

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: P299995

Luminaire Tested: **GLNA-AF-04-LED-E1-SL3-7050-600-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299995  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194479)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GLNA-AF-04-LED-E1-SL3-7050-600-HSS  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(4) 70 CRI, 5000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III  
w/Spill Control WITH HOUSESIDE SHEILD OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12275.2 lumens  
Efficiency: N/A  
Efficacy: 95.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 129  
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

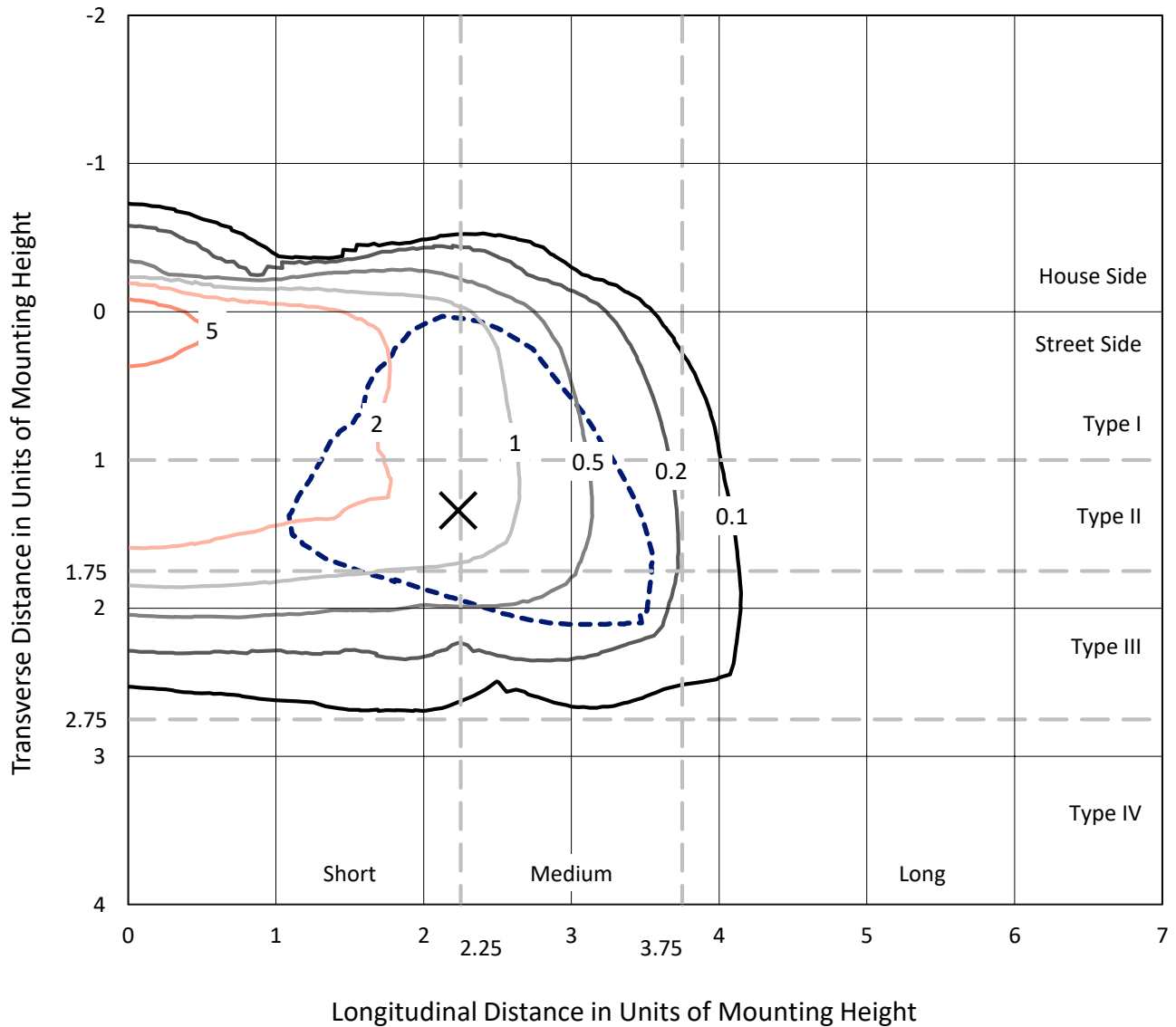


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

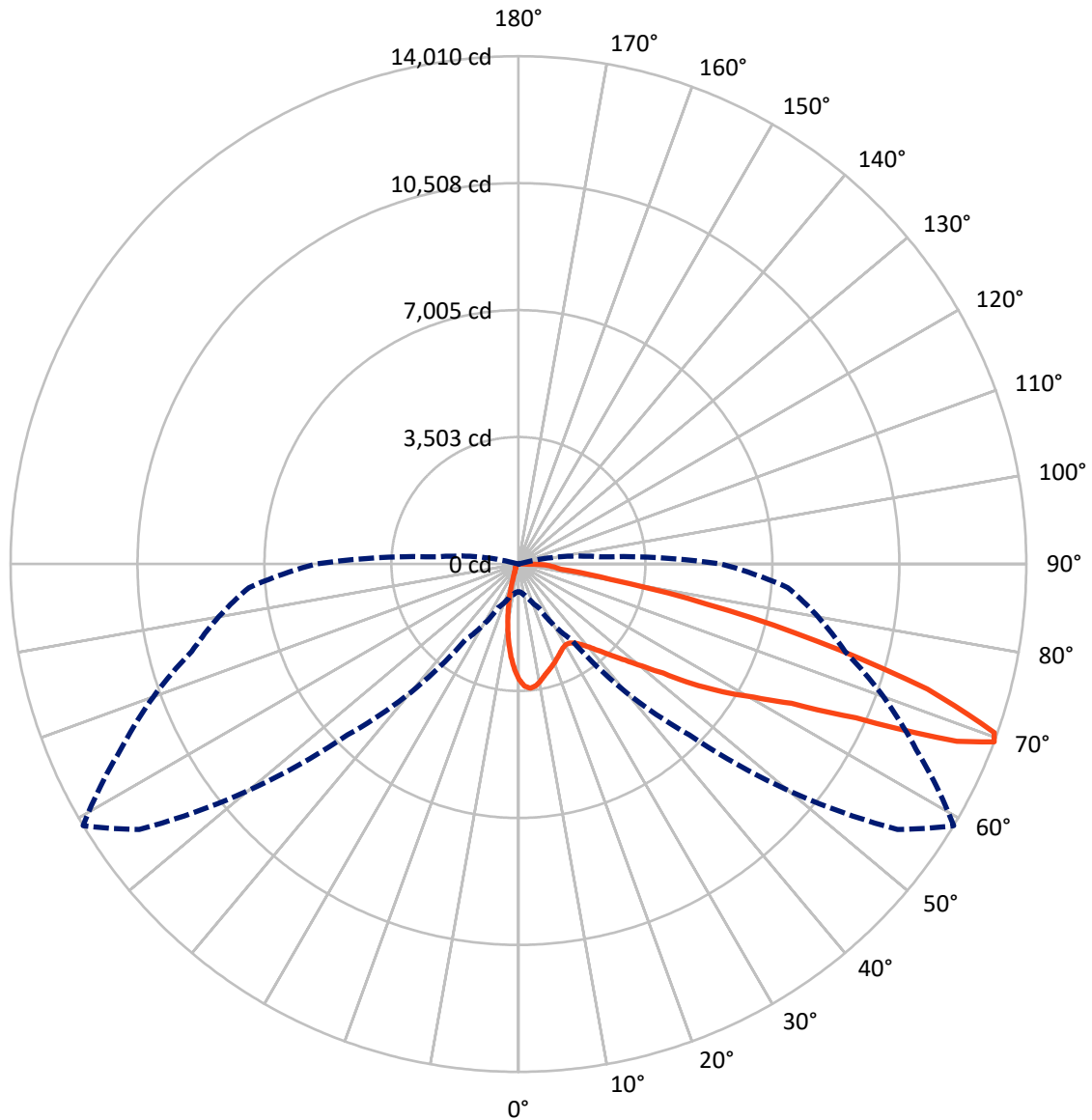


Based on 20 foot mounting height. Maximum calculated value = 8 fc  
 Type III - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	999.6	0.0	999.6
	% Fixture	8.1	0.0	8.1
<b>Street Side</b>	Lumens	11275.6	0.0	11275.6
	% Fixture	91.9	0.0	91.9
<b>Total</b>	Lumens	12275.2	0.0	12275.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	259.3	2.1
10°-20°	535.9	4.4
20°-30°	721.1	5.9
30°-40°	1047.0	8.5
40°-50°	1743.3	14.2
50°-60°	2719.5	22.2
60°-70°	3365.2	27.4
70°-80°	1705.4	13.9
80°-90°	178.4	1.5
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°	12275.2	100.0
0°-180°	12275.2	100.0



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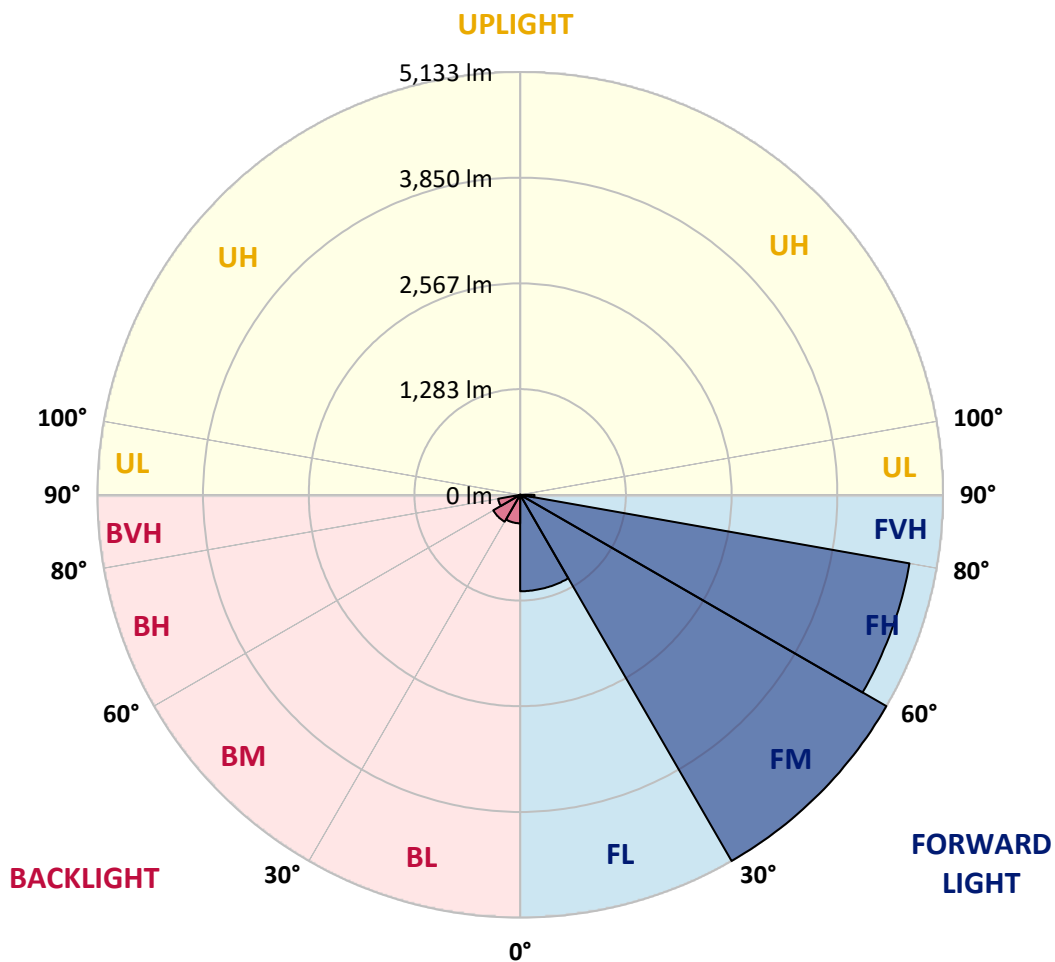
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1170.3	9.5			
FM	(30°-60°)	5133.1	41.8			
FH	(60°-80°)	4799.2	39.1			G2/5000
FVH	(80°-90°)	173.0	1.4			G2/225
BL	(0°-30°)	346.0	2.8	B1/500		
BM	(30°-60°)	376.7	3.1	B1/1000		
BH	(60°-80°)	271.5	2.2	B1/500		G1/500
BVH	(80°-90°)	5.5	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 III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	3195.0	3195.0	3195.0	3195.0	3195.0	3195.0	3195.0	3195.0	3195.0	3195.0	3195.0
2.5°	3501.8	3500.6	3485.2	3478.3	3465.7	3439.4	3398.4	3377.0	3342.3	3281.8	3200.7
5°	3469.9	3486.7	3495.5	3496.4	3505.4	3495.5	3458.7	3440.9	3393.0	3295.7	3150.0
7.5°	3253.4	3259.5	3285.4	3307.4	3350.5	3391.5	3404.7	3397.0	3368.6	3264.6	3070.8
10°	3021.6	3027.7	3058.4	3087.4	3145.8	3208.9	3275.5	3289.6	3301.3	3220.0	2994.5
12.5°	2821.6	2827.9	2859.2	2897.2	2965.3	3043.1	3146.5	3169.4	3221.5	3177.8	2933.4
15°	2649.4	2652.2	2682.8	2729.9	2811.3	2911.1	3028.6	3065.3	3145.2	3147.9	2880.0
17.5°	2503.0	2509.9	2528.8	2573.8	2662.7	2786.2	2923.1	2975.8	3069.3	3122.9	2827.9
20°	2413.4	2420.4	2419.7	2444.7	2524.6	2656.4	2817.6	2880.6	2994.5	3097.3	2781.4
22.5°	2396.2	2396.2	2378.1	2374.5	2421.8	2532.2	2707.9	2784.8	2927.0	3086.1	2748.8
25°	2458.0	2455.0	2410.1	2373.3	2375.4	2441.2	2601.5	2693.1	2870.3	3093.7	2731.4
27.5°	2588.5	2584.9	2528.0	2458.0	2401.7	2401.0	2521.0	2619.6	2825.1	3129.8	2738.3
30°	2768.8	2767.5	2705.8	2617.5	2515.6	2421.8	2493.3	2582.8	2795.9	3195.0	2754.3
32.5°	2965.9	2963.8	2917.4	2824.5	2695.2	2515.6	2522.5	2597.5	2804.3	3281.8	2793.2
35°	3175.0	3171.5	3151.3	3070.2	2927.9	2688.3	2618.3	2676.5	2857.1	3411.7	2869.5
37.5°	3401.2	3404.7	3419.2	3341.5	3192.3	2930.6	2778.7	2818.2	2963.2	3588.0	2993.7
40°	3735.1	3734.5	3739.3	3637.2	3493.6	3226.9	3002.7	3015.3	3141.0	3821.9	3182.6
42.5°	4341.0	4298.7	4170.3	3962.1	3817.7	3565.7	3285.4	3272.1	3358.3	4111.3	3447.0
45°	5155.3	5065.0	4731.9	4332.8	4148.1	3947.6	3633.0	3590.7	3645.6	4459.1	3773.3
47.5°	5855.6	5761.8	5290.7	4718.6	4498.6	4309.9	4040.5	3964.2	3982.2	4848.5	4186.9
50°	6093.7	6047.9	5636.4	5054.7	4838.0	4765.9	4513.3	4420.2	4394.6	5298.9	4666.5
52.5°	6011.1	6007.7	5733.5	5272.6	5149.0	5237.9	5108.0	5000.4	4906.1	5773.8	5154.5
55°	5878.5	5895.9	5773.0	5463.4	5459.2	5669.0	5921.6	5832.0	5558.6	6289.5	5575.2
57.5°	5512.8	5587.0	5750.9	5824.5	5995.1	6209.7	6599.1	6651.9	6328.4	6684.4	5924.3
60°	4473.0	4636.0	5171.9	5876.4	6685.9	7220.3	7416.8	7461.8	6959.9	7012.7	6395.7
62.5°	3175.0	3341.5	4021.1	5212.9	6696.2	8548.1	8634.9	8457.9	7655.6	7499.4	7208.6
65°	1685.2	1813.9	2369.1	3762.8	5805.8	8856.4	10765.2	10237.7	8882.7	8456.5	8258.7
67.5°	862.1	900.9	1121.8	1841.6	3991.3	7866.6	12674.7	13046.0	10997.7	9406.2	8208.1
69°	762.9	785.8	932.3	1331.3	2555.7	6663.0	12767.8	14010.2	12105.0	9326.9	7459.1
70°	738.5	758.7	891.9	1205.0	1997.7	5587.6	12411.6	13925.6	12388.1	9025.8	6899.6
72.5°	626.9	644.1	794.2	1064.9	1623.7	2773.6	10082.2	11800.2	11116.4	7518.7	4994.1
75°	419.3	476.2	762.2	998.2	1510.4	1575.7	6647.0	8527.3	7921.4	5071.3	2601.5
77.5°	100.7	108.2	215.2	794.2	1381.4	1386.8	3418.6	5301.0	4323.7	1807.5	614.9
80°	54.2	52.1	60.3	157.6	1286.2	1301.5	1539.0	2573.1	1543.8	299.9	202.6
82.5°	38.2	36.1	38.9	66.0	404.8	1185.5	1113.4	1164.7	639.9	115.2	91.0
85°	13.9	13.2	21.4	59.7	126.9	681.5	1143.9	960.6	518.5	52.7	66.6
87.5°	4.8	4.2	8.4	32.6	38.9	290.2	705.9	726.1	204.1	31.9	31.3
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°	3195.0	3195.0	3195.0	3195.0	3195.0	3195.0	3195.0	3195.0	3195.0	3195.0	3195.0
2.5°	3166.6	3123.5	3044.5	2963.2	2888.2	2798.0	2752.8	2708.5	2689.8	2682.8	2650.3
5°	3075.0	3002.1	2834.2	2665.4	2509.9	2344.7	2235.8	2148.4	2096.9	2071.9	2032.4
7.5°	2957.7	2838.4	2583.4	2323.3	2081.0	1842.2	1665.3	1529.1	1435.4	1390.4	1349.4
10°	2843.8	2684.9	2322.6	1967.9	1638.8	1322.3	1077.9	900.9	787.9	735.8	702.6
12.5°	2741.9	2535.7	2070.7	1621.6	1208.4	837.9	589.3	448.5	378.3	353.9	342.1
15°	2650.9	2398.3	1832.6	1292.5	818.3	478.9	322.2	274.3	263.1	263.1	261.6
17.5°	2564.7	2263.6	1602.6	983.5	513.6	293.0	245.0	238.7	238.7	241.5	241.5
20°	2482.1	2135.2	1380.5	705.9	323.4	232.4	221.5	220.0	221.5	224.9	224.9
22.5°	2411.3	2018.5	1173.1	484.4	240.2	209.5	204.1	202.0	202.6	204.7	206.2
25°	2358.6	1920.0	977.4	328.3	206.8	190.8	184.7	181.2	178.4	178.4	179.7
27.5°	2325.4	1836.8	787.9	238.7	186.0	173.6	163.7	158.2	151.9	148.6	149.8
30°	2301.0	1757.5	610.1	195.0	166.7	154.0	141.6	132.6	123.6	119.4	120.8
32.5°	2292.0	1693.6	456.0	172.1	149.2	135.3	120.0	108.2	98.6	95.0	95.8
35°	2316.3	1643.0	333.9	155.5	135.3	117.9	100.7	87.4	79.9	77.8	78.4
37.5°	2380.2	1615.9	249.9	141.6	122.9	103.4	84.1	71.5	66.6	66.6	67.2
40°	2500.9	1615.3	200.7	132.0	111.8	89.5	69.4	60.3	57.6	59.1	59.7
42.5°	2677.2	1652.0	174.8	122.9	102.1	76.3	57.6	51.3	50.6	52.1	52.7
45°	2918.0	1719.3	161.0	115.2	91.6	63.9	48.5	44.3	44.3	46.4	47.3
47.5°	3213.1	1817.8	149.2	107.6	81.1	53.4	41.6	38.9	39.5	41.6	42.2
50°	3568.4	1942.3	137.4	99.2	73.6	44.3	36.1	34.0	34.7	37.4	38.2
52.5°	3973.2	2109.5	127.8	91.6	63.9	36.8	30.5	29.2	30.5	33.4	34.0
55°	4320.2	2259.4	116.0	85.3	51.3	30.5	25.0	25.0	26.5	29.8	30.5
57.5°	4654.1	2416.2	105.5	73.6	40.3	24.4	20.8	21.4	23.5	27.1	27.7
60°	5144.2	2682.0	93.1	61.8	30.5	19.3	17.4	18.1	20.8	24.4	25.0
62.5°	5976.4	3086.8	80.5	51.3	23.5	15.3	13.9	15.3	18.7	22.9	23.5
65°	6727.5	3251.3	66.0	43.1	18.1	11.8	11.8	13.9	18.1	22.3	22.9
67.5°	6308.9	2736.9	51.3	34.0	13.9	9.0	9.7	13.2	17.4	22.3	22.9
69°	5579.4	2237.9	43.7	27.1	11.8	8.4	9.0	13.2	17.4	21.4	22.3
70°	5011.0	1889.5	38.9	22.9	10.5	8.4	9.0	12.4	17.4	21.4	22.3
72.5°	3356.2	1020.3	31.3	16.6	9.7	7.6	7.6	12.4	16.6	20.8	21.4
75°	1442.3	281.8	25.0	11.8	8.4	6.9	6.9	11.8	16.0	20.2	21.4
77.5°	263.7	71.5	20.2	10.5	8.4	6.9	6.3	11.1	15.3	19.3	20.2
80°	104.9	35.3	16.0	9.0	7.6	6.3	5.5	10.5	14.5	18.7	19.3
82.5°	63.3	20.2	13.2	8.4	7.6	5.5	4.8	9.0	13.9	18.1	18.7
85°	51.3	13.9	10.5	8.4	6.9	5.5	4.2	8.4	12.4	17.4	18.1
87.5°	25.0	9.7	9.7	7.6	6.9	5.5	4.2	7.6	11.8	16.6	17.4
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)