.2
77.5°	1789.4	839.2	406.1	416.2	444.2	503.6	565.4	574.3	567.7	559.9	562.0
80°	700.1	488.1	347.8	362.4	385.9	443.1	502.6	508.2	498.1	497.0	488.1
82.5°	420.7	297.3	270.4	293.9	323.1	384.8	434.2	431.9	424.0	470.1	411.7
85°	182.9	164.9	197.4	221.0	235.6	288.3	366.9	356.7	337.7	297.3	290.5
87.5°	74.1	85.2	108.8	131.2	141.4	186.3	251.3	242.3	245.8	201.9	200.8
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)