

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: P270630

Luminaire Tested: **NAV-AF-05-D-UNV-T3R-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270630
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-05-D-UNV-T3R-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17507.6 lumens
Efficiency: N/A
Efficacy: 108.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Full Cutoff
BUG Rating: B2 - U0 - G3

Input Watts (W): 162
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

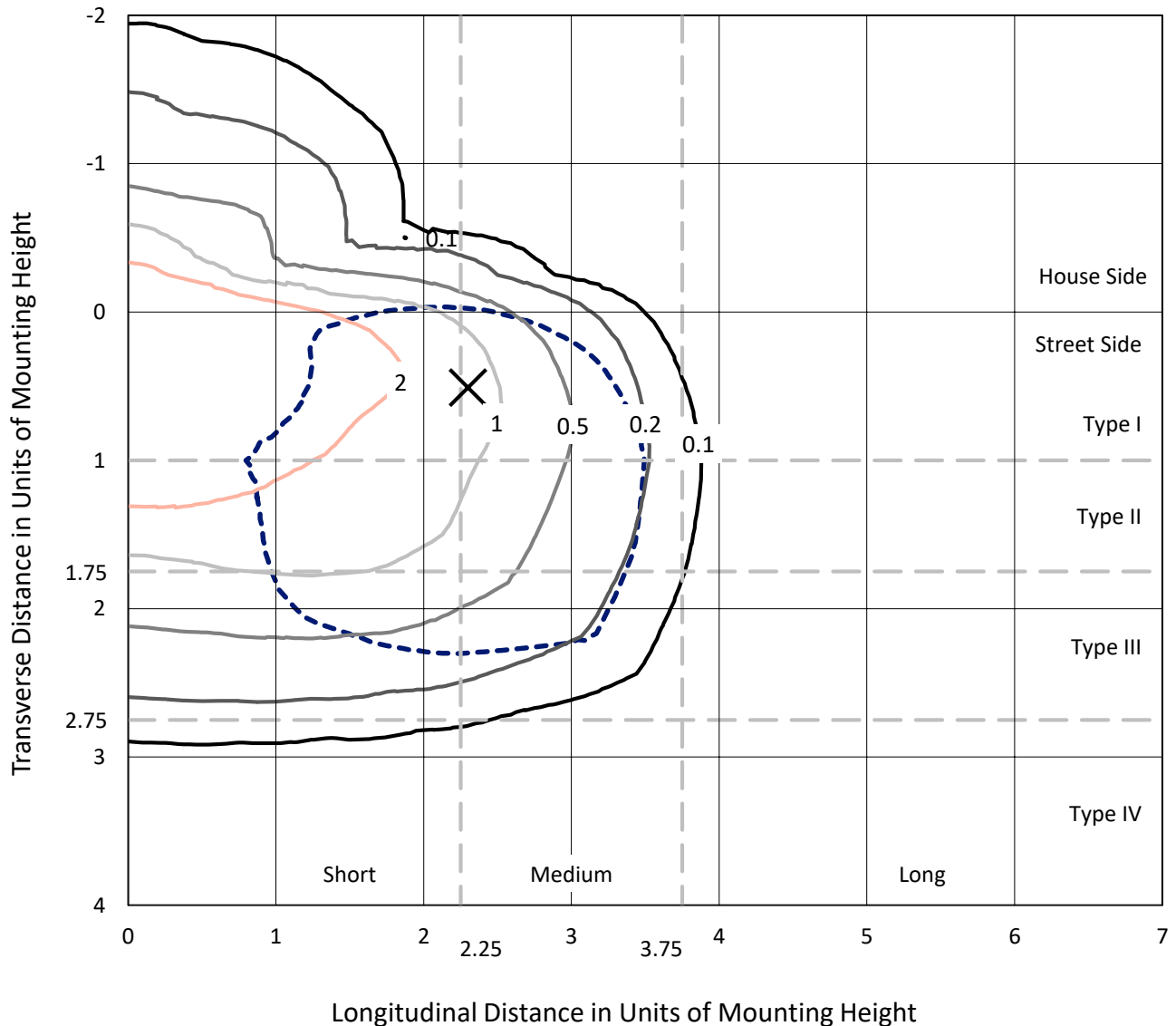


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Iso-Footcandle Lines of Horizontal Illumination

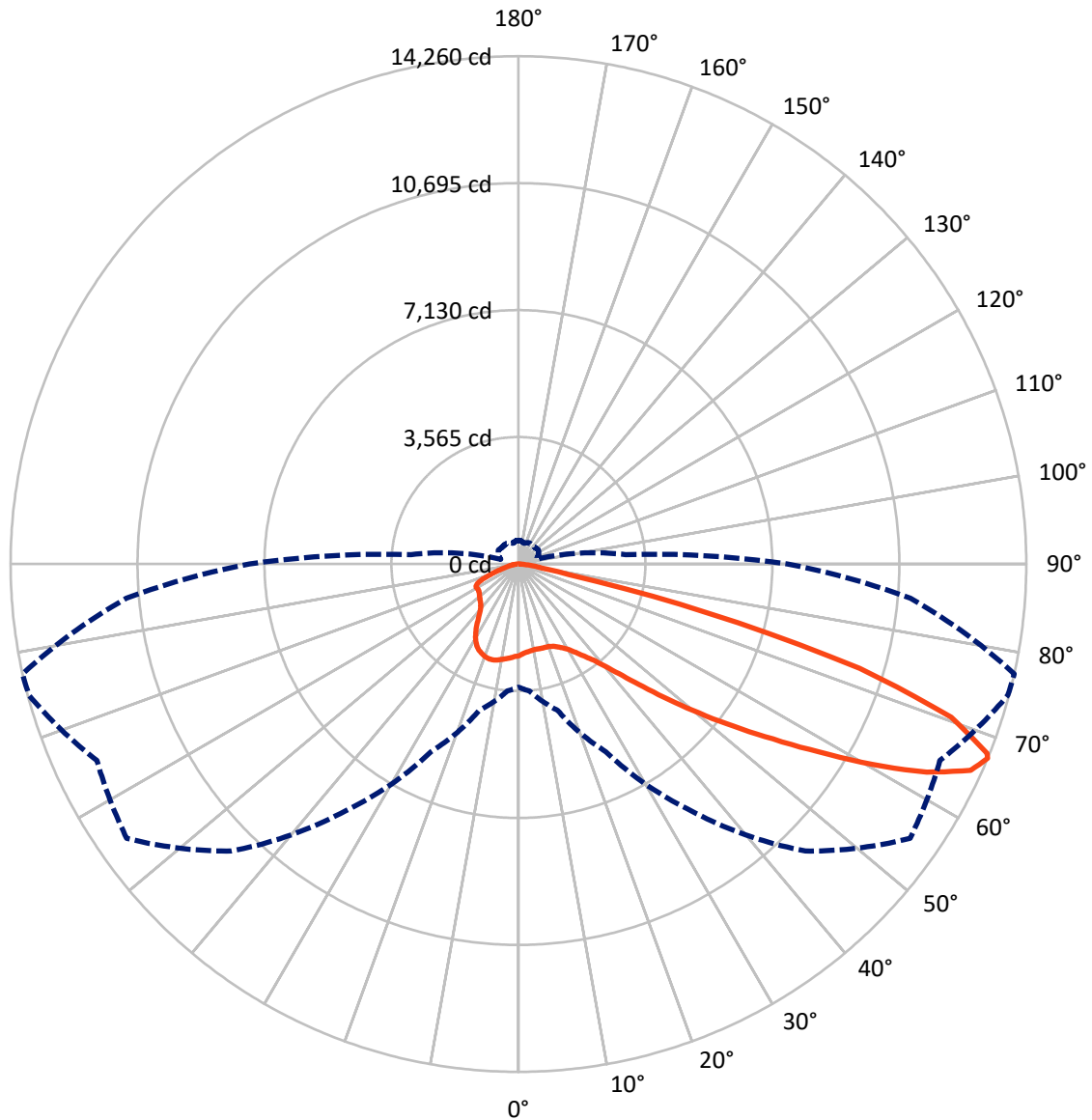
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5 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	3008.7	0.0	3008.7
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	14499.0	0.0	14499.0
	% Fixture	82.8	0.0	82.8
Total	Lumens	17507.6	0.0	17507.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.5	1.3
10°-20°	635.5	3.6
20°-30°	1079.8	6.2
30°-40°	1727.5	9.9
40°-50°	2659.5	15.2
50°-60°	3689.8	21.1
60°-70°	4921.9	28.1
70°-80°	2342.3	13.4
80°-90°	221.8	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°	17507.6	100.0
0°-180°	17507.6	100.0



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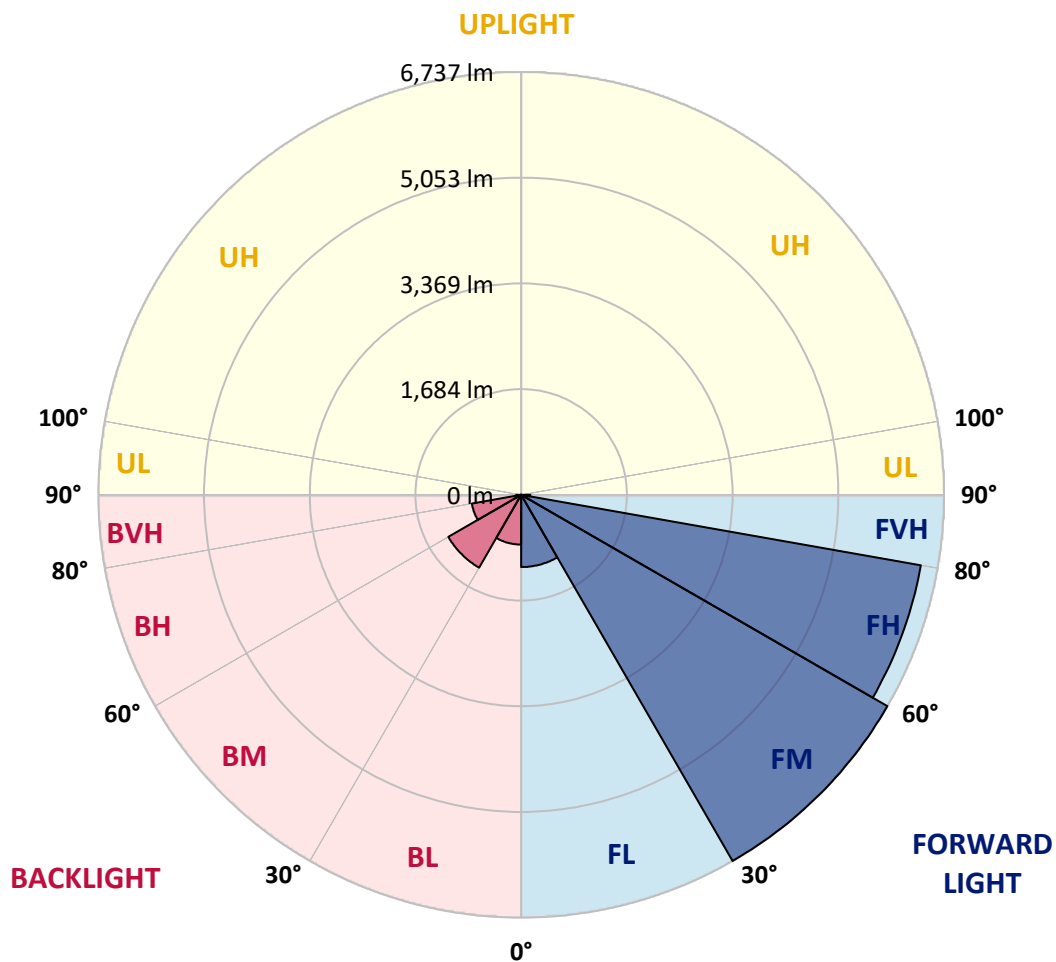
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1151.3	6.6			
FM	(30°-60°)	6737.1	38.5			
FH	(60°-80°)	6466.5	36.9			G3/7500
FVH	(80°-90°)	144.0	0.8			G2/225
BL	(0°-30°)	793.6	4.5	B2/1000		
BM	(30°-60°)	1339.6	7.7	B2/2500		
BH	(60°-80°)	797.7	4.6	B2/1000		G2/1000
BVH	(80°-90°)	77.7	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°	2576.7	2576.7	2576.7	2576.7	2576.7	2576.7	2576.7	2576.7	2576.7	2576.7	2576.7
2.5°	2310.4	2321.3	2322.4	2353.6	2367.8	2403.5	2442.5	2477.0	2507.3	2518.2	2537.7
5°	2078.9	2078.9	2082.1	2102.7	2142.6	2200.0	2281.2	2370.0	2463.1	2485.8	2543.1
7.5°	1957.6	1959.8	1962.0	1982.6	2013.9	2064.8	2146.1	2267.1	2421.9	2459.7	2560.3
10°	1968.5	1965.2	1954.4	1950.1	1963.1	1995.6	2065.9	2190.3	2387.2	2445.7	2591.8
12.5°	2138.3	2131.9	2096.1	2044.3	1996.7	1984.7	2033.5	2151.4	2371.0	2445.7	2644.8
15°	2429.5	2433.8	2363.5	2255.3	2130.8	2046.3	2040.0	2137.2	2365.6	2452.3	2706.6
17.5°	2808.2	2810.3	2713.1	2556.0	2349.3	2175.2	2084.2	2137.2	2365.6	2458.8	2766.1
20°	3210.8	3195.7	3085.3	2888.3	2619.9	2353.6	2165.5	2150.4	2372.2	2468.5	2822.4
22.5°	3556.0	3541.9	3426.1	3219.4	2912.1	2564.8	2274.8	2193.7	2407.8	2508.4	2901.3
25°	3858.0	3866.7	3754.0	3521.4	3203.3	2802.8	2438.2	2293.2	2482.6	2581.0	2998.7
27.5°	4224.8	4208.6	4078.8	3857.0	3503.0	3049.6	2642.6	2418.6	2571.3	2668.7	3117.7
30°	4649.1	4641.5	4466.2	4237.8	3833.1	3325.5	2845.0	2553.9	2687.0	2788.8	3267.0
32.5°	5164.1	5163.1	4974.8	4694.5	4204.2	3637.1	3084.2	2739.0	2855.9	2958.7	3465.1
35°	5747.4	5746.4	5551.5	5181.5	4631.8	3982.5	3365.6	2964.0	3064.7	3173.0	3701.0
37.5°	6152.2	6145.8	6043.9	5684.7	5104.7	4383.9	3717.2	3267.0	3301.7	3422.9	3985.7
40°	6230.1	6269.0	6356.8	6144.5	5620.9	4829.7	4070.1	3592.9	3625.3	3781.1	4343.8
42.5°	6145.8	6196.6	6487.6	6547.1	6137.0	5369.8	4511.6	4044.1	4085.2	4278.9	4764.8
45°	6072.2	6116.5	6481.2	6770.2	6646.7	5958.5	5062.5	4594.9	4672.9	4913.1	5245.4
47.5°	5946.6	5987.7	6353.5	6810.1	6937.9	6525.6	5725.7	5257.2	5391.4	5682.5	5792.9
50°	5940.1	5958.5	6179.3	6675.9	7038.5	6956.2	6460.6	6032.1	6237.7	6573.2	6398.9
52.5°	5775.7	5904.4	6104.6	6461.7	7040.6	7207.3	7184.6	6881.6	7198.7	7569.8	7063.5
55°	4769.1	4917.4	5855.7	6356.8	7027.7	7422.6	7845.7	7785.3	8280.8	8671.5	7807.9
57.5°	4453.2	4515.9	5137.0	6388.0	7135.9	7778.8	8506.9	8755.9	9518.8	9945.2	8700.8
60°	4366.7	4432.5	4993.1	6403.3	7429.2	8426.9	9404.1	9852.2	10974.4	11426.7	9714.7
62.5°	4270.4	4355.8	5004.0	6417.3	7944.3	9385.8	10594.5	11041.4	12468.8	12872.5	10664.9
65°	3989.0	4102.5	4803.7	6328.6	8508.0	10589.1	12168.0	12281.6	13703.6	13960.1	11238.4
67°	3455.4	3579.8	4254.1	5815.6	8456.1	11399.8	13426.5	13057.6	14228.6	14259.9	11052.2
67.5°	3286.5	3415.4	4068.0	5602.4	8307.9	11505.8	13649.6	13164.8	14224.1	14189.5	10879.2
70°	2213.1	2358.1	2880.8	4113.3	6664.0	10708.2	13595.4	12834.7	13291.3	12894.2	9346.8
72.5°	1098.4	1102.7	1437.1	2253.0	4037.6	7680.1	11341.2	10979.9	10774.2	10024.2	6858.9
75°	529.2	539.0	678.5	995.6	1702.3	3965.1	7734.3	7408.6	6308.0	5461.8	3432.7
77.5°	403.7	413.4	527.0	648.2	709.9	1293.2	3830.9	3096.1	1827.8	1459.8	967.5
80°	311.6	330.0	444.8	497.8	469.6	518.3	1204.4	948.0	711.0	652.6	479.4
82.5°	243.5	254.3	377.6	377.6	324.6	347.4	560.5	547.5	441.5	398.3	257.5
85°	172.0	193.8	304.0	281.3	213.2	215.4	335.4	321.5	227.2	182.8	100.6
87.5°	76.8	98.5	216.4	184.0	113.6	87.7	137.4	117.9	89.8	69.3	46.5
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°	2576.7	2576.7	2576.7	2576.7	2576.7	2576.7	2576.7	2576.7	2576.7	2576.7	2576.7
2.5°	2559.4	2576.7	2603.6	2619.9	2641.6	2650.3	2659.0	2674.1	2685.9	2682.7	2677.3
5°	2583.2	2612.5	2646.0	2656.7	2656.7	2646.0	2639.4	2640.5	2637.2	2635.1	2628.6
7.5°	2617.8	2657.8	2681.6	2670.8	2637.2	2595.1	2555.0	2531.2	2508.4	2494.5	2498.7
10°	2666.4	2710.8	2712.0	2664.4	2584.2	2492.3	2413.2	2362.5	2313.8	2292.0	2298.6
12.5°	2736.9	2781.2	2743.3	2640.5	2499.9	2356.0	2210.9	2105.9	2011.8	1989.0	1982.6
15°	2812.7	2847.2	2762.7	2589.6	2378.6	2141.6	1898.2	1741.3	1636.3	1617.8	1611.4
17.5°	2878.6	2898.1	2753.0	2498.7	2187.1	1813.8	1530.3	1424.2	1402.6	1413.4	1413.4
20°	2937.0	2930.5	2710.8	2358.1	1885.2	1450.1	1285.7	1284.5	1313.9	1340.8	1343.0
22.5°	3010.6	2959.7	2643.7	2149.3	1524.9	1209.8	1181.7	1209.8	1242.4	1272.7	1276.0
25°	3098.3	2992.3	2553.9	1851.5	1226.0	1098.4	1110.3	1134.1	1154.7	1178.4	1179.6
27.5°	3185.8	3017.0	2427.3	1502.1	1063.9	1027.0	1040.0	1049.7	1055.1	1070.3	1070.3
30°	3287.6	3036.6	2244.4	1203.4	989.2	964.2	956.7	952.4	956.7	977.1	978.3
32.5°	3415.4	3071.2	1994.4	1032.4	954.4	919.9	880.9	859.3	874.4	911.2	917.7
35°	3560.3	3112.4	1694.7	964.2	942.6	898.2	826.8	793.3	798.7	832.2	837.6
37.5°	3742.2	3165.4	1399.3	948.0	954.4	896.1	801.8	754.2	730.5	731.6	730.5
40°	3974.8	3218.4	1165.6	952.4	980.5	901.4	790.0	715.3	665.6	667.7	672.0
42.5°	4218.4	3253.0	1017.2	965.3	1011.9	909.1	785.7	677.4	634.2	670.9	704.5
45°	4502.9	3243.3	940.4	977.1	1035.7	912.3	769.4	673.1	637.3	747.7	810.5
47.5°	4829.7	3201.1	897.1	982.7	1042.2	911.2	757.5	687.2	664.4	856.1	927.4
50°	5184.7	3135.1	862.6	973.9	1038.9	906.8	770.4	704.5	675.3	879.8	935.0
52.5°	5573.3	3074.4	826.8	954.4	1022.7	893.9	786.7	696.9	645.0	810.5	852.8
55°	6033.1	3060.3	786.7	920.9	995.6	879.8	778.1	673.1	611.4	718.6	744.5
57.5°	6559.1	3148.1	734.9	879.8	958.9	851.7	757.5	660.2	599.4	653.6	667.7
60°	7226.8	3341.8	679.6	836.5	913.3	809.5	739.1	663.4	602.8	643.8	647.1
62.5°	7748.4	3516.0	629.8	783.5	852.8	758.6	719.6	666.6	612.6	656.9	651.5
65°	7937.9	3430.4	568.2	704.5	767.2	702.4	692.7	668.8	612.6	664.4	652.6
67°	7549.3	3022.5	509.7	625.5	686.0	652.6	666.6	660.2	601.7	663.4	642.7
67.5°	7364.2	2878.6	494.5	612.6	664.4	637.3	660.2	655.9	598.5	661.2	637.3
70°	6073.3	2064.8	417.7	514.0	556.2	561.6	620.1	627.6	572.5	621.2	577.9
72.5°	4321.1	1292.1	360.4	398.3	449.2	480.6	566.0	589.7	537.8	540.1	504.3
75°	2138.3	693.8	321.5	307.3	349.5	400.5	493.4	537.8	487.1	450.2	438.4
77.5°	721.8	392.7	271.6	247.8	271.6	321.5	409.1	469.6	429.6	380.9	373.3
80°	373.3	285.8	212.1	199.2	214.2	248.9	320.3	390.7	366.9	369.1	304.0
82.5°	232.8	174.2	152.6	151.5	162.4	190.5	236.0	317.1	314.9	269.4	195.9
85°	108.2	100.6	97.3	100.6	103.8	108.2	153.7	226.2	239.2	144.9	128.7
87.5°	45.5	44.3	38.9	42.2	46.5	45.5	61.7	96.3	134.1	90.9	83.4
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)