

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: P196737

Luminaire Tested: **NAV-AF-03-D-UNV-T2-7030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196737  
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-T2-7030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13854.1 lumens  
Efficiency: N/A  
Efficacy: 111.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B2 - U0 - G2

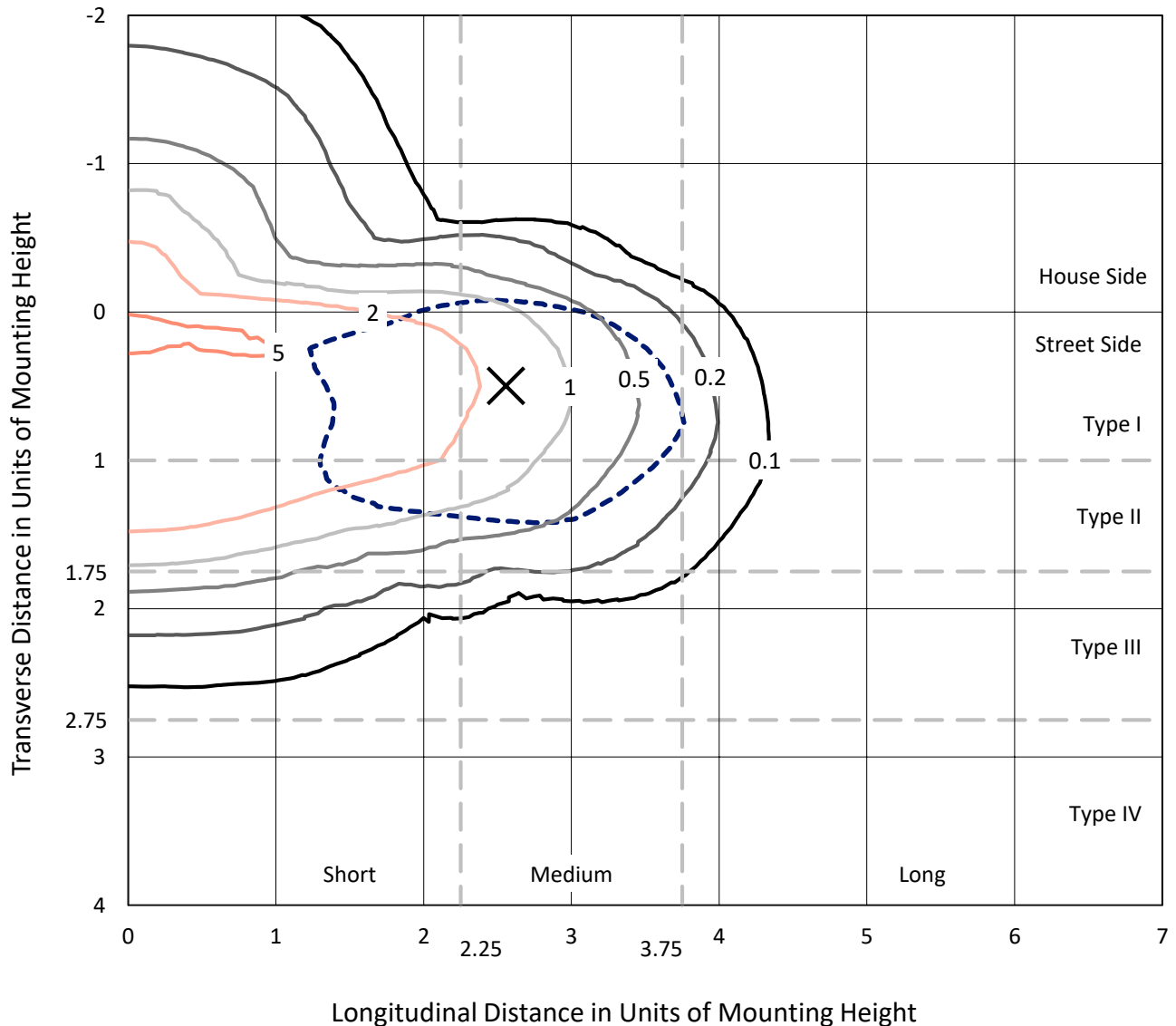
Input Watts (W): 124  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

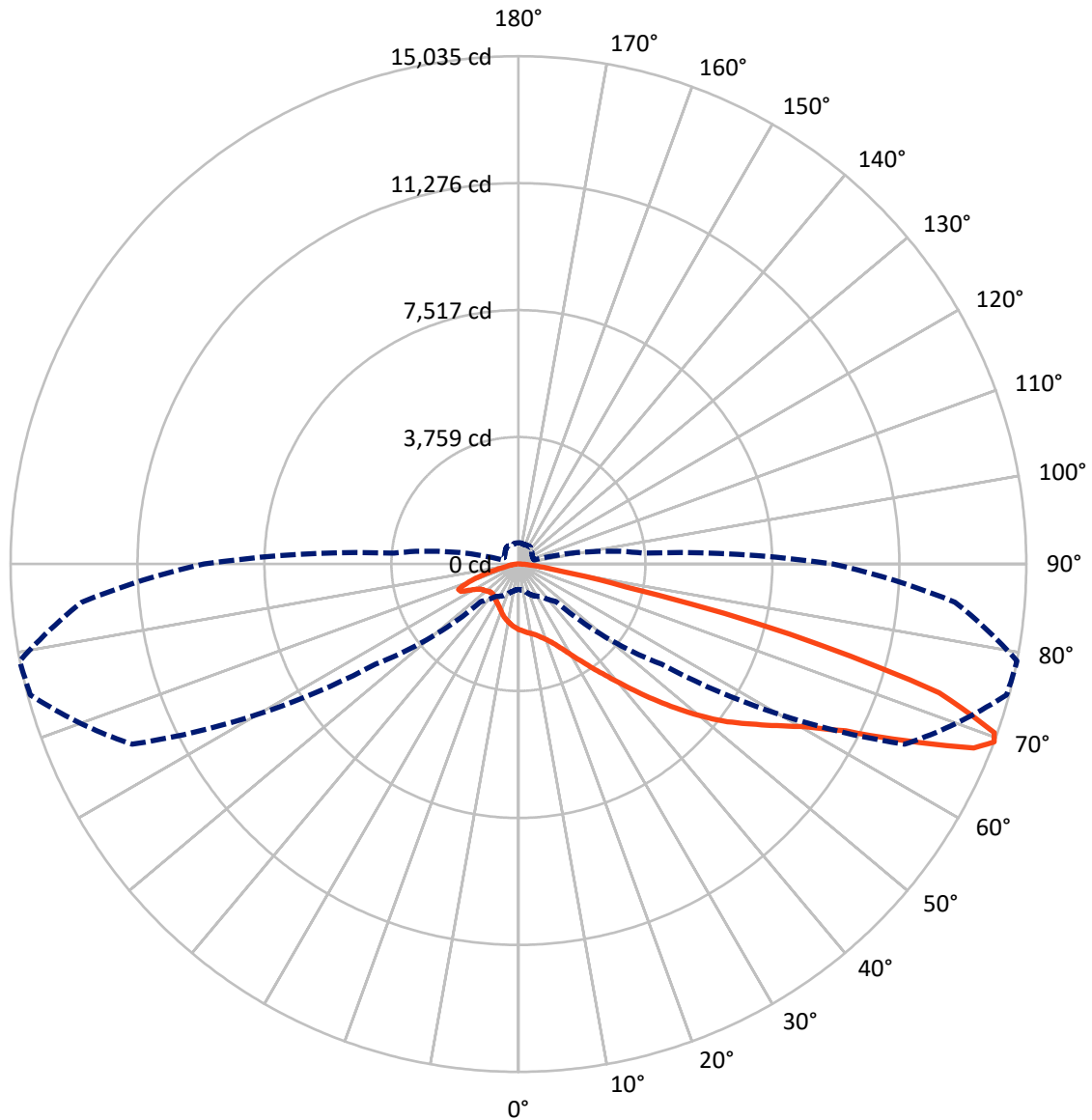
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.9 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	2606.2	0.0	2606.2
	% Fixture	18.8	0.0	18.8
<b>Street Side</b>	Lumens	11247.9	0.0	11247.9
	% Fixture	81.2	0.0	81.2
<b>Total</b>	Lumens	13854.1	0.0	13854.1
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	180.2	1.3
10°-20°	516.7	3.7
20°-30°	853.8	6.2
30°-40°	1382.6	10.0
40°-50°	2208.7	15.9
50°-60°	3163.1	22.8
60°-70°	3524.2	25.4
70°-80°	1763.1	12.7
80°-90°	261.6	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°	13854.1	100.0
0°-180°	13854.1	100.0

**Coefficient of Utilization**



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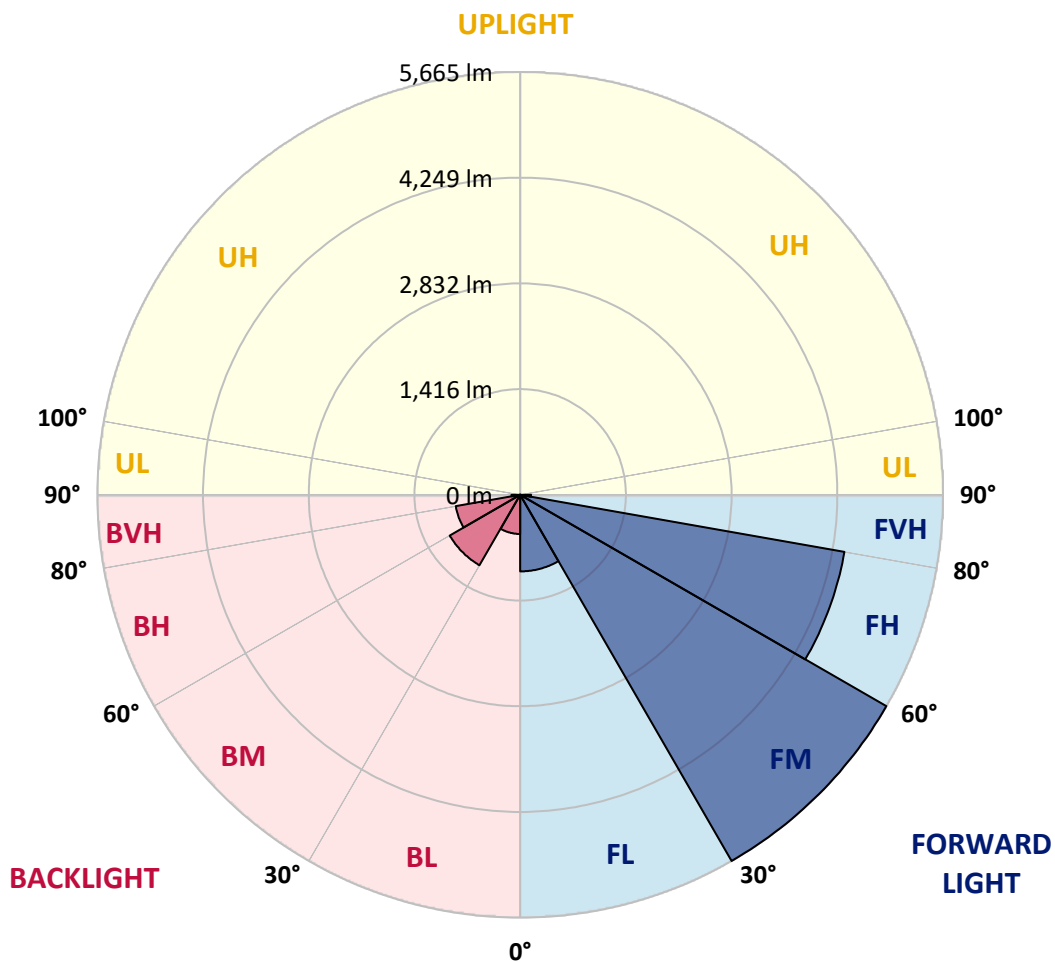
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1025.8	7.4			
FM (30°-60°)	5664.9	40.9			
FH (60°-80°)	4410.9	31.8			G2/5000
FVH (80°-90°)	146.2	1.1			G2/225
BL (0°-30°)	525.0	3.8	B2/1000		
BM (30°-60°)	1089.4	7.9	B2/2500		
BH (60°-80°)	876.3	6.3	B2/1000		G2/1000
BVH (80°-90°)	115.4	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°	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2
2.5°	2134.5	2130.0	2129.0	2115.5	2108.2	2092.9	2056.6	2019.4	1984.9	1966.7	1947.8
5°	2313.0	2304.0	2299.5	2276.9	2256.9	2222.5	2165.3	2106.4	2044.8	2013.1	1975.0
7.5°	2420.9	2421.8	2421.8	2403.7	2383.7	2342.1	2269.6	2188.9	2097.3	2055.6	1995.8
10°	2429.9	2430.9	2444.4	2449.0	2453.5	2431.8	2364.7	2263.2	2145.5	2091.0	2013.1
12.5°	2340.3	2346.6	2369.3	2401.8	2448.1	2471.7	2442.7	2342.9	2207.0	2140.8	2045.7
15°	2219.7	2226.0	2255.0	2305.0	2379.2	2458.2	2498.9	2434.6	2287.7	2209.8	2093.7
17.5°	2160.8	2168.0	2188.0	2227.9	2300.4	2406.4	2528.8	2532.4	2382.8	2293.2	2150.8
20°	2132.7	2138.1	2163.6	2196.1	2251.4	2352.9	2531.5	2635.8	2496.1	2391.9	2220.5
22.5°	2197.1	2198.9	2211.5	2229.7	2266.8	2344.8	2529.7	2742.6	2637.5	2516.1	2310.3
25°	2385.5	2373.7	2364.7	2342.1	2351.2	2406.4	2558.7	2856.9	2818.8	2679.2	2429.9
27.5°	2608.6	2606.7	2583.1	2530.6	2497.0	2532.4	2641.2	2984.6	3040.9	2886.7	2586.8
30°	2856.9	2857.7	2833.3	2768.9	2701.0	2704.6	2772.6	3132.5	3306.4	3137.0	2779.9
32.5°	3117.0	3133.3	3088.0	3023.6	2941.2	2914.9	2961.2	3311.0	3613.7	3432.4	3003.7
35°	3427.9	3430.6	3380.8	3286.5	3204.0	3162.3	3204.9	3534.0	3968.1	3779.6	3276.5
37.5°	3750.6	3752.4	3700.7	3580.2	3476.0	3448.8	3495.9	3805.0	4343.3	4174.8	3597.4
40°	4014.3	4033.3	3992.6	3879.2	3774.2	3757.9	3825.8	4129.5	4822.8	4642.4	3979.0
42.5°	4313.4	4335.2	4286.2	4168.3	4084.9	4079.5	4185.6	4499.2	5299.5	5183.5	4411.4
45°	4650.6	4681.4	4613.5	4481.0	4410.4	4530.0	4536.3	4908.9	5848.7	5789.0	4898.0
47.5°	5018.6	5044.0	4988.7	4846.4	4769.2	4942.5	4879.8	5352.1	6442.5	6438.0	5424.6
50°	5302.3	5330.3	5335.7	5273.3	5192.5	5214.4	5256.9	5817.9	7034.3	7105.0	5969.4
52.5°	5250.6	5277.8	5400.1	5564.2	5693.8	5637.7	5689.2	6312.9	7606.3	7755.8	6486.9
55°	4833.6	4848.2	5077.5	5467.3	6019.2	6287.6	6291.1	6851.2	8150.0	8359.4	6978.2
57.5°	4082.3	4084.1	4382.3	4957.0	5829.7	6708.9	7240.9	7527.4	8717.5	9026.6	7587.2
60°	2888.6	2895.8	3243.1	3994.4	5150.9	6658.2	8262.5	8737.5	9374.6	9776.1	8372.1
62.5°	1714.9	1731.2	1993.1	2595.9	3825.8	6005.7	8866.1	10890.1	10342.6	10875.5	9628.4
65°	1115.7	1129.3	1286.1	1588.8	2260.5	4369.6	8667.6	12974.6	12174.3	12604.9	11433.9
67.5°	859.3	870.1	993.3	1176.5	1386.7	2361.9	6930.1	13411.6	14404.0	14538.1	12957.5
69°	755.0	764.0	854.7	1030.6	1167.4	1563.5	5164.4	12618.5	14961.4	15034.8	12976.5
70°	699.7	707.0	792.1	944.4	1072.3	1248.1	3952.7	11697.7	14757.5	14945.1	12602.2
72.5°	576.5	582.8	643.5	760.5	876.5	889.2	1751.1	8541.7	12426.4	13026.3	10664.4
75°	481.3	484.9	524.8	610.0	709.6	707.9	894.7	4838.2	7582.7	8297.8	6584.7
77.5°	401.5	404.3	430.5	483.2	560.2	557.4	629.9	2088.3	3348.1	3230.2	2266.8
80°	354.4	356.1	369.9	383.4	432.3	429.6	466.7	959.0	1362.3	1259.0	857.4
82.5°	269.3	272.8	341.7	348.1	335.3	323.6	325.4	558.4	697.9	635.4	460.4
85°	152.3	153.2	219.4	256.5	291.8	219.4	211.2	288.2	344.3	301.8	201.2
87.5°	68.0	70.7	105.1	121.5	157.7	128.7	120.5	122.4	148.6	123.3	79.8
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°	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2	1944.2
2.5°	1929.6	1914.2	1877.9	1840.8	1803.7	1780.2	1755.7	1733.0	1723.9	1723.0	1705.7
5°	1937.8	1901.5	1819.0	1728.5	1642.3	1575.3	1519.0	1482.8	1447.4	1441.1	1425.8
7.5°	1940.6	1881.7	1747.5	1602.5	1471.0	1378.7	1322.4	1297.9	1280.7	1276.1	1270.6
10°	1939.7	1856.2	1667.8	1469.2	1319.7	1249.9	1229.0	1234.5	1241.7	1245.3	1245.3
12.5°	1954.1	1844.6	1588.0	1344.1	1221.7	1188.3	1204.6	1232.7	1254.4	1263.5	1265.3
15°	1980.5	1837.2	1500.0	1235.4	1152.9	1161.1	1201.0	1241.7	1272.6	1286.1	1289.8
17.5°	2013.1	1827.3	1398.5	1145.7	1113.1	1141.1	1192.8	1244.5	1281.6	1298.9	1301.5
20°	2049.2	1812.7	1293.4	1078.6	1077.7	1113.1	1164.7	1222.7	1262.6	1281.6	1280.7
22.5°	2098.3	1799.2	1195.6	1029.7	1038.7	1071.3	1113.9	1166.5	1203.7	1220.9	1217.2
25°	2163.6	1786.5	1107.6	986.2	994.3	1016.0	1045.9	1085.8	1112.1	1121.2	1114.9
27.5°	2251.4	1776.4	1038.7	946.3	945.3	955.4	973.4	995.3	1007.9	1005.1	995.3
30°	2359.2	1766.5	987.9	910.9	898.2	897.3	905.4	918.1	926.3	910.0	901.8
32.5°	2479.8	1749.2	942.6	880.1	857.4	849.3	852.9	870.1	903.7	887.3	880.9
35°	2622.1	1729.3	897.3	846.5	829.3	813.9	816.6	853.8	955.4	943.6	937.2
37.5°	2793.4	1711.2	855.6	810.2	809.4	790.4	788.6	833.0	968.9	943.6	938.1
40°	2999.1	1707.6	818.5	770.4	784.9	777.7	771.4	798.4	893.6	842.1	832.0
42.5°	3247.5	1723.9	791.2	732.4	756.8	774.0	762.3	768.6	807.5	761.3	753.3
45°	3537.6	1768.4	771.4	698.8	726.9	771.4	757.7	752.2	758.6	733.2	727.7
47.5°	3875.7	1847.1	757.7	670.8	698.8	764.0	756.0	745.0	742.3	727.7	724.2
50°	4237.3	1953.2	748.7	645.2	673.5	751.3	755.0	739.5	735.1	728.8	726.9
52.5°	4596.2	2068.4	737.8	623.6	652.6	736.0	756.0	734.1	727.7	724.2	722.4
55°	4953.3	2188.0	717.9	604.5	637.2	717.9	755.0	726.9	719.7	719.7	719.7
57.5°	5416.4	2370.2	691.6	589.1	617.2	694.3	743.2	718.7	708.8	709.6	710.6
60°	6085.4	2675.6	662.5	572.0	591.0	667.1	725.1	704.2	692.4	696.1	697.0
62.5°	7202.9	3209.5	622.7	547.5	563.8	638.1	701.6	684.3	673.5	679.8	680.6
65°	8693.0	3855.6	570.2	516.6	535.7	605.4	671.6	660.7	649.0	664.4	663.4
67.5°	9602.1	4045.1	514.8	484.0	508.5	571.0	634.5	629.9	621.8	649.0	647.2
69°	9303.9	3702.5	483.2	463.2	489.5	547.5	610.9	609.1	602.8	629.0	627.2
70°	8840.7	3382.5	463.2	449.6	479.4	532.9	595.5	595.5	589.1	611.9	607.3
72.5°	7101.5	2508.8	417.0	415.0	445.0	493.1	553.8	558.4	554.7	562.9	558.4
75°	4169.4	1511.8	371.6	377.1	403.3	450.4	507.6	511.3	507.6	506.6	507.6
77.5°	1445.6	678.0	328.1	336.3	358.9	407.0	456.8	464.1	458.7	452.4	454.1
80°	565.5	394.3	281.1	292.7	311.8	358.1	406.0	410.6	402.4	401.5	394.3
82.5°	339.9	240.2	218.4	237.4	261.0	310.9	350.7	349.0	342.6	379.7	332.5
85°	147.7	133.2	159.5	178.5	190.3	232.9	296.4	288.2	272.8	240.2	234.8
87.5°	59.9	68.9	88.0	106.1	114.1	150.4	203.0	195.8	198.6	163.2	162.2
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)