

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: P299722

Luminaire Tested: **GLNA-AF-05-LED-E1-SL2-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299722
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-05-LED-E1-SL2-600-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(5) 70 CRI, 4000K CCT 600mA 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: 14745.6 lumens
Efficiency: N/A
Efficacy: 91.0 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-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

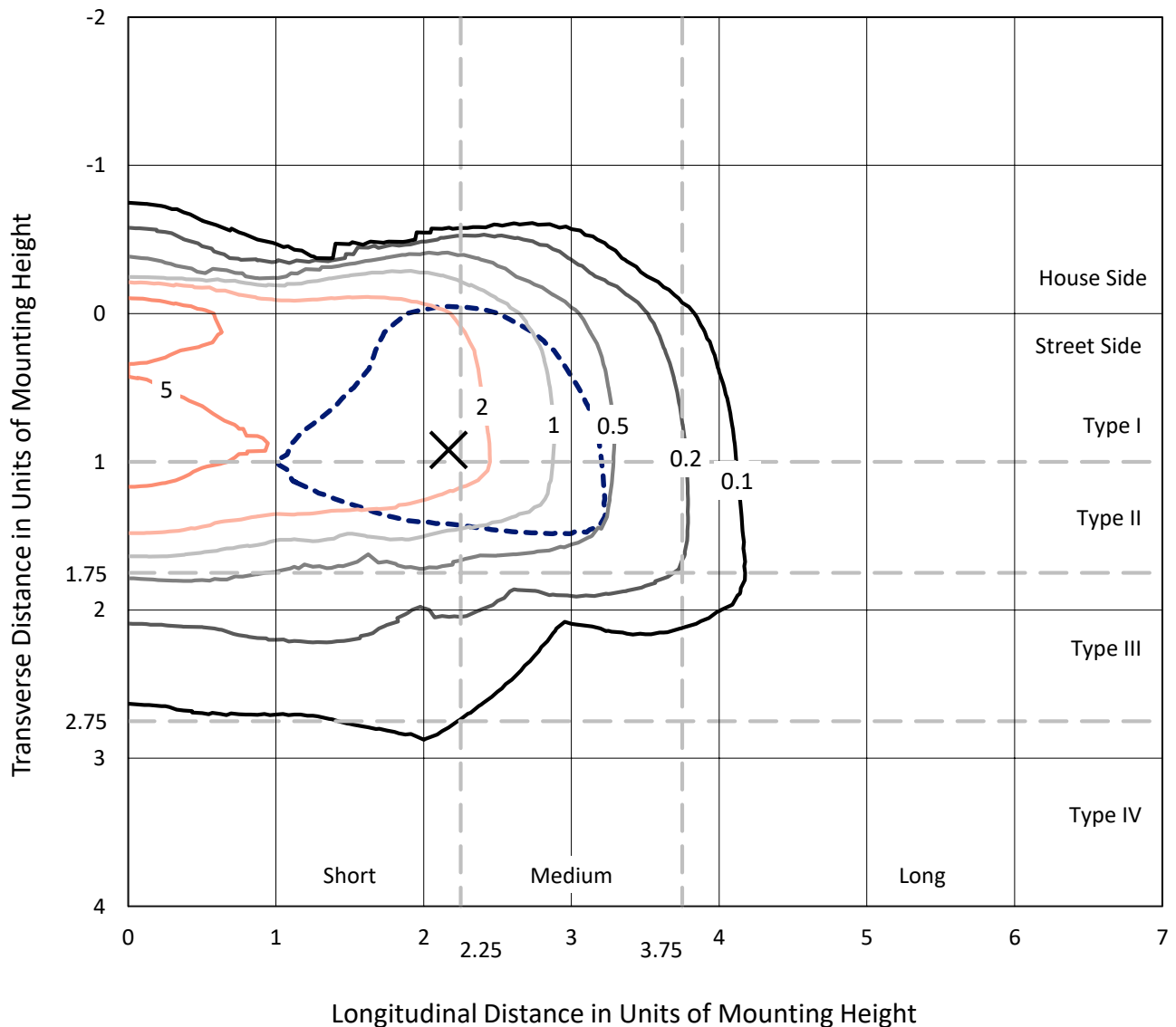


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

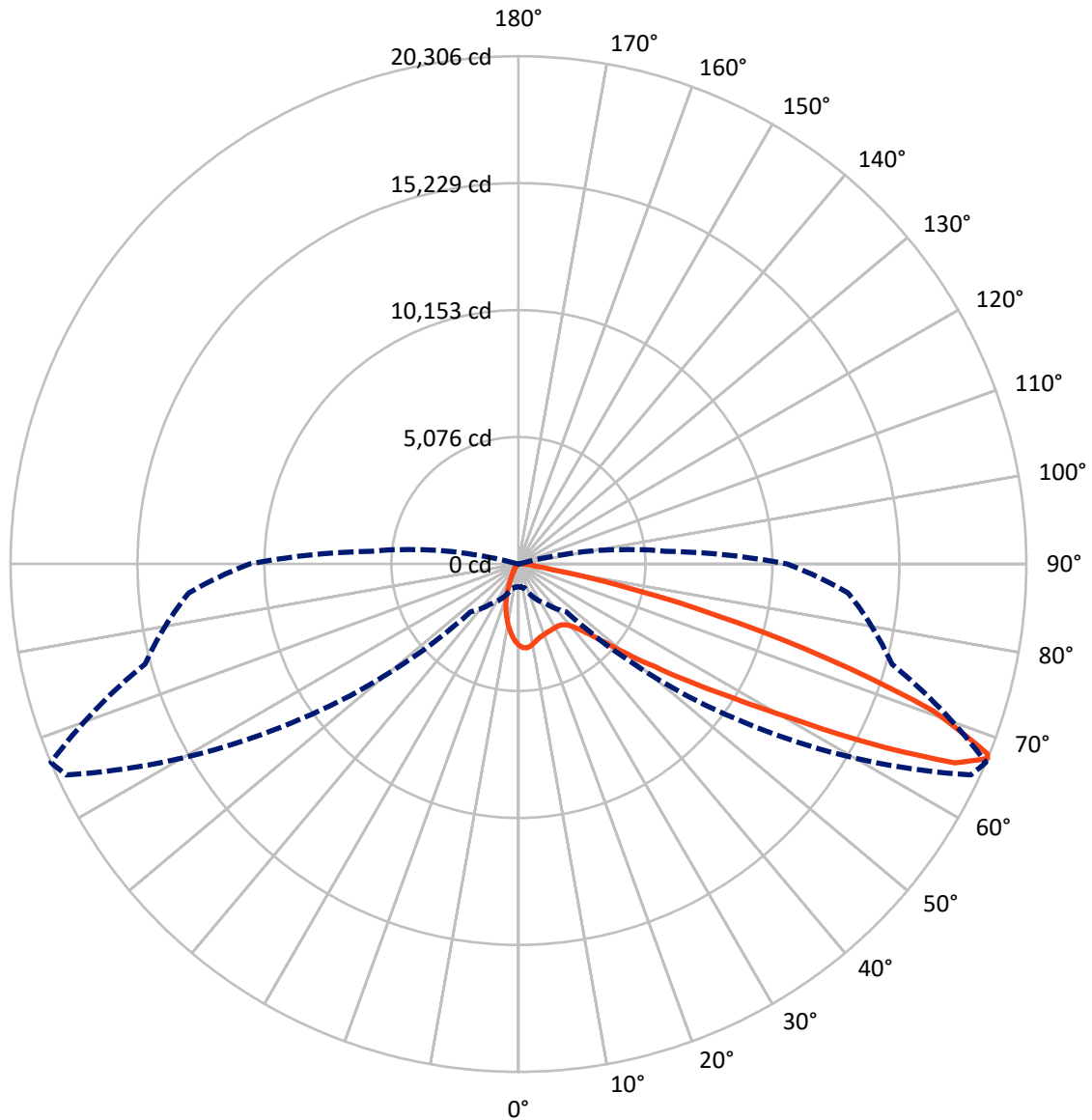


Based on 20 foot mounting height. Maximum calculated value = 8.1 fc
 Type II - Short - Semi-Cutoff

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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	1531.0	0.0	1531.0
	% Fixture	10.4	0.0	10.4
Street Side	Lumens	13214.6	0.0	13214.6
	% Fixture	89.6	0.0	89.6
Total	Lumens	14745.6	0.0	14745.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	264.6	1.8
10°-20°	563.2	3.8
20°-30°	818.8	5.6
30°-40°	1277.4	8.7
40°-50°	2262.8	15.3
50°-60°	3580.7	24.3
60°-70°	4101.2	27.8
70°-80°	1701.2	11.5
80°-90°	175.7	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°	14745.6	100.0
0°-180°	14745.6	100.0

Coefficient of Utilization



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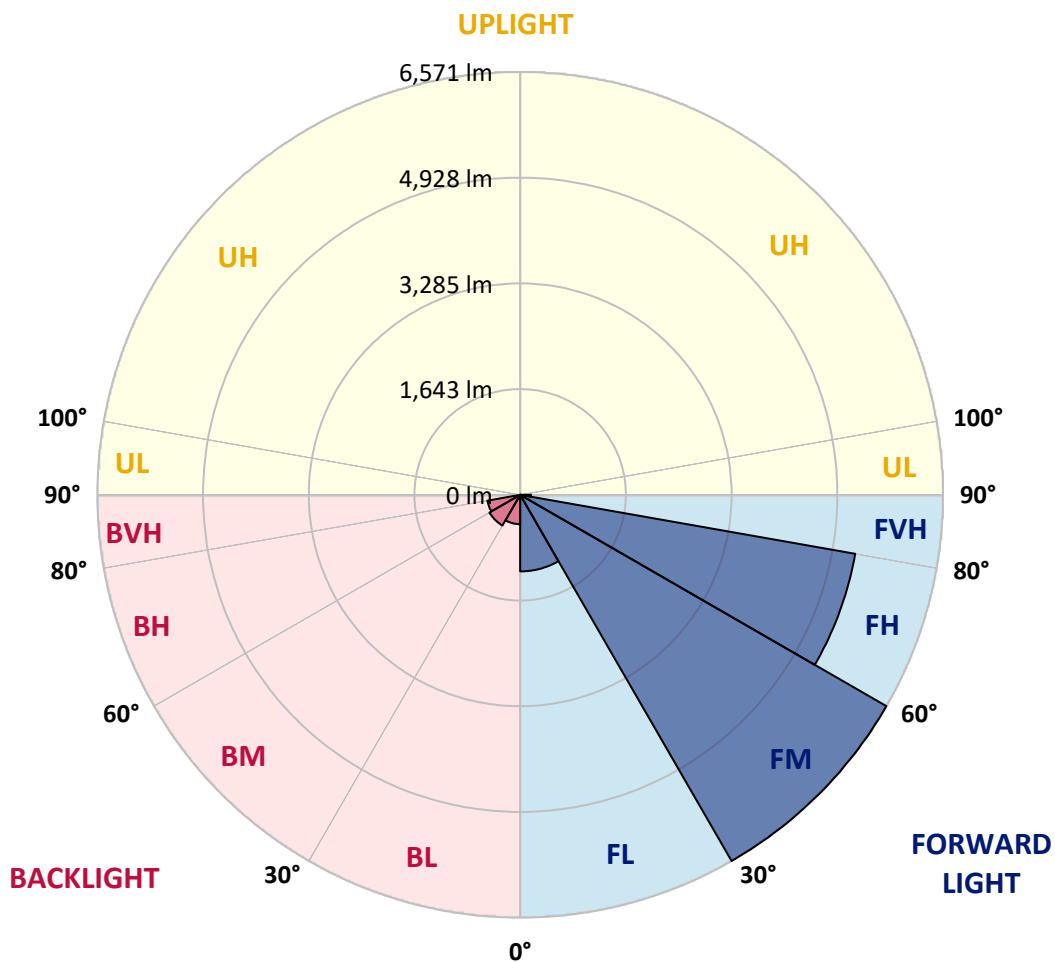
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1189.7	8.1			
FM	(30°-60°)	6570.7	44.6			
FH	(60°-80°)	5286.3	35.9			G3/7500
FVH	(80°-90°)	167.8	1.1			G2/225
BL	(0°-30°)	456.9	3.1	B1/500		
BM	(30°-60°)	550.2	3.7	B1/1000		
BH	(60°-80°)	516.0	3.5	B2/1000		G2/1000
BVH	(80°-90°)	7.9	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	3251.9	3251.9	3251.9	3251.9	3251.9	3251.9	3251.9	3251.9	3251.9	3251.9	3251.9
2.5°	3362.0	3368.9	3368.1	3373.2	3385.3	3386.1	3374.1	3350.9	3345.7	3315.6	3263.1
5°	3100.6	3120.4	3132.4	3181.4	3236.5	3302.7	3352.6	3370.6	3368.1	3346.6	3267.4
7.5°	2802.1	2821.9	2835.7	2893.3	2966.4	3079.9	3209.8	3316.5	3325.9	3349.1	3264.0
10°	2603.5	2606.9	2625.8	2680.9	2757.4	2873.5	3028.3	3215.0	3243.3	3328.5	3255.4
12.5°	2440.0	2442.6	2467.6	2526.9	2608.6	2725.6	2888.1	3104.0	3147.9	3302.7	3253.7
15°	2323.9	2333.4	2355.8	2417.7	2504.5	2620.7	2787.5	3022.3	3074.8	3293.2	3269.2
17.5°	2285.2	2295.5	2302.4	2347.1	2426.3	2539.8	2711.0	2969.0	3028.3	3298.4	3299.3
20°	2325.6	2333.4	2317.9	2329.1	2378.1	2479.6	2646.5	2923.4	2993.9	3304.4	3338.0
22.5°	2476.2	2479.6	2437.5	2388.4	2379.8	2435.7	2595.7	2887.3	2963.0	3320.8	3383.5
25°	2734.2	2728.2	2659.4	2553.6	2453.8	2428.0	2565.6	2864.9	2947.5	3338.0	3430.8
27.5°	3045.5	3054.1	2959.5	2805.6	2615.5	2479.6	2561.3	2855.5	2940.6	3350.0	3472.1
30°	3424.0	3436.0	3327.6	3134.1	2861.5	2606.9	2600.9	2853.7	2936.3	3342.3	3475.6
32.5°	3810.1	3824.8	3739.6	3540.1	3190.0	2820.2	2690.3	2872.7	2944.9	3315.6	3455.8
35°	4214.4	4235.0	4178.3	4007.1	3635.5	3128.1	2847.7	2930.3	2985.3	3313.0	3436.0
37.5°	4772.6	4791.5	4684.8	4503.4	4174.8	3540.9	3100.6	3038.7	3080.8	3354.3	3441.2
40°	5606.0	5603.4	5328.2	5050.4	4767.4	4065.6	3455.8	3234.7	3256.3	3479.0	3504.8
42.5°	6514.2	6509.9	6103.1	5680.8	5425.4	4711.5	3922.8	3573.6	3559.0	3708.7	3669.9
45°	7214.3	7213.5	6881.5	6405.9	6217.5	5452.9	4526.6	4044.9	4022.6	4081.9	3974.4
47.5°	7512.8	7517.9	7351.1	7016.5	7095.6	6455.7	5287.8	4727.8	4694.3	4670.2	4506.8
50°	7280.5	7290.9	7304.6	7239.3	7739.8	7803.5	6308.7	5690.3	5673.9	5566.4	5311.0
52.5°	6522.0	6574.4	6736.1	6943.4	7963.4	9097.0	7909.3	6885.8	6798.0	6683.7	6402.4
55°	5243.9	5301.5	5608.6	6111.7	7630.6	9946.8	10152.3	8427.0	8280.8	7939.4	7533.4
57.5°	3470.4	3559.9	4005.4	4645.3	6663.9	10083.5	12390.3	10566.0	10056.9	9122.0	8664.4
60°	1912.0	1998.0	2481.3	3061.0	4813.0	9407.5	13895.4	13351.0	12451.3	10443.9	10038.0
62.5°	1177.4	1223.9	1580.8	2120.1	2886.4	7425.0	14206.7	16850.6	15809.1	12146.0	11697.0
65°	937.5	957.3	1131.9	1733.1	2069.3	4416.5	13201.3	19518.6	19171.1	14206.7	13182.4
67°	910.0	917.7	1000.3	1487.9	1950.7	2707.5	11059.7	19952.9	20305.6	15453.9	13228.8
67.5°	916.0	924.6	1002.8	1420.0	1947.2	2488.2	10321.8	19781.8	20227.3	15552.8	13023.3
70°	883.3	910.0	1148.2	1419.1	1851.7	2067.6	6181.4	17139.6	17603.2	14451.0	11050.3
72.5°	313.1	314.8	496.3	1148.2	2013.4	2090.0	3104.0	12564.9	12908.0	11054.6	7966.9
75°	185.8	158.3	165.1	326.8	1924.0	2029.8	1790.7	8028.8	8157.0	6334.5	4034.6
77.5°	128.2	111.8	115.3	144.5	732.8	2001.4	1422.6	4186.9	4050.1	2221.6	859.2
80°	73.1	64.5	68.8	126.4	266.6	1867.2	1341.7	1697.8	1447.5	376.7	237.4
82.5°	38.7	32.7	39.6	104.1	185.8	1163.7	1344.3	820.5	650.2	127.3	161.7
85°	13.8	11.2	18.9	71.4	123.9	356.9	1246.3	689.8	541.8	61.9	123.0
87.5°	2.6	2.6	7.7	29.2	49.9	109.2	737.1	409.4	274.4	37.0	84.3
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°	3251.9	3251.9	3251.9	3251.9	3251.9	3251.9	3251.9	3251.9	3251.9	3251.9	3251.9
2.5°	3241.6	3204.6	3154.8	3093.7	3021.4	2957.8	2910.5	2861.5	2851.2	2834.0	2831.4
5°	3220.1	3156.5	3032.6	2890.7	2739.3	2602.6	2491.6	2392.7	2348.9	2311.0	2306.7
7.5°	3188.3	3092.8	2882.1	2653.3	2416.8	2201.8	2019.5	1890.4	1771.8	1715.0	1706.4
10°	3151.3	3014.6	2712.7	2395.3	2068.5	1764.9	1494.0	1266.9	1129.3	1047.6	1037.3
12.5°	3116.9	2938.0	2539.8	2127.8	1693.5	1287.5	939.2	722.5	578.0	519.5	512.6
15°	3100.6	2876.1	2378.1	1854.3	1301.3	819.7	513.5	397.4	350.1	336.3	335.4
17.5°	3098.9	2823.6	2219.9	1571.4	911.7	476.5	334.6	305.3	295.9	292.4	292.4
20°	3098.0	2773.7	2061.6	1278.1	578.8	317.4	278.7	271.8	264.9	260.6	260.6
22.5°	3107.5	2729.0	1896.5	978.8	364.7	257.2	245.1	238.2	229.6	223.6	222.8
25°	3116.9	2694.6	1727.9	696.7	264.0	223.6	211.6	202.1	190.1	182.3	181.5
27.5°	3118.6	2651.6	1547.3	466.2	221.0	195.2	179.8	165.1	151.4	143.6	142.8
30°	3092.8	2579.4	1346.9	314.8	195.2	169.4	148.8	133.3	120.4	114.4	114.4
32.5°	3042.1	2489.9	1126.7	237.4	173.7	145.4	123.0	108.4	99.8	97.2	96.3
35°	2996.5	2393.6	900.5	201.3	155.7	123.0	100.6	91.2	86.0	85.1	84.3
37.5°	2969.8	2316.2	688.1	182.3	138.5	103.2	85.1	78.3	75.7	74.0	74.8
40°	2990.5	2251.7	508.3	166.9	121.3	86.0	72.2	68.8	66.2	65.4	65.4
42.5°	3080.8	2240.5	377.6	153.1	104.9	71.4	62.8	60.2	58.5	57.6	58.5
45°	3318.2	2309.3	293.3	140.2	88.6	60.2	53.3	52.5	51.6	51.6	51.6
47.5°	3675.1	2451.2	244.3	125.6	74.0	51.6	46.4	45.6	44.7	45.6	45.6
50°	4279.7	2711.0	218.5	110.9	61.1	43.9	39.6	39.6	39.6	39.6	40.4
52.5°	5199.2	3221.8	201.3	96.3	49.9	37.0	33.5	33.5	34.4	34.4	35.3
55°	6223.5	3899.6	185.8	81.7	42.1	31.0	27.5	28.4	29.2	30.1	30.1
57.5°	7334.7	4650.4	172.9	67.1	36.1	24.9	23.2	24.1	24.9	26.7	26.7
60°	8675.6	5463.2	154.0	52.5	30.1	19.8	18.1	19.8	22.4	24.1	24.9
62.5°	10148.0	6249.3	129.9	41.3	24.9	15.5	14.6	18.1	21.5	23.2	24.1
65°	11154.3	6496.2	99.8	33.5	18.9	11.2	12.0	16.3	20.6	23.2	23.2
67°	10746.7	5889.8	81.7	28.4	15.5	8.6	11.2	16.3	20.6	22.4	23.2
67.5°	10463.7	5652.4	78.3	27.5	14.6	8.6	11.2	16.3	20.6	23.2	23.2
70°	8513.9	4246.2	65.4	20.6	12.0	7.7	9.5	15.5	19.8	22.4	22.4
72.5°	5915.6	2618.1	58.5	14.6	10.3	6.9	8.6	14.6	18.9	21.5	22.4
75°	2812.5	947.8	49.9	11.2	9.5	6.0	7.7	14.6	18.9	21.5	21.5
77.5°	573.7	220.2	40.4	9.5	7.7	6.0	6.9	13.8	18.1	20.6	20.6
80°	188.4	85.1	30.1	8.6	7.7	6.0	6.9	12.9	18.1	19.8	20.6
82.5°	135.9	43.0	19.8	8.6	7.7	6.0	6.0	12.9	17.2	19.8	19.8
85°	104.1	30.1	12.9	8.6	7.7	6.0	6.0	12.0	16.3	18.9	18.9
87.5°	68.8	12.0	10.3	8.6	7.7	6.0	6.0	12.0	15.5	18.1	18.9
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)