

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: P197290

Luminaire Tested: **NAV-AF-04-D-UNV-T3R-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197290
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)
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-T3R-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16360 lumens
Efficiency: N/A
Efficacy: 95.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium - Full Cutoff
BUG Rating: B2 - U0 - G3

Input Watts (W): 171
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

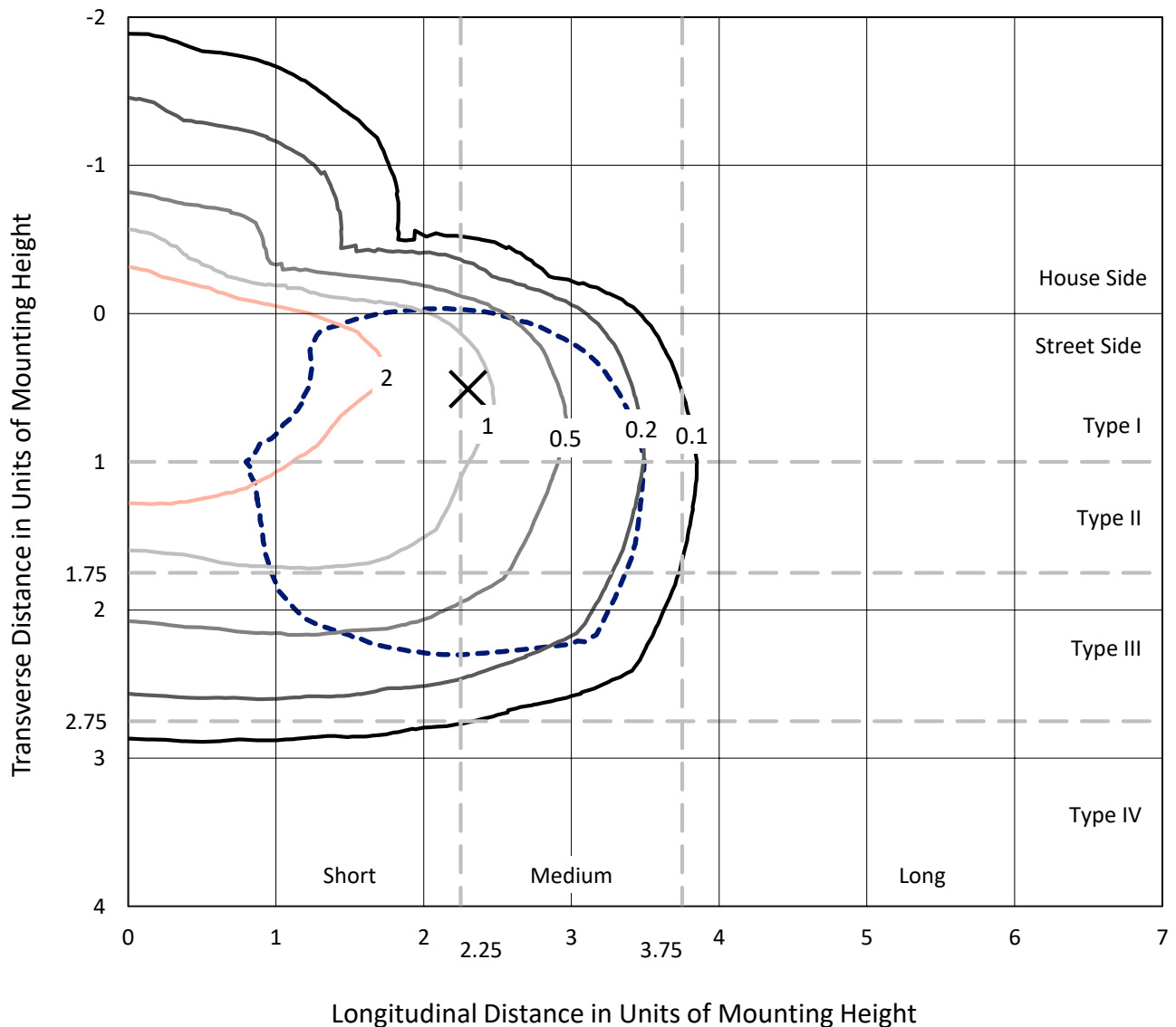


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Iso-Footcandle Lines of Horizontal Illumination

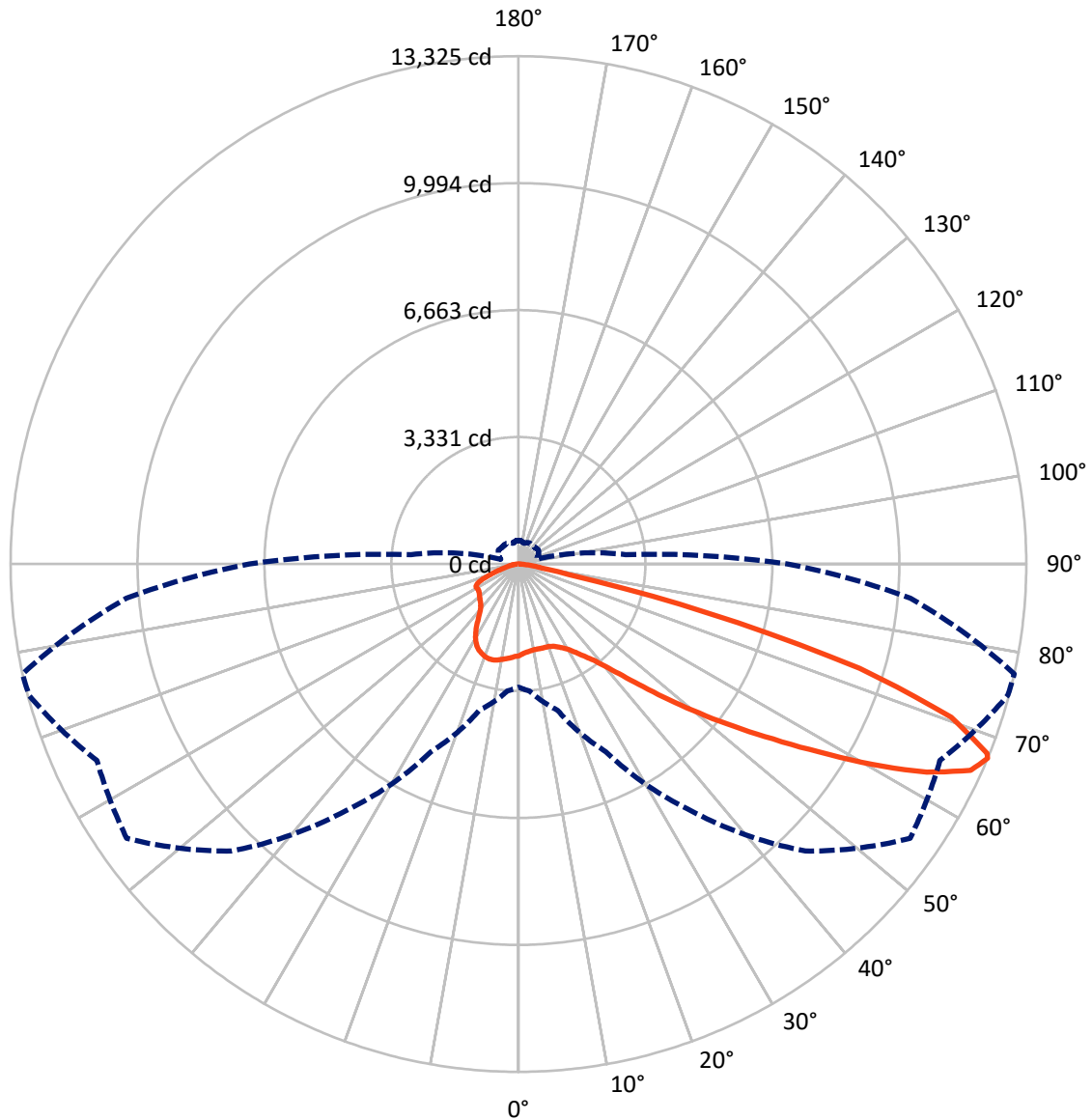
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.6 fc
 Type III - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2811.5	0.0	2811.5
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	13548.5	0.0	13548.5
	% Fixture	82.8	0.0	82.8
Total	Lumens	16360.0	0.0	16360.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.4	1.3
10°-20°	593.9	3.6
20°-30°	1009.0	6.2
30°-40°	1614.3	9.9
40°-50°	2485.2	15.2
50°-60°	3447.9	21.1
60°-70°	4599.3	28.1
70°-80°	2188.8	13.4
80°-90°	207.2	1.3
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°	16360.0	100.0
0°-180°	16360.0	100.0



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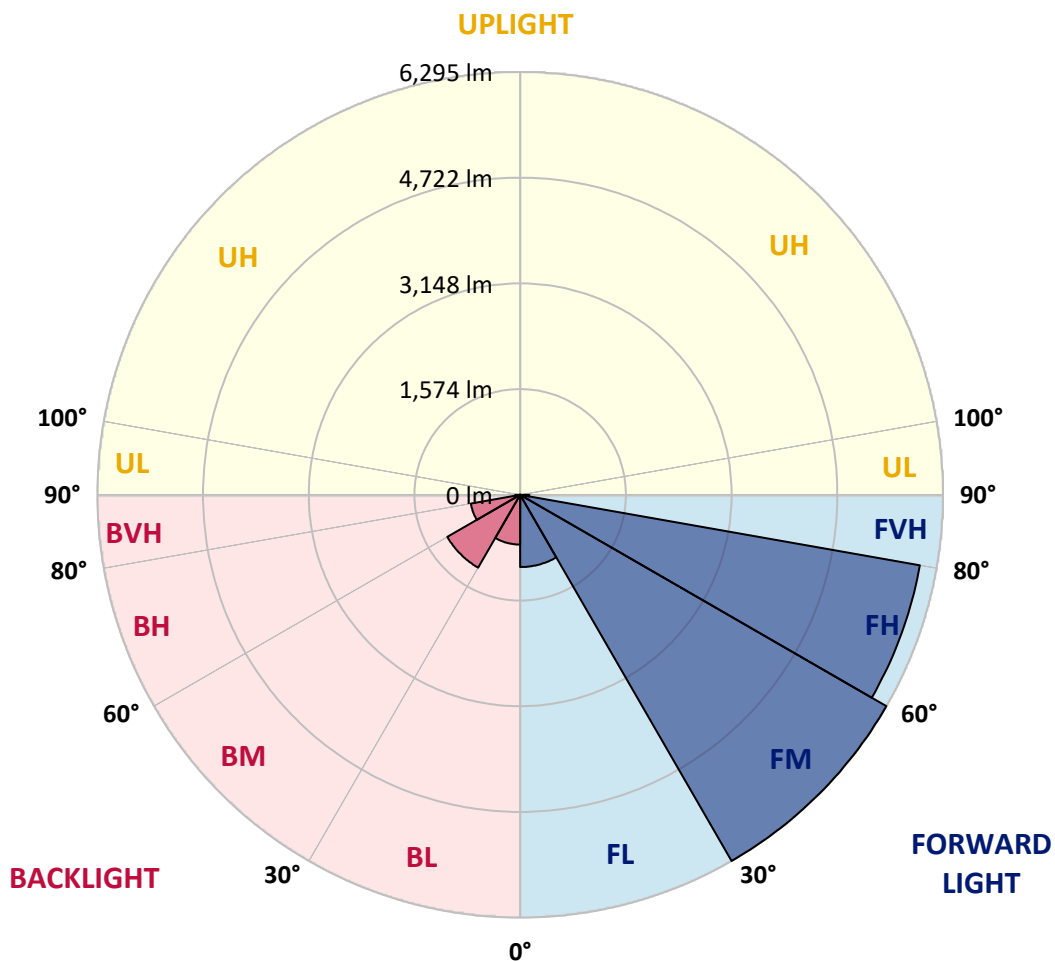
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1075.8	6.6			
FM (30°-60°)	6295.5	38.5			
FH (60°-80°)	6042.6	36.9			G3/7500
FVH (80°-90°)	134.6	0.8			G2/225
BL (0°-30°)	741.5	4.5	B2/1000		
BM (30°-60°)	1251.8	7.7	B2/2500		
BH (60°-80°)	745.4	4.6	B2/1000		G2/1000
BVH (80°-90°)	72.6	0.4			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	2407.8	2407.8	2407.8	2407.8	2407.8	2407.8	2407.8	2407.8	2407.8	2407.8	2407.8
2.5°	2159.0	2169.1	2170.1	2199.4	2212.6	2246.0	2282.4	2314.7	2343.0	2353.2	2371.4
5°	1942.6	1942.6	1945.6	1964.8	2002.3	2055.9	2131.7	2214.6	2301.6	2322.8	2376.4
7.5°	1829.3	1831.4	1833.4	1852.6	1881.9	1929.4	2005.3	2118.5	2263.2	2298.5	2392.6
10°	1839.4	1836.4	1826.3	1822.3	1834.4	1864.7	1930.5	2046.7	2230.8	2285.4	2421.9
12.5°	1998.2	1992.1	1958.8	1910.2	1865.7	1854.6	1900.1	2010.3	2215.6	2285.4	2471.5
15°	2270.2	2274.3	2208.5	2107.4	1991.1	1912.3	1906.2	1997.2	2210.6	2291.5	2529.1
17.5°	2624.2	2626.2	2535.2	2388.5	2195.4	2032.6	1947.6	1997.2	2210.6	2297.5	2584.7
20°	3000.3	2986.2	2883.0	2699.0	2448.2	2199.4	2023.5	2009.3	2216.6	2306.6	2637.3
22.5°	3322.9	3309.8	3201.6	3008.4	2721.2	2396.6	2125.6	2049.8	2250.0	2344.1	2711.1
25°	3605.1	3613.2	3508.0	3290.6	2993.3	2619.1	2278.3	2142.8	2319.8	2411.8	2802.1
27.5°	3947.9	3932.7	3811.4	3604.1	3273.4	2849.7	2469.4	2260.1	2402.7	2493.7	2913.4
30°	4344.3	4337.2	4173.4	3960.0	3581.8	3107.5	2658.5	2386.5	2510.9	2606.0	3052.9
32.5°	4825.6	4824.6	4648.7	4386.8	3928.7	3398.8	2882.0	2559.4	2668.7	2764.7	3238.0
35°	5370.7	5369.7	5187.7	4841.8	4328.1	3721.4	3145.0	2769.8	2863.8	2965.0	3458.4
37.5°	5748.9	5742.8	5647.8	5312.0	4770.0	4096.5	3473.6	3052.9	3085.3	3198.6	3724.4
40°	5821.7	5858.1	5940.0	5741.8	5252.4	4513.2	3803.3	3357.3	3387.7	3533.3	4059.1
42.5°	5742.8	5790.4	6062.4	6118.0	5734.7	5017.8	4215.9	3779.0	3817.4	3998.4	4452.5
45°	5674.1	5715.5	6056.3	6326.3	6211.0	5567.9	4730.6	4293.7	4366.5	4591.0	4901.5
47.5°	5556.8	5595.2	5937.0	6363.7	6483.1	6097.8	5350.5	4912.6	5038.0	5310.0	5413.2
50°	5550.7	5567.9	5774.2	6238.3	6577.1	6500.2	6037.1	5636.7	5828.8	6142.3	5979.5
52.5°	5397.0	5517.3	5704.4	6038.1	6579.1	6734.9	6713.6	6430.5	6726.8	7073.6	6600.4
55°	4456.5	4595.1	5471.8	5940.0	6567.0	6936.1	7331.5	7274.9	7738.0	8103.1	7296.1
57.5°	4161.3	4219.9	4800.4	5969.3	6668.1	7268.8	7949.4	8181.9	8894.9	9293.3	8130.4
60°	4080.4	4142.0	4665.9	5983.5	6942.2	7874.5	8787.7	9206.3	10255.0	10677.7	9077.9
62.5°	3990.4	4070.2	4676.0	5996.7	7423.5	8770.5	9900.0	10317.7	11651.5	12028.7	9965.8
65°	3727.4	3833.6	4488.9	5913.7	7950.4	9895.0	11370.4	11476.6	12805.3	13045.0	10501.7
67°	3228.9	3345.2	3975.2	5434.4	7901.8	10652.4	12546.5	12201.6	13295.8	13325.1	10327.8
67.5°	3071.1	3191.5	3801.3	5235.2	7763.3	10751.5	12754.8	12301.7	13291.7	13259.4	10166.0
70°	2068.0	2203.5	2691.9	3843.7	6227.2	10006.2	12704.2	11993.3	12420.0	12048.9	8734.1
72.5°	1026.4	1030.5	1342.9	2105.4	3772.9	7176.8	10597.8	10260.0	10067.9	9367.1	6409.2
75°	494.5	503.6	634.0	930.3	1590.7	3705.2	7227.3	6922.9	5894.5	5103.7	3207.7
77.5°	377.2	386.3	492.5	605.7	663.4	1208.4	3579.8	2893.2	1708.0	1364.2	904.0
80°	291.2	308.4	415.6	465.2	438.9	484.4	1125.5	885.8	664.4	609.8	448.0
82.5°	227.5	237.6	352.9	352.9	303.4	324.6	523.8	511.7	412.6	372.1	240.7
85°	160.8	181.0	284.2	262.9	199.2	201.2	313.5	300.3	212.4	170.9	94.0
87.5°	71.8	92.0	202.2	171.9	106.2	81.9	128.4	110.2	83.9	64.7	43.5
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°	2407.8	2407.8	2407.8	2407.8	2407.8	2407.8	2407.8	2407.8	2407.8	2407.8	2407.8
2.5°	2391.6	2407.8	2433.0	2448.2	2468.4	2476.5	2484.6	2498.8	2509.9	2506.9	2501.8
5°	2413.8	2441.1	2472.5	2482.6	2482.6	2472.5	2466.4	2467.4	2464.4	2462.4	2456.3
7.5°	2446.2	2483.6	2505.9	2495.7	2464.4	2425.0	2387.5	2365.3	2344.1	2330.9	2335.0
10°	2491.7	2533.2	2534.2	2489.7	2414.8	2328.9	2255.1	2207.5	2162.0	2141.8	2147.9
12.5°	2557.4	2598.9	2563.5	2467.4	2336.0	2201.5	2066.0	1967.9	1879.9	1858.7	1852.6
15°	2628.2	2660.6	2581.7	2419.9	2222.7	2001.2	1773.7	1627.1	1529.0	1511.8	1505.7
17.5°	2689.9	2708.1	2572.6	2335.0	2043.7	1694.8	1429.9	1330.8	1310.6	1320.7	1320.7
20°	2744.5	2738.4	2533.2	2203.5	1761.6	1355.1	1201.4	1200.3	1227.6	1252.9	1254.9
22.5°	2813.3	2765.7	2470.5	2008.3	1424.8	1130.6	1104.3	1130.6	1160.9	1189.2	1192.3
25°	2895.2	2796.1	2386.5	1730.2	1145.7	1026.4	1037.5	1059.8	1079.0	1101.2	1102.3
27.5°	2977.1	2819.3	2268.2	1403.6	994.0	959.7	971.8	980.9	986.0	1000.1	1000.1
30°	3072.1	2837.5	2097.3	1124.5	924.3	901.0	893.9	889.9	893.9	913.1	914.2
32.5°	3191.5	2869.9	1863.7	964.7	891.9	859.6	823.1	802.9	817.1	851.5	857.5
35°	3327.0	2908.3	1583.6	901.0	880.8	839.3	772.6	741.2	746.3	777.6	782.7
37.5°	3496.9	2957.9	1307.5	885.8	891.9	837.3	749.3	704.8	682.6	683.6	682.6
40°	3714.3	3007.4	1089.1	889.9	916.2	842.4	738.2	668.4	621.9	623.9	628.0
42.5°	3941.8	3039.8	950.6	902.0	945.5	849.4	734.2	633.0	592.6	627.0	658.3
45°	4207.8	3030.7	878.8	913.1	967.8	852.5	719.0	629.0	595.6	698.8	757.4
47.5°	4513.2	2991.2	838.3	918.2	973.8	851.5	707.9	642.1	620.9	799.9	866.6
50°	4844.9	2929.6	806.0	910.1	970.8	847.4	720.0	658.3	631.0	822.1	873.7
52.5°	5207.9	2872.9	772.6	891.9	955.6	835.3	735.2	651.2	602.7	757.4	796.9
55°	5637.7	2859.8	735.2	860.6	930.3	822.1	727.1	629.0	571.4	671.5	695.7
57.5°	6129.1	2941.7	686.6	822.1	896.0	795.8	707.9	616.9	560.2	610.8	623.9
60°	6753.1	3122.7	635.1	781.7	853.5	756.4	690.7	619.9	563.3	601.7	604.7
62.5°	7240.5	3285.5	588.5	732.1	796.9	708.9	672.5	622.9	572.4	613.8	608.8
65°	7417.4	3205.6	530.9	658.3	717.0	656.3	647.2	624.9	572.4	620.9	609.8
67°	7054.4	2824.4	476.3	584.5	641.1	609.8	622.9	616.9	562.2	619.9	600.7
67.5°	6881.5	2689.9	462.1	572.4	620.9	595.6	616.9	612.8	559.2	617.9	595.6
70°	5675.1	1929.4	390.3	480.3	519.8	524.8	579.4	586.5	534.9	580.5	540.0
72.5°	4037.9	1207.4	336.7	372.1	419.7	449.0	528.9	551.1	502.6	504.6	471.2
75°	1998.2	648.2	300.3	287.2	326.6	374.2	461.1	502.6	455.1	420.7	409.6
77.5°	674.5	367.1	253.8	231.6	253.8	300.3	382.2	438.9	401.5	356.0	348.9
80°	348.9	267.0	198.2	186.1	200.2	232.6	299.3	365.1	342.8	344.8	284.2
82.5°	217.4	162.8	142.6	141.6	151.7	178.0	220.5	296.3	294.3	251.8	183.0
85°	101.1	94.0	91.0	94.0	97.1	101.1	143.6	211.3	223.5	135.5	120.3
87.5°	42.5	41.5	36.4	39.4	43.5	42.5	57.6	90.0	125.4	84.9	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

(END OF REPORT)