

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-05-LED-E1-SL3-7027-600-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-05-LED-E1-SL3-7027-600-HSS  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(5) 70 CRI, 2700K 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: 13214.3 lumens  
Efficiency: N/A  
Efficacy: 81.6 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type III - Short - Non-Cutoff  
BUG Rating: B1 - 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

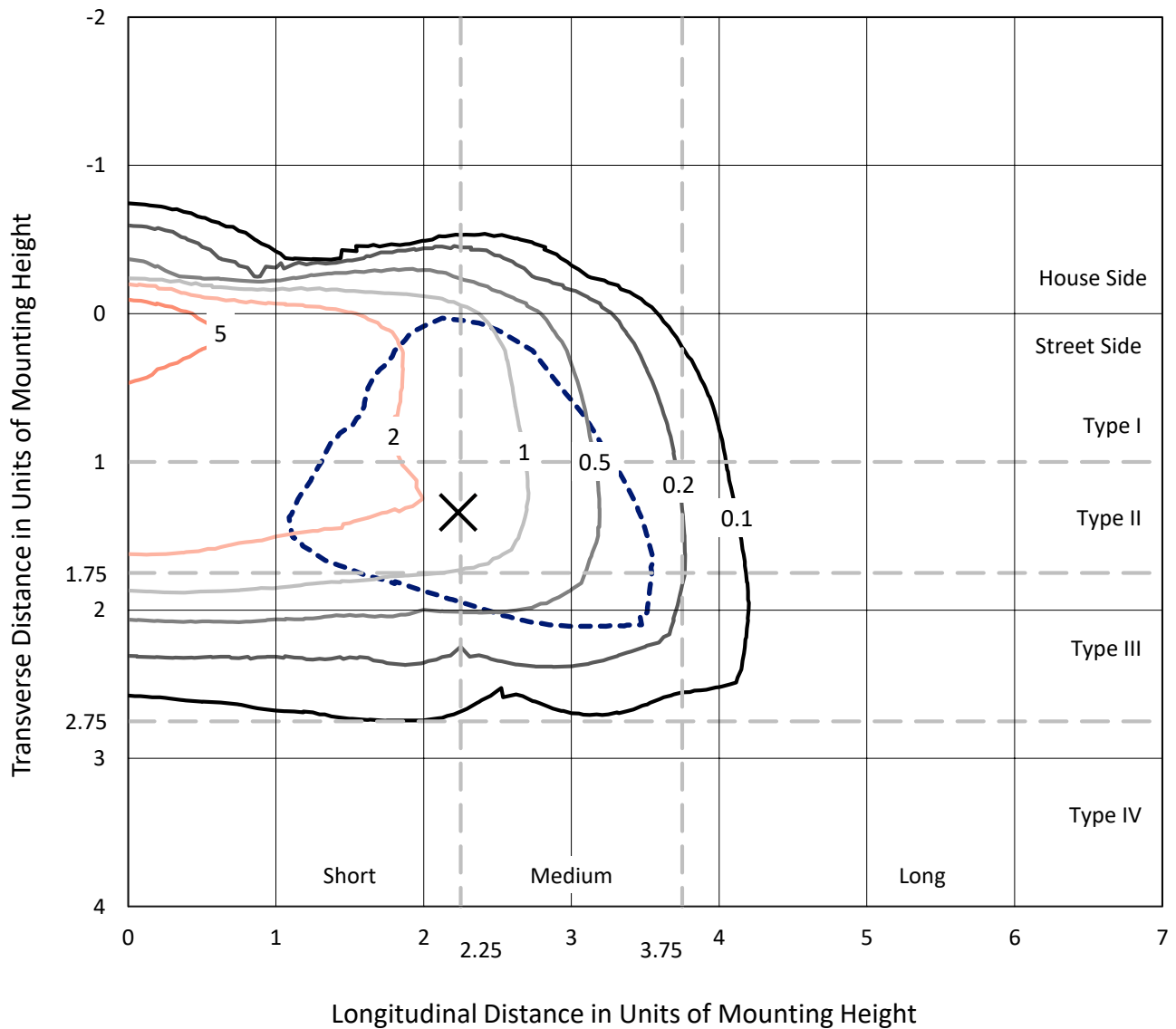


REPORT NUMBER: P299995

CATALOG NUMBER: GLNA-AF-05-LED-E1-SL3-7027-600-HSS

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

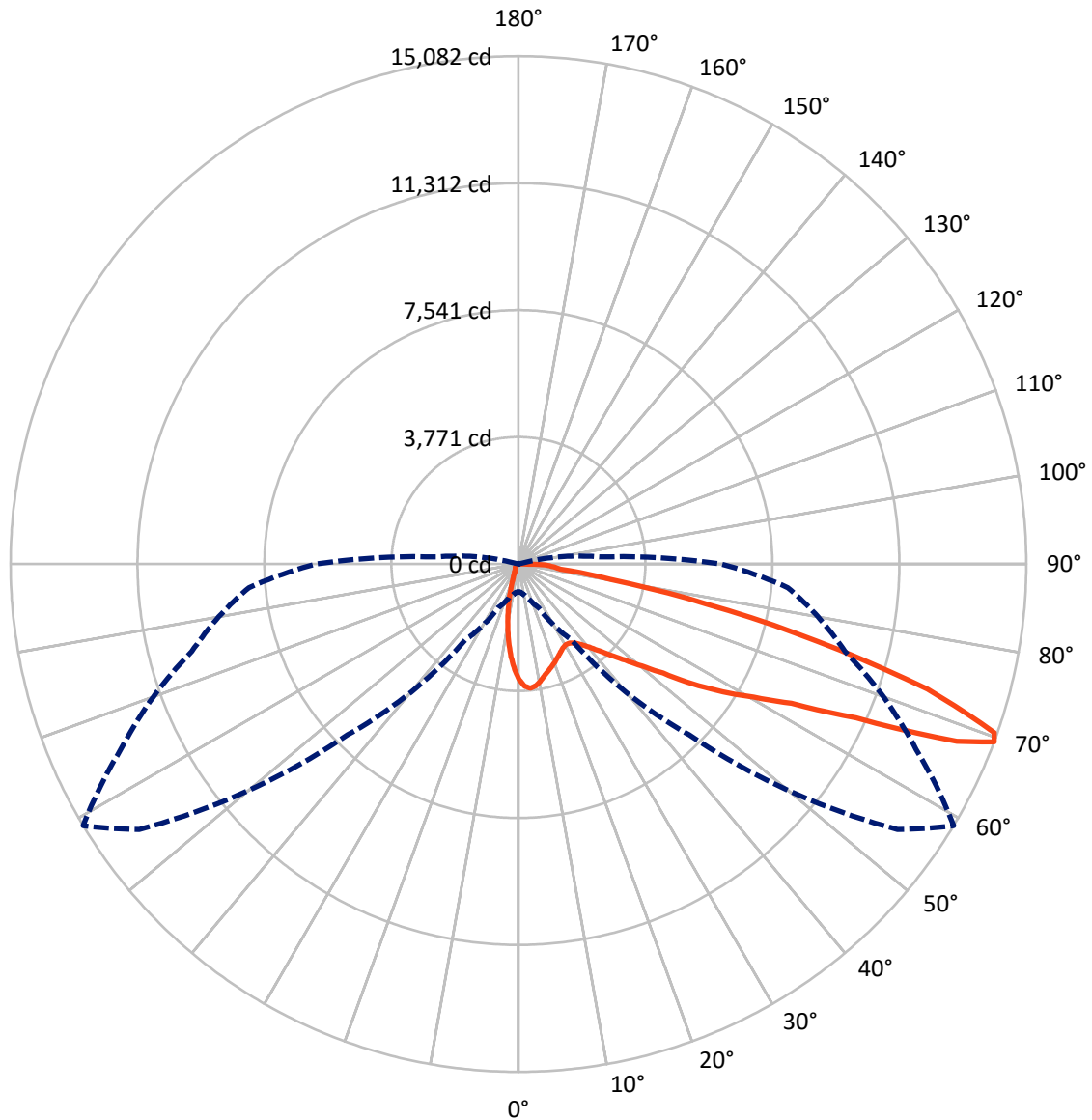


Based on 20 foot mounting height. Maximum calculated value = 8.6 fc  
 Type III - Short - Non-Cutoff

REPORT NUMBER: P299995

CATALOG NUMBER: GLNA-AF-05-LED-E1-SL3-7027-600-HSS

### 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	1076.1	0.0	1076.1
	% Fixture	8.1	0.0	8.1
<b>Street Side</b>	Lumens	12138.2	0.0	12138.2
	% Fixture	91.9	0.0	91.9
<b>Total</b>	Lumens	13214.3	0.0	13214.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	279.2	2.1
10°-20°	576.9	4.4
20°-30°	776.3	5.9
30°-40°	1127.1	8.5
40°-50°	1876.7	14.2
50°-60°	2927.6	22.2
60°-70°	3622.7	27.4
70°-80°	1835.9	13.9
80°-90°	192.1	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°	13214.3	100.0
0°-180°	13214.3	100.0



REPORT NUMBER: P299995

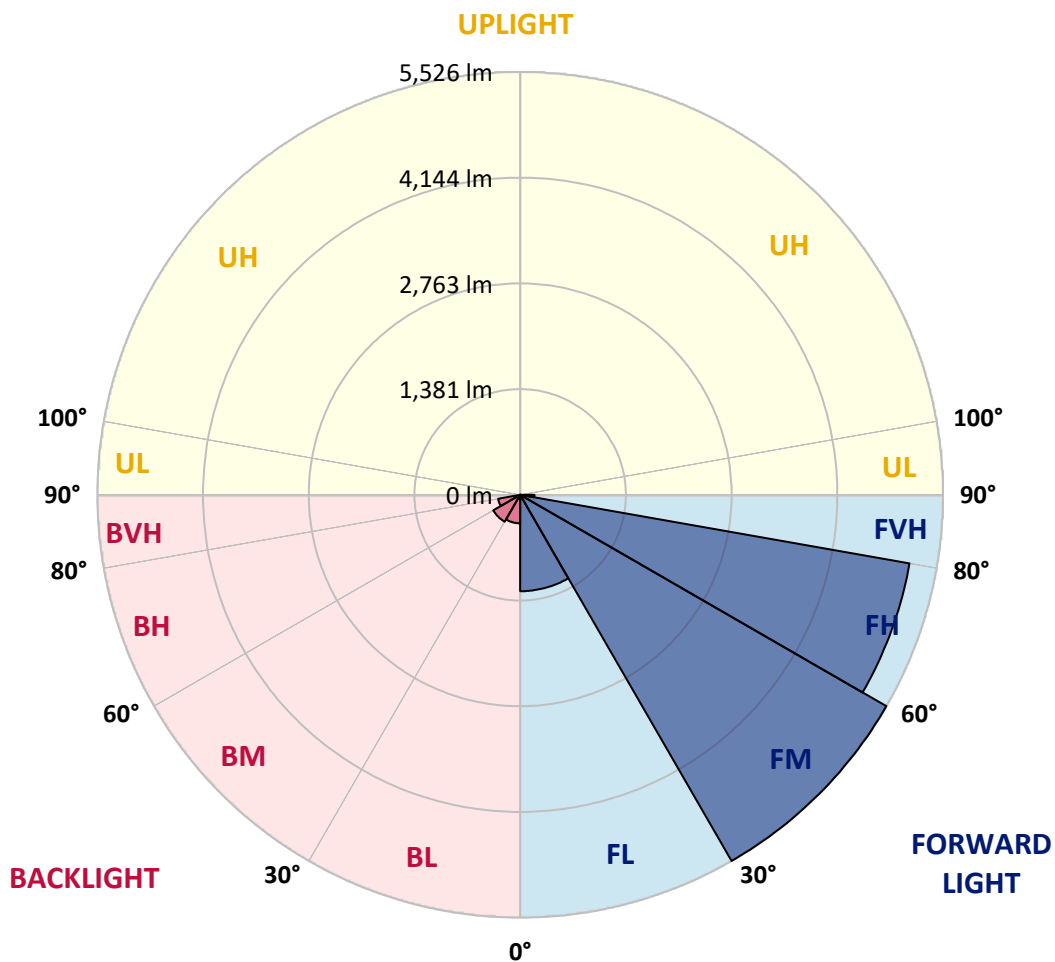
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1259.8	9.5			
FM	(30°-60°)	5525.9	41.8			
FH	(60°-80°)	5166.3	39.1			G3/7500
FVH	(80°-90°)	186.2	1.4			G2/225
BL	(0°-30°)	372.5	2.8	B1/500		
BM	(30°-60°)	405.5	3.1	B1/1000		
BH	(60°-80°)	292.3	2.2	B1/500		G1/500
BVH	(80°-90°)	5.9	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-G3**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	3439.4	3439.4	3439.4	3439.4	3439.4	3439.4	3439.4	3439.4	3439.4	3439.4	3439.4
2.5°	3769.7	3768.4	3751.9	3744.4	3730.8	3702.5	3658.4	3635.4	3598.0	3532.9	3445.5
5°	3735.4	3753.5	3763.0	3763.9	3773.6	3763.0	3723.4	3704.1	3652.6	3547.8	3391.0
7.5°	3502.3	3508.9	3536.7	3560.5	3606.9	3651.0	3665.2	3656.9	3626.3	3514.3	3305.7
10°	3252.8	3259.4	3292.4	3323.6	3386.5	3454.4	3526.1	3541.2	3553.9	3466.4	3223.6
12.5°	3037.4	3044.2	3077.9	3118.9	3192.2	3275.9	3387.2	3411.8	3467.9	3420.9	3157.8
15°	2852.1	2855.1	2888.1	2938.8	3026.3	3133.8	3260.3	3299.9	3385.8	3388.8	3100.3
17.5°	2694.5	2701.9	2722.3	2770.7	2866.4	2999.4	3146.7	3203.5	3304.2	3361.8	3044.2
20°	2598.1	2605.5	2604.9	2631.8	2717.8	2859.6	3033.1	3101.0	3223.6	3334.2	2994.2
22.5°	2579.5	2579.5	2560.1	2556.2	2607.1	2725.9	2915.0	2997.8	3151.0	3322.3	2959.1
25°	2646.0	2642.9	2594.5	2554.9	2557.1	2627.9	2800.6	2899.2	3089.9	3330.4	2940.4
27.5°	2786.5	2782.7	2721.4	2646.0	2585.4	2584.7	2713.9	2820.0	3041.3	3369.3	2947.8
30°	2980.6	2979.3	2912.8	2817.7	2708.0	2607.1	2684.0	2780.4	3009.8	3439.4	2965.0
32.5°	3192.8	3190.6	3140.6	3040.6	2901.5	2708.0	2715.5	2796.3	3018.9	3532.9	3006.9
35°	3417.9	3414.1	3392.4	3305.1	3151.9	2894.0	2818.7	2881.3	3075.7	3672.7	3089.0
37.5°	3661.4	3665.2	3680.8	3597.1	3436.5	3154.8	2991.3	3033.8	3189.9	3862.5	3222.7
40°	4020.9	4020.2	4025.4	3915.4	3760.9	3473.8	3232.4	3246.0	3381.3	4114.3	3426.1
42.5°	4673.1	4627.6	4489.4	4265.2	4109.8	3838.5	3536.7	3522.5	3615.2	4425.8	3710.7
45°	5549.8	5452.5	5093.9	4664.3	4465.4	4249.6	3910.9	3865.4	3924.5	4800.2	4062.0
47.5°	6303.6	6202.7	5695.4	5079.6	4842.8	4639.6	4349.6	4267.5	4286.9	5219.5	4507.3
50°	6559.9	6510.6	6067.6	5441.4	5208.1	5130.5	4858.6	4758.4	4730.8	5704.3	5023.5
52.5°	6471.0	6467.4	6172.1	5676.0	5543.0	5638.7	5498.8	5383.0	5281.4	6215.6	5548.8
55°	6328.2	6347.0	6214.7	5881.4	5876.9	6102.7	6374.6	6278.2	5983.9	6770.7	6001.8
57.5°	5934.6	6014.4	6190.9	6270.1	6453.8	6684.8	7104.0	7160.8	6812.6	7195.8	6377.5
60°	4815.2	4990.7	5567.6	6326.0	7197.4	7772.7	7984.3	8032.7	7492.4	7549.2	6885.0
62.5°	3417.9	3597.1	4328.8	5611.7	7208.5	9202.1	9295.5	9105.0	8241.3	8073.2	7760.1
65°	1814.2	1952.6	2550.3	4050.7	6249.9	9534.0	11588.9	11021.0	9562.2	9103.4	8890.6
67.5°	928.0	969.9	1207.6	1982.5	4296.6	8468.4	13644.4	14044.2	11839.1	10125.8	8836.0
69°	821.2	845.9	1003.6	1433.2	2751.2	7172.8	13744.6	15082.1	13031.1	10040.5	8029.7
70°	795.0	816.7	960.1	1297.2	2150.6	6015.1	13361.2	14991.0	13335.8	9716.3	7427.5
72.5°	674.9	693.4	854.9	1146.3	1747.9	2985.8	10853.6	12703.1	11966.9	8094.0	5376.2
75°	451.3	512.6	820.6	1074.6	1625.9	1696.3	7155.6	9179.7	8527.4	5459.3	2800.6
77.5°	108.4	116.5	231.7	854.9	1487.0	1492.9	3680.2	5706.5	4654.5	1945.8	662.0
80°	58.4	56.1	64.9	169.7	1384.6	1401.1	1656.7	2770.0	1661.9	322.8	218.1
82.5°	41.2	38.9	41.9	71.0	435.7	1276.2	1198.6	1253.8	688.9	124.0	98.0
85°	14.9	14.3	23.1	64.3	136.6	733.7	1231.4	1034.1	558.1	56.8	71.7
87.5°	5.2	4.5	9.0	35.1	41.9	312.4	759.9	781.6	219.7	34.4	33.7
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°	3439.4	3439.4	3439.4	3439.4	3439.4	3439.4	3439.4	3439.4	3439.4	3439.4	3439.4
2.5°	3408.9	3362.5	3277.5	3189.9	3109.1	3012.1	2963.4	2915.7	2895.6	2888.1	2853.0
5°	3310.3	3231.8	3051.0	2869.3	2701.9	2524.1	2406.9	2312.8	2257.4	2230.4	2187.9
7.5°	3184.0	3055.5	2781.1	2501.0	2240.2	1983.2	1792.7	1646.1	1545.2	1496.8	1452.7
10°	3061.4	2890.4	2500.3	2118.5	1764.2	1423.5	1160.4	969.9	848.2	792.0	756.3
12.5°	2951.7	2729.7	2229.1	1745.6	1300.8	902.0	634.4	482.8	407.2	381.0	368.3
15°	2853.7	2581.8	1972.8	1391.3	881.0	515.6	346.8	295.2	283.2	283.2	281.7
17.5°	2761.0	2436.8	1725.3	1058.8	552.9	315.4	263.8	257.0	257.0	259.9	259.9
20°	2672.1	2298.5	1486.1	759.9	348.2	250.2	238.5	236.9	238.5	242.1	242.1
22.5°	2595.8	2173.0	1262.8	521.5	258.6	225.6	219.7	217.4	218.1	220.4	221.9
25°	2539.0	2066.9	1052.2	353.4	222.6	205.4	198.9	195.0	192.1	192.1	193.4
27.5°	2503.3	1977.3	848.2	257.0	200.2	186.9	176.2	170.4	163.6	159.9	161.3
30°	2477.0	1892.0	656.8	209.9	179.4	165.8	152.5	142.8	133.0	128.5	130.1
32.5°	2467.3	1823.2	490.9	185.3	160.6	145.7	129.2	116.5	106.1	102.3	103.2
35°	2493.6	1768.7	359.5	167.4	145.7	126.9	108.4	94.1	86.0	83.7	84.4
37.5°	2562.3	1739.5	269.0	152.5	132.3	111.3	90.5	76.9	71.7	71.7	72.4
40°	2692.2	1738.8	216.1	142.1	120.4	96.4	74.7	64.9	62.0	63.6	64.3
42.5°	2882.0	1778.4	188.2	132.3	109.9	82.1	62.0	55.2	54.5	56.1	56.8
45°	3141.3	1850.8	173.3	124.0	98.6	68.8	52.3	47.7	47.7	50.0	50.9
47.5°	3458.9	1956.9	160.6	115.8	87.3	57.5	44.8	41.9	42.5	44.8	45.5
50°	3841.5	2090.9	148.0	106.8	79.2	47.7	38.9	36.6	37.3	40.3	41.2
52.5°	4277.2	2270.9	137.6	98.6	68.8	39.6	32.8	31.4	32.8	36.0	36.6
55°	4650.7	2432.2	124.9	91.9	55.2	32.8	26.9	26.9	28.5	32.1	32.8
57.5°	5010.2	2601.0	113.6	79.2	43.4	26.2	22.4	23.1	25.3	29.2	29.9
60°	5537.8	2887.2	100.2	66.5	32.8	20.8	18.8	19.5	22.4	26.2	26.9
62.5°	6433.6	3322.9	86.6	55.2	25.3	16.5	14.9	16.5	20.1	24.7	25.3
65°	7242.2	3500.1	71.0	46.4	19.5	12.7	12.7	14.9	19.5	24.0	24.7
67.5°	6791.6	2946.2	55.2	36.6	14.9	9.7	10.4	14.3	18.8	24.0	24.7
69°	6006.3	2409.2	47.1	29.2	12.7	9.0	9.7	14.3	18.8	23.1	24.0
70°	5394.3	2034.1	41.9	24.7	11.3	9.0	9.7	13.3	18.8	23.1	24.0
72.5°	3613.0	1098.4	33.7	17.9	10.4	8.1	8.1	13.3	17.9	22.4	23.1
75°	1552.6	303.4	26.9	12.7	9.0	7.5	7.5	12.7	17.2	21.7	23.1
77.5°	283.9	76.9	21.7	11.3	9.0	7.5	6.8	12.0	16.5	20.8	21.7
80°	112.9	38.0	17.2	9.7	8.1	6.8	5.9	11.3	15.6	20.1	20.8
82.5°	68.1	21.7	14.3	9.0	8.1	5.9	5.2	9.7	14.9	19.5	20.1
85°	55.2	14.9	11.3	9.0	7.5	5.9	4.5	9.0	13.3	18.8	19.5
87.5°	26.9	10.4	10.4	8.1	7.5	5.9	4.5	8.1	12.7	17.9	18.8
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)