

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: McGRAW-EDISON

Report Number: P299590

Luminaire Tested: **GLNA-AF-03-LED-E1-SL2-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299590
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24287)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-03-LED-E1-SL2-HSS
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(3) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
w/Spill Control WITH HOUSESIDE SHEILD OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13672.5 lumens
Efficiency: N/A
Efficacy: 82.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

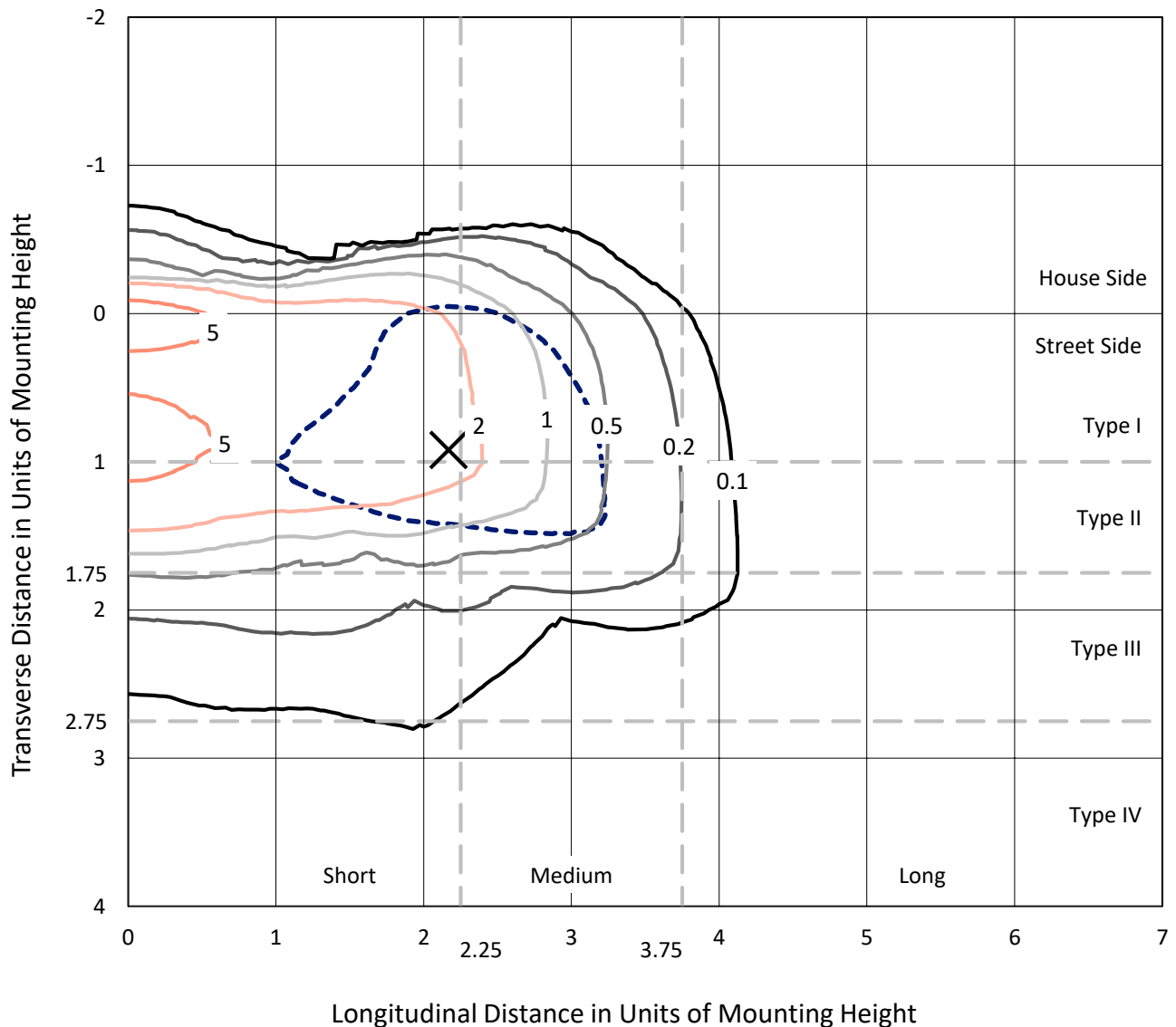
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

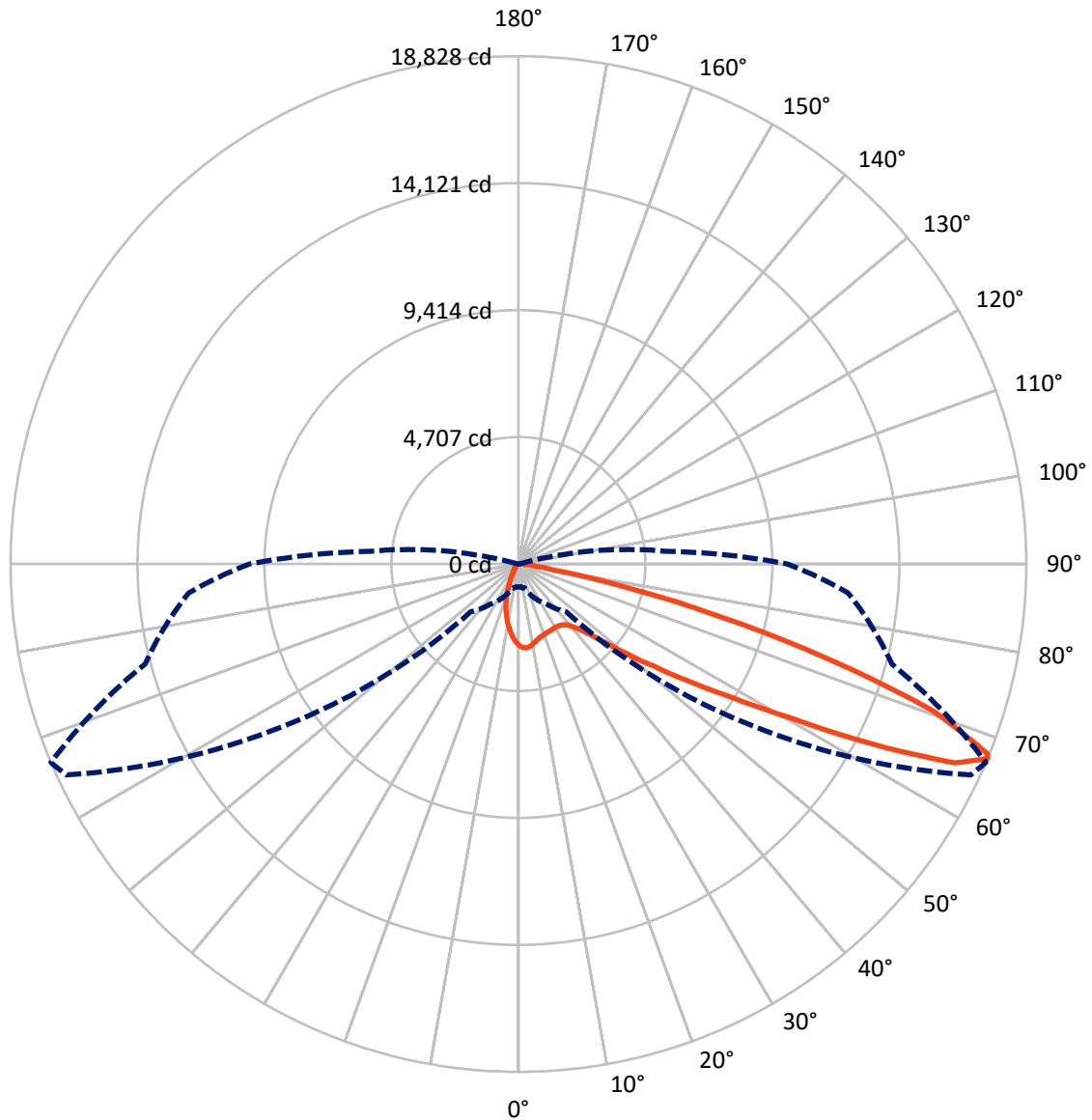
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7.5 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1419.6	0.0	1419.6
	% Fixture	10.4	0.0	10.4
Street Side	Lumens	12252.9	0.0	12252.9
	% Fixture	89.6	0.0	89.6
Total	Lumens	13672.5	0.0	13672.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	245.4	1.8
10°-20°	522.2	3.8
20°-30°	759.2	5.6
30°-40°	1184.4	8.7
40°-50°	2098.2	15.3
50°-60°	3320.1	24.3
60°-70°	3802.7	27.8
70°-80°	1577.4	11.5
80°-90°	162.9	1.2
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°	13672.5	100.0
0°-180°	13672.5	100.0

Coefficient of Utilization



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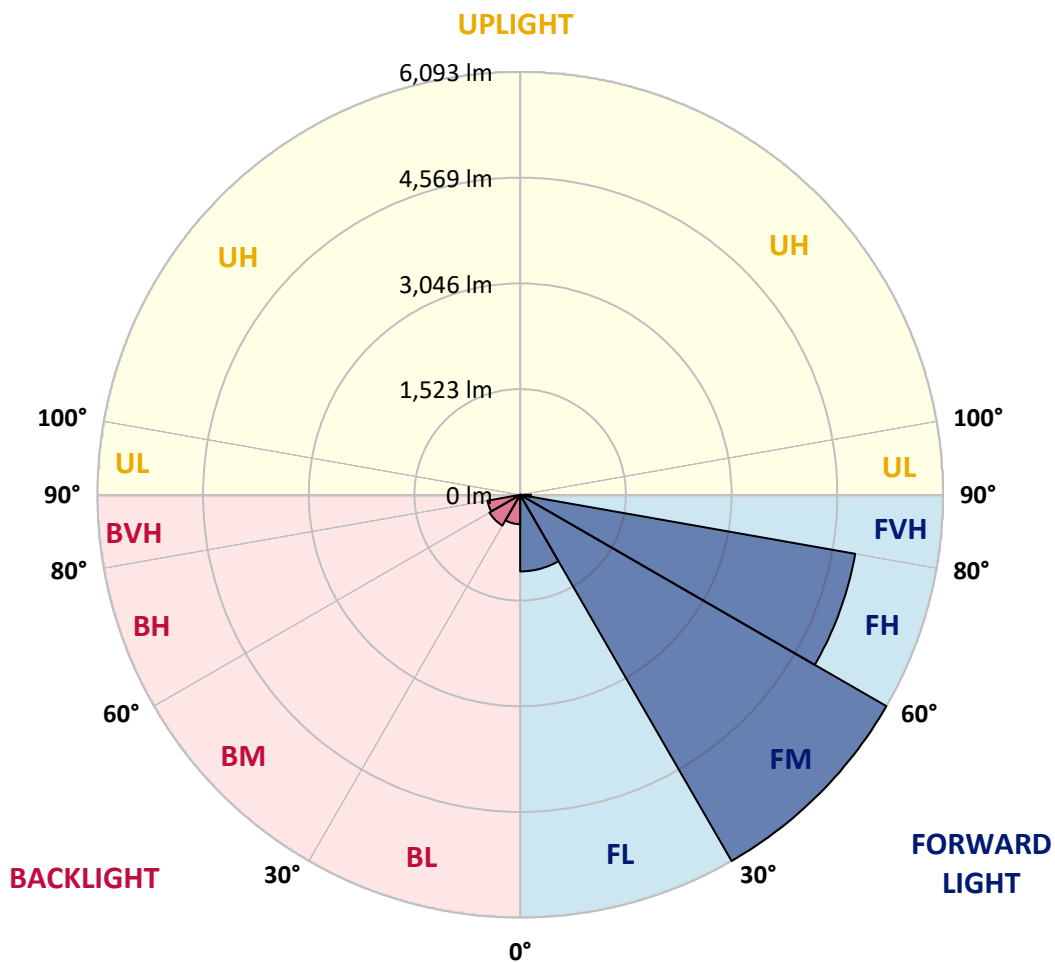
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1103.2	8.1			
FM	(30°-60°)	6092.5	44.6			
FH	(60°-80°)	4901.6	35.9			G2/5000
FVH	(80°-90°)	155.6	1.1			G2/225
BL	(0°-30°)	423.6	3.1	B1/500		
BM	(30°-60°)	510.2	3.7	B1/1000		
BH	(60°-80°)	478.5	3.5	B1/500		G1/500
BVH	(80°-90°)	7.3	0.1			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 Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	3015.3	3015.3	3015.3	3015.3	3015.3	3015.3	3015.3	3015.3	3015.3	3015.3	3015.3
2.5°	3117.4	3123.8	3123.0	3127.7	3138.9	3139.7	3128.5	3107.0	3102.2	3074.3	3025.7
5°	2874.9	2893.3	2904.4	2949.9	3000.9	3062.3	3108.6	3125.3	3123.0	3103.0	3029.7
7.5°	2598.2	2616.6	2629.3	2682.7	2750.5	2855.8	2976.2	3075.1	3083.9	3105.4	3026.5
10°	2414.0	2417.2	2434.7	2485.8	2556.7	2664.4	2807.9	2981.0	3007.3	3086.3	3018.5
12.5°	2262.5	2264.9	2288.0	2343.0	2418.8	2527.2	2678.0	2878.1	2918.8	3062.3	3016.9
15°	2154.8	2163.6	2184.3	2241.7	2322.3	2429.9	2584.7	2802.4	2851.0	3053.6	3031.2
17.5°	2118.9	2128.5	2134.9	2176.3	2249.7	2355.0	2513.7	2752.9	2807.9	3058.4	3059.2
20°	2156.4	2163.6	2149.2	2159.6	2205.1	2299.2	2453.9	2710.7	2776.1	3063.9	3095.0
22.5°	2296.0	2299.2	2260.1	2214.6	2206.6	2258.5	2406.8	2677.2	2747.3	3079.1	3137.3
25°	2535.2	2529.6	2465.8	2367.7	2275.2	2251.3	2378.9	2656.4	2733.0	3095.0	3181.2
27.5°	2823.9	2831.9	2744.2	2601.4	2425.2	2299.2	2374.9	2647.7	2726.6	3106.2	3219.5
30°	3174.8	3186.0	3085.5	2906.0	2653.2	2417.2	2411.6	2646.1	2722.6	3099.0	3222.6
32.5°	3532.9	3546.4	3467.5	3282.5	2957.9	2615.0	2494.5	2663.6	2730.6	3074.3	3204.3
35°	3907.7	3926.8	3874.2	3715.5	3371.0	2900.5	2640.5	2717.0	2768.1	3071.9	3186.0
37.5°	4425.3	4442.8	4343.9	4175.6	3871.0	3283.3	2874.9	2817.5	2856.6	3110.2	3190.7
40°	5198.0	5195.6	4940.4	4682.8	4420.5	3769.7	3204.3	2999.3	3019.3	3225.8	3249.8
42.5°	6040.2	6036.2	5659.0	5267.4	5030.5	4368.6	3637.3	3313.6	3300.0	3438.8	3402.9
45°	6689.3	6688.5	6380.7	5939.7	5765.0	5056.1	4197.2	3750.6	3729.8	3784.9	3685.2
47.5°	6966.0	6970.8	6816.1	6505.9	6579.3	5985.9	4902.9	4383.8	4352.7	4330.4	4178.8
50°	6750.7	6760.3	6773.1	6712.4	7176.6	7235.6	5849.6	5276.2	5261.0	5161.3	4924.5
52.5°	6047.3	6096.0	6245.9	6438.1	7383.9	8435.0	7333.7	6384.7	6303.3	6197.3	5936.5
55°	4862.3	4915.7	5200.4	5666.9	7075.3	9222.9	9413.5	7813.8	7678.2	7361.6	6985.2
57.5°	3217.9	3300.8	3713.9	4307.2	6178.9	9349.7	11488.6	9797.1	9325.0	8458.1	8033.9
60°	1772.8	1852.6	2300.7	2838.3	4462.7	8722.9	12884.2	12379.4	11545.2	9683.9	9307.5
62.5°	1091.8	1134.8	1465.8	1965.8	2676.4	6884.7	13172.9	15624.4	14658.6	11262.1	10845.8
65°	869.3	887.6	1049.5	1606.9	1918.8	4095.1	12240.6	18098.2	17776.0	13172.9	12223.1
67°	843.7	850.9	927.5	1379.7	1808.7	2510.5	10254.9	18500.9	18827.9	14329.2	12266.1
67.5°	849.3	857.3	929.9	1316.7	1805.5	2307.1	9570.6	18342.2	18755.3	14420.9	12075.5
70°	819.0	843.7	1064.6	1315.9	1717.0	1917.2	5731.5	15892.3	16322.2	13399.4	10246.1
72.5°	290.3	291.9	460.1	1064.6	1866.9	1937.9	2878.1	11650.5	11968.7	10250.1	7387.1
75°	172.3	146.7	153.1	303.0	1784.0	1882.1	1660.4	7444.5	7563.4	5873.5	3741.0
77.5°	118.8	103.7	106.9	134.0	679.5	1855.8	1319.0	3882.2	3755.4	2059.9	796.7
80°	67.8	59.8	63.8	117.2	247.2	1731.3	1244.1	1574.2	1342.2	349.3	220.1
82.5°	35.9	30.3	36.7	96.5	172.3	1079.0	1246.5	760.8	602.9	118.0	149.9
85°	12.8	10.4	17.5	66.2	114.8	331.0	1155.6	639.6	502.4	57.4	114.0
87.5°	2.4	2.4	7.2	27.1	46.3	101.3	683.4	379.6	254.4	34.3	78.2
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°	3015.3	3015.3	3015.3	3015.3	3015.3	3015.3	3015.3	3015.3	3015.3	3015.3	3015.3
2.5°	3005.7	2971.4	2925.2	2868.6	2801.6	2742.6	2698.7	2653.2	2643.7	2627.7	2625.3
5°	2985.8	2926.8	2811.9	2680.4	2540.0	2413.2	2310.3	2218.6	2177.9	2142.8	2138.9
7.5°	2956.3	2867.8	2672.4	2460.2	2240.9	2041.6	1872.5	1752.9	1642.8	1590.2	1582.2
10°	2922.0	2795.2	2515.3	2221.0	1918.0	1636.4	1385.2	1174.7	1047.1	971.3	961.8
12.5°	2890.1	2724.2	2355.0	1973.0	1570.3	1193.8	870.9	669.9	535.9	481.7	475.3
15°	2874.9	2666.8	2205.1	1719.4	1206.6	760.0	476.1	368.4	324.6	311.8	311.0
17.5°	2873.3	2618.1	2058.3	1457.0	845.3	441.8	310.2	283.1	274.3	271.1	271.1
20°	2872.5	2571.9	1911.6	1185.1	536.7	294.3	258.4	252.0	245.6	241.6	241.6
22.5°	2881.3	2530.4	1758.5	907.5	338.1	238.4	227.3	220.9	212.9	207.3	206.5
25°	2890.1	2498.5	1602.2	646.0	244.8	207.3	196.2	187.4	176.2	169.1	168.3
27.5°	2891.7	2458.7	1434.7	432.2	205.0	181.0	166.7	153.1	140.4	133.2	132.4
30°	2867.8	2391.7	1248.9	291.9	181.0	157.1	138.0	123.6	111.6	106.1	106.1
32.5°	2820.7	2308.7	1044.7	220.1	161.1	134.8	114.0	100.5	92.5	90.1	89.3
35°	2778.4	2219.4	835.0	186.6	144.3	114.0	93.3	84.5	79.7	79.0	78.2
37.5°	2753.7	2147.6	638.0	169.1	128.4	95.7	79.0	72.6	70.2	68.6	69.4
40°	2772.9	2087.8	471.3	154.7	112.4	79.7	67.0	63.8	61.4	60.6	60.6
42.5°	2856.6	2077.5	350.1	142.0	97.3	66.2	58.2	55.8	54.2	53.4	54.2
45°	3076.7	2141.3	271.9	130.0	82.1	55.8	49.4	48.6	47.8	47.8	47.8
47.5°	3407.7	2272.8	226.5	116.4	68.6	47.8	43.1	42.3	41.5	42.3	42.3
50°	3968.3	2513.7	202.6	102.9	56.6	40.7	36.7	36.7	36.7	36.7	37.5
52.5°	4820.8	2987.4	186.6	89.3	46.3	34.3	31.1	31.1	31.9	31.9	32.7
55°	5770.6	3615.8	172.3	75.8	39.1	28.7	25.5	26.3	27.1	27.9	27.9
57.5°	6801.0	4312.0	160.3	62.2	33.5	23.1	21.5	22.3	23.1	24.7	24.7
60°	8044.2	5065.6	142.8	48.6	27.9	18.3	16.7	18.3	20.7	22.3	23.1
62.5°	9409.5	5794.5	120.4	38.3	23.1	14.4	13.6	16.7	19.9	21.5	22.3
65°	10342.6	6023.4	92.5	31.1	17.5	10.4	11.2	15.2	19.1	21.5	21.5
67°	9964.6	5461.2	75.8	26.3	14.4	8.0	10.4	15.2	19.1	20.7	21.5
67.5°	9702.2	5241.1	72.6	25.5	13.6	8.0	10.4	15.2	19.1	21.5	21.5
70°	7894.3	3937.2	60.6	19.1	11.2	7.2	8.8	14.4	18.3	20.7	20.7
72.5°	5485.1	2427.5	54.2	13.6	9.6	6.4	8.0	13.6	17.5	19.9	20.7
75°	2607.8	878.8	46.3	10.4	8.8	5.6	7.2	13.6	17.5	19.9	19.9
77.5°	531.9	204.2	37.5	8.8	7.2	5.6	6.4	12.8	16.7	19.1	19.1
80°	174.6	79.0	27.9	8.0	7.2	5.6	6.4	12.0	16.7	18.3	19.1
82.5°	126.0	39.9	18.3	8.0	7.2	5.6	5.6	12.0	15.9	18.3	18.3
85°	96.5	27.9	12.0	8.0	7.2	5.6	5.6	11.2	15.2	17.5	17.5
87.5°	63.8	11.2	9.6	8.0	7.2	5.6	5.6	11.2	14.4	16.7	17.5
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)