

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: P197037

Luminaire Tested: **NAV-AF-03-D-UNV-SL2-8030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197037
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)
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-SL2-8030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13227 lumens
Efficiency: N/A
Efficacy: 69.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 191
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

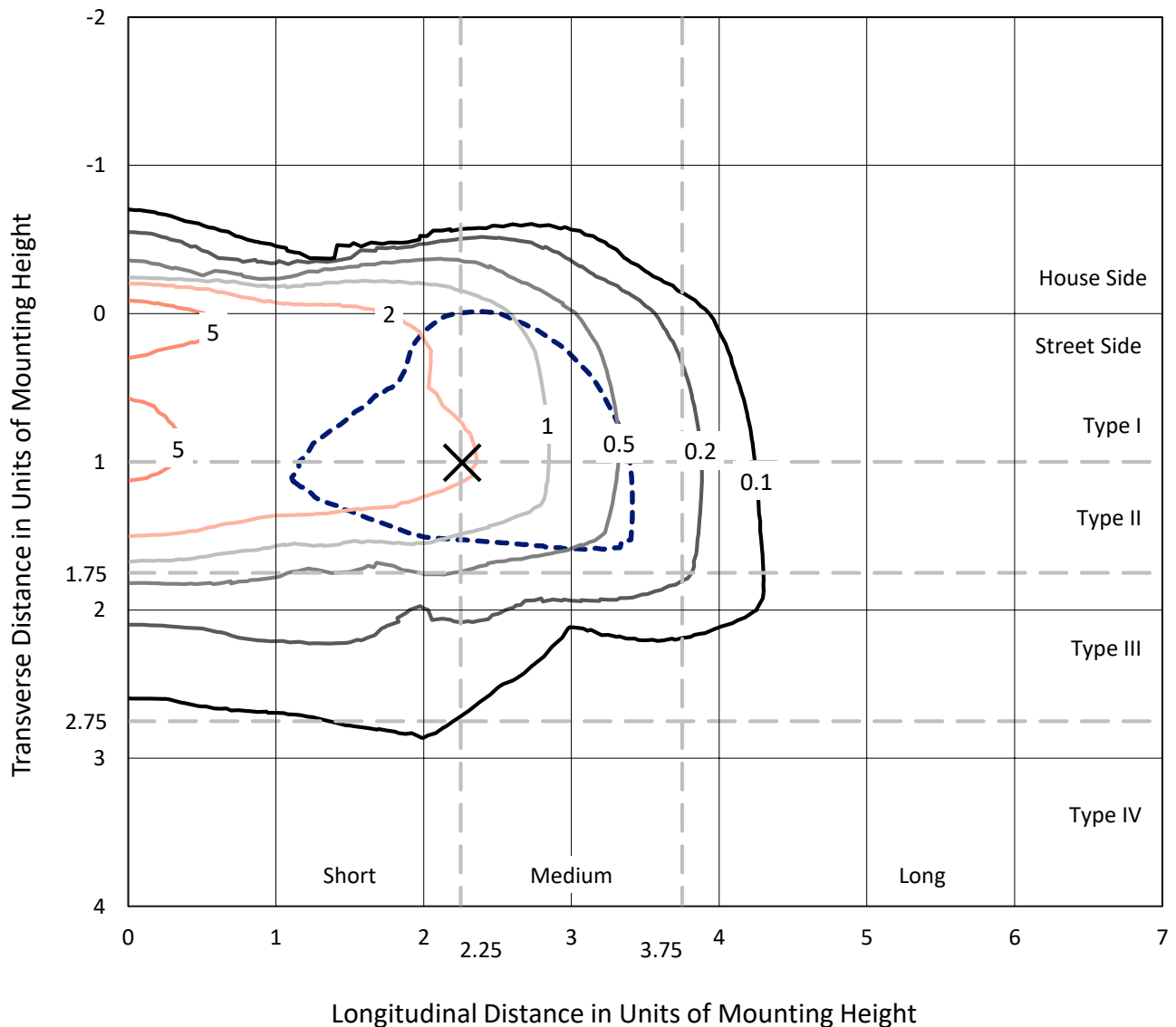


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

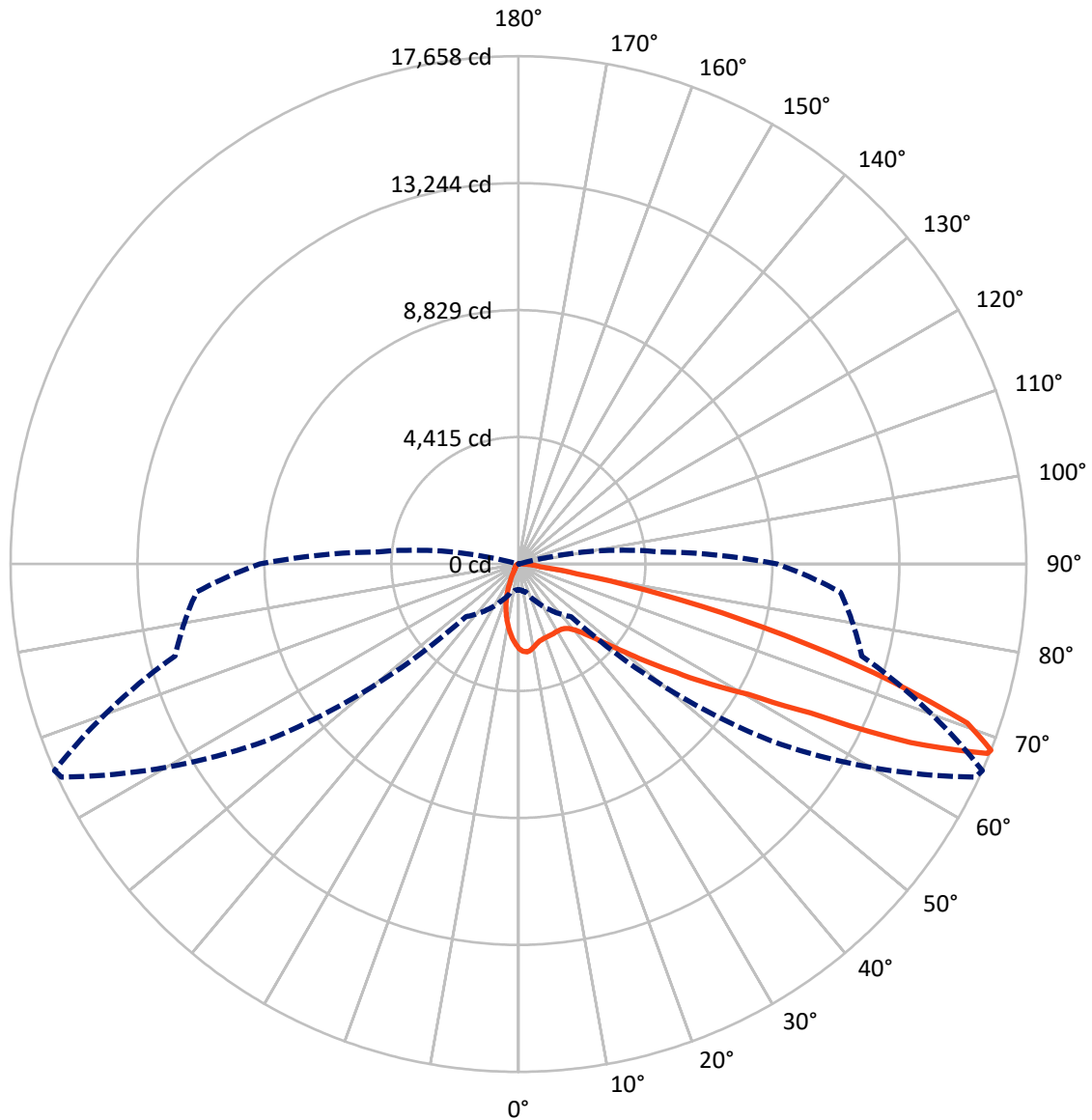


Based on 20 foot mounting height. Maximum calculated value = 7.4 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1339.8	0.0	1339.8
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	11887.2	0.0	11887.2
	% Fixture	89.9	0.0	89.9
Total	Lumens	13227.0	0.0	13227.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	241.6	1.8
10°-20°	519.8	3.9
20°-30°	753.2	5.7
30°-40°	1153.0	8.7
40°-50°	1972.2	14.9
50°-60°	3085.1	23.3
60°-70°	3552.3	26.9
70°-80°	1777.6	13.4
80°-90°	172.2	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°	13227.0	100.0
0°-180°	13227.0	100.0



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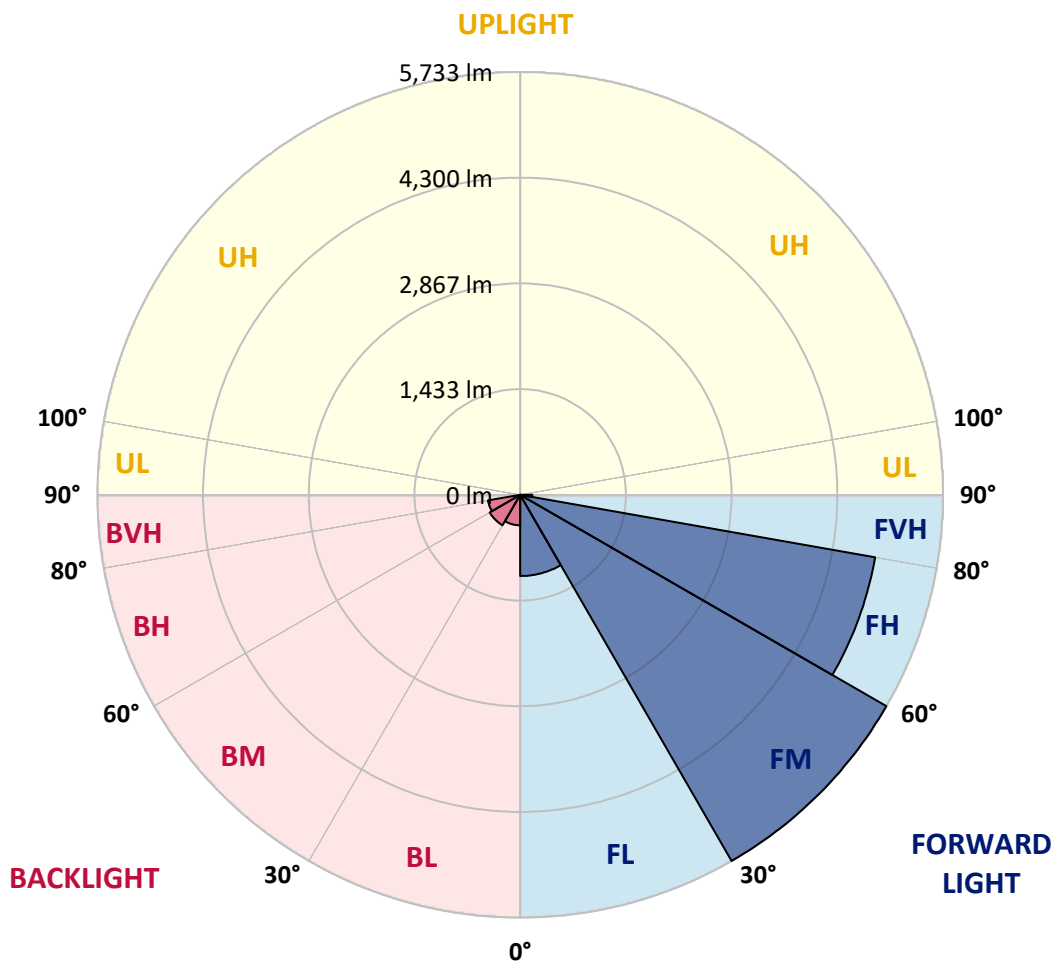
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1101.1	8.3			
FM	(30°-60°)	5733.2	43.3			
FH	(60°-80°)	4887.3	36.9			G2/5000
FVH	(80°-90°)	165.6	1.3			G2/225
BL	(0°-30°)	413.5	3.1	B1/500		
BM	(30°-60°)	477.1	3.6	B1/1000		
BH	(60°-80°)	442.6	3.3	B1/500		G1/500
BVH	(80°-90°)	6.5	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	2946.9	2946.9	2946.9	2946.9	2946.9	2946.9	2946.9	2946.9	2946.9	2946.9	2946.9
2.5°	3099.5	3101.6	3100.5	3103.6	3101.6	3086.0	3069.4	3034.1	3037.2	2991.5	2940.6
5°	2881.4	2899.1	2916.7	2934.4	2977.0	3014.3	3059.0	3069.4	3069.4	3029.9	2955.2
7.5°	2659.2	2660.3	2680.0	2703.9	2761.0	2829.5	2933.4	3026.8	3028.9	3039.3	2957.2
10°	2492.1	2497.2	2510.7	2536.7	2593.8	2661.3	2777.6	2924.0	2935.4	3012.3	2936.5
12.5°	2362.3	2368.5	2383.0	2413.1	2465.1	2534.6	2657.1	2824.3	2839.9	2986.3	2930.2
15°	2262.6	2270.9	2282.3	2312.4	2368.5	2442.2	2576.2	2757.9	2776.6	2975.9	2950.0
17.5°	2221.0	2221.0	2220.0	2240.8	2296.8	2371.6	2511.8	2722.6	2746.4	2984.2	2983.2
20°	2238.7	2235.6	2213.8	2208.6	2242.8	2317.6	2460.9	2699.7	2726.7	2999.8	3023.7
22.5°	2332.1	2325.9	2277.1	2236.6	2226.2	2276.1	2426.6	2684.1	2716.3	3032.0	3077.7
25°	2530.5	2511.8	2444.3	2352.9	2270.9	2265.7	2402.8	2675.8	2710.1	3069.4	3136.9
27.5°	2788.0	2782.8	2674.8	2552.3	2394.4	2300.0	2395.5	2669.6	2703.9	3096.4	3184.6
30°	3107.8	3109.9	2985.3	2825.4	2586.5	2396.5	2418.3	2666.5	2701.8	3098.5	3205.4
32.5°	3438.0	3440.1	3336.2	3164.9	2849.2	2562.7	2482.7	2681.0	2713.2	3090.1	3204.4
35°	3755.7	3758.8	3696.5	3558.4	3200.2	2793.2	2604.2	2730.9	2753.7	3095.3	3202.3
37.5°	4157.6	4170.0	4093.2	3964.4	3640.5	3131.7	2802.5	2831.6	2850.3	3137.9	3217.9
40°	4842.9	4826.3	4606.1	4388.1	4118.1	3543.9	3089.1	3005.0	3011.2	3248.0	3277.0
42.5°	5641.4	5620.6	5243.7	4867.8	4609.3	4041.3	3455.6	3270.8	3269.8	3432.8	3405.8
45°	6328.8	6316.3	5919.7	5418.1	5153.4	4590.6	3907.3	3654.0	3641.5	3752.6	3640.5
47.5°	6816.8	6806.4	6506.3	6003.8	5782.6	5194.9	4471.2	4176.3	4150.3	4171.1	4021.5
50°	6864.6	6853.1	6748.3	6425.3	6517.8	6081.6	5167.9	4860.5	4827.3	4795.1	4597.8
52.5°	6418.1	6417.0	6472.1	6451.3	7032.8	7222.8	6022.5	5706.8	5667.3	5585.3	5389.1
55°	5505.4	5500.2	5708.9	6012.1	7021.4	8400.3	7325.6	6714.0	6662.1	6498.0	6240.5
57.5°	4022.6	3995.6	4431.7	5074.4	6528.1	8915.3	9395.0	7965.2	7879.0	7358.8	6962.2
60°	2221.0	2231.4	2792.1	3553.2	5360.0	8813.6	11299.4	9424.1	9197.7	8101.2	7701.5
62.5°	1245.0	1270.9	1688.4	2309.3	3417.2	7988.1	12321.1	11934.8	11389.7	8967.2	8636.0
65°	941.8	957.4	1167.1	1781.8	2154.6	5582.2	12484.1	15445.5	14975.2	10279.7	10124.0
67.5°	886.8	899.2	1002.0	1477.6	1962.5	2894.9	11256.8	17522.2	17581.4	12069.8	11276.5
68°	893.0	908.6	1011.4	1421.5	1959.4	2589.7	10733.5	17532.6	17658.3	12358.5	11237.1
70°	820.3	824.5	1069.5	1394.5	1899.2	2040.4	7764.8	16331.2	16556.6	12702.2	10200.8
72.5°	313.6	314.6	479.7	1207.6	1989.5	2051.8	3911.5	12907.8	12919.2	11054.3	7952.8
75°	163.0	137.1	150.6	378.0	1900.2	1999.9	1962.5	8813.6	8758.5	7476.2	4873.0
77.5°	112.1	95.5	100.7	130.8	790.2	1998.8	1417.4	5068.2	5056.8	3180.5	1390.4
80°	63.3	55.0	60.2	110.1	277.2	1876.3	1320.8	2178.5	2052.8	558.6	225.3
82.5°	32.2	27.0	32.2	92.4	172.4	1180.6	1284.4	854.6	761.1	132.9	146.4
85°	8.3	8.3	15.6	64.4	107.0	387.3	1151.5	616.8	554.5	58.1	103.8
87.5°	2.1	1.0	6.2	23.9	38.4	84.1	638.6	343.7	295.9	30.1	60.2
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°	2946.9	2946.9	2946.9	2946.9	2946.9	2946.9	2946.9	2946.9	2946.9	2946.9	2946.9
2.5°	2919.9	2890.8	2833.7	2769.3	2723.6	2673.8	2644.7	2609.4	2582.4	2558.5	2576.2
5°	2909.5	2853.4	2726.7	2584.5	2465.1	2350.8	2265.7	2184.7	2123.4	2085.0	2100.6
7.5°	2882.5	2799.4	2593.8	2371.6	2176.4	1992.6	1843.1	1709.1	1605.3	1549.2	1566.9
10°	2836.8	2719.5	2443.2	2134.9	1861.8	1602.2	1380.0	1180.6	1030.0	959.4	976.1
12.5°	2803.6	2648.8	2287.5	1906.4	1547.1	1178.5	883.6	655.2	537.9	467.3	473.5
15°	2789.0	2593.8	2142.1	1665.5	1203.5	757.0	477.6	345.8	305.3	290.7	291.8
17.5°	2791.1	2550.2	2004.0	1415.3	856.6	435.1	292.8	263.7	257.5	254.4	254.4
20°	2796.3	2506.6	1860.7	1154.7	548.3	280.4	244.0	234.7	231.6	227.4	228.4
22.5°	2811.9	2473.4	1716.4	893.0	337.5	228.4	216.0	207.7	202.5	196.2	197.3
25°	2835.7	2448.4	1574.1	642.7	237.8	199.4	187.9	176.5	167.2	159.9	160.9
27.5°	2850.3	2413.1	1422.5	438.2	197.3	174.4	158.9	143.3	132.9	126.7	125.6
30°	2839.9	2356.0	1250.2	287.6	174.4	150.6	131.9	114.2	103.8	98.6	98.6
32.5°	2811.9	2282.3	1060.2	209.7	154.7	129.8	107.0	91.4	84.1	81.0	82.0
35°	2779.7	2205.5	857.7	177.6	139.1	110.1	87.2	74.8	71.6	70.6	70.6
37.5°	2762.0	2139.0	663.5	160.9	124.6	91.4	71.6	64.4	61.3	61.3	61.3
40°	2781.8	2088.1	491.1	148.5	110.1	75.8	60.2	55.0	54.0	54.0	54.0
42.5°	2865.9	2070.5	359.3	138.1	95.5	63.3	51.9	47.8	46.7	47.8	47.8
45°	3029.9	2108.9	272.0	127.7	82.0	51.9	44.6	41.5	41.5	42.6	42.6
47.5°	3308.2	2207.5	223.2	117.3	68.5	43.6	38.4	36.3	36.3	37.4	37.4
50°	3740.2	2390.3	200.4	105.9	57.1	37.4	32.2	31.2	31.2	32.2	33.2
52.5°	4396.4	2738.1	189.0	94.5	46.7	31.2	27.0	26.0	27.0	28.0	28.0
55°	5126.4	3183.6	175.5	83.1	39.5	26.0	21.8	21.8	22.8	24.9	24.9
57.5°	5806.5	3613.5	163.0	68.5	34.3	20.8	17.7	17.7	19.7	21.8	21.8
60°	6525.0	4035.0	146.4	55.0	29.1	16.6	14.5	14.5	17.7	19.7	20.8
62.5°	7412.8	4525.1	124.6	43.6	22.8	12.5	10.4	13.5	16.6	19.7	19.7
65°	8696.2	5134.7	97.6	34.3	17.7	9.3	8.3	12.5	15.6	18.7	19.7
67.5°	9162.4	5056.8	73.7	28.0	13.5	7.3	7.3	11.4	15.6	18.7	18.7
68°	8992.2	4886.5	70.6	27.0	12.5	7.3	7.3	11.4	15.6	18.7	18.7
70°	7835.4	3994.6	58.1	20.8	10.4	6.2	6.2	10.4	15.6	17.7	18.7
72.5°	5866.7	2654.0	49.8	13.5	9.3	6.2	5.2	10.4	14.5	17.7	17.7
75°	3365.3	1101.7	42.6	10.4	8.3	5.2	5.2	9.3	14.5	17.7	17.7
77.5°	951.1	257.5	34.3	8.3	7.3	5.2	4.2	9.3	13.5	16.6	16.6
80°	174.4	76.8	27.0	7.3	6.2	5.2	4.2	9.3	13.5	16.6	16.6
82.5°	115.3	36.3	19.7	7.3	6.2	5.2	4.2	8.3	12.5	15.6	15.6
85°	86.2	26.0	12.5	7.3	6.2	5.2	4.2	8.3	12.5	15.6	15.6
87.5°	47.8	11.4	9.3	8.3	7.3	5.2	4.2	7.3	11.4	14.5	14.5
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)