

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: P299599

Luminaire Tested: **GLNA-AF-05-LED-E1-SL2-7027-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299599  
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-SL2-7027-HSS  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(5) 70 CRI, 2700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II  
w/Spill Control WITH HOUSESIDE SHEILD OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

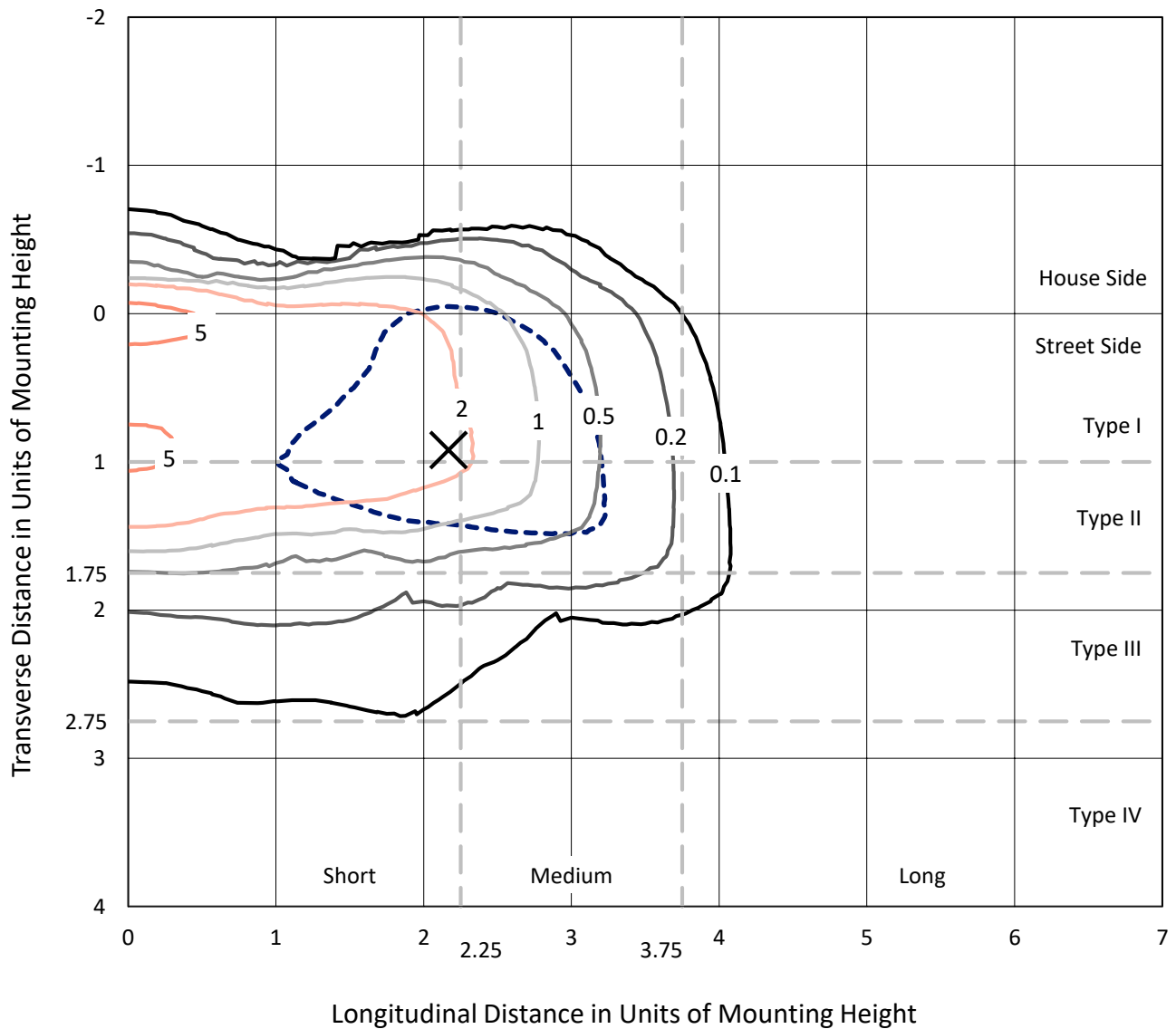
Lumens per Lamp: N/A  
Luminaire Lumens: 19447.9 lumens  
Efficiency: N/A  
Efficacy: 69.7 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type II - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G3  
  
Input Watts (W): 279  
Input Voltage (V): NR  
Input Current (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

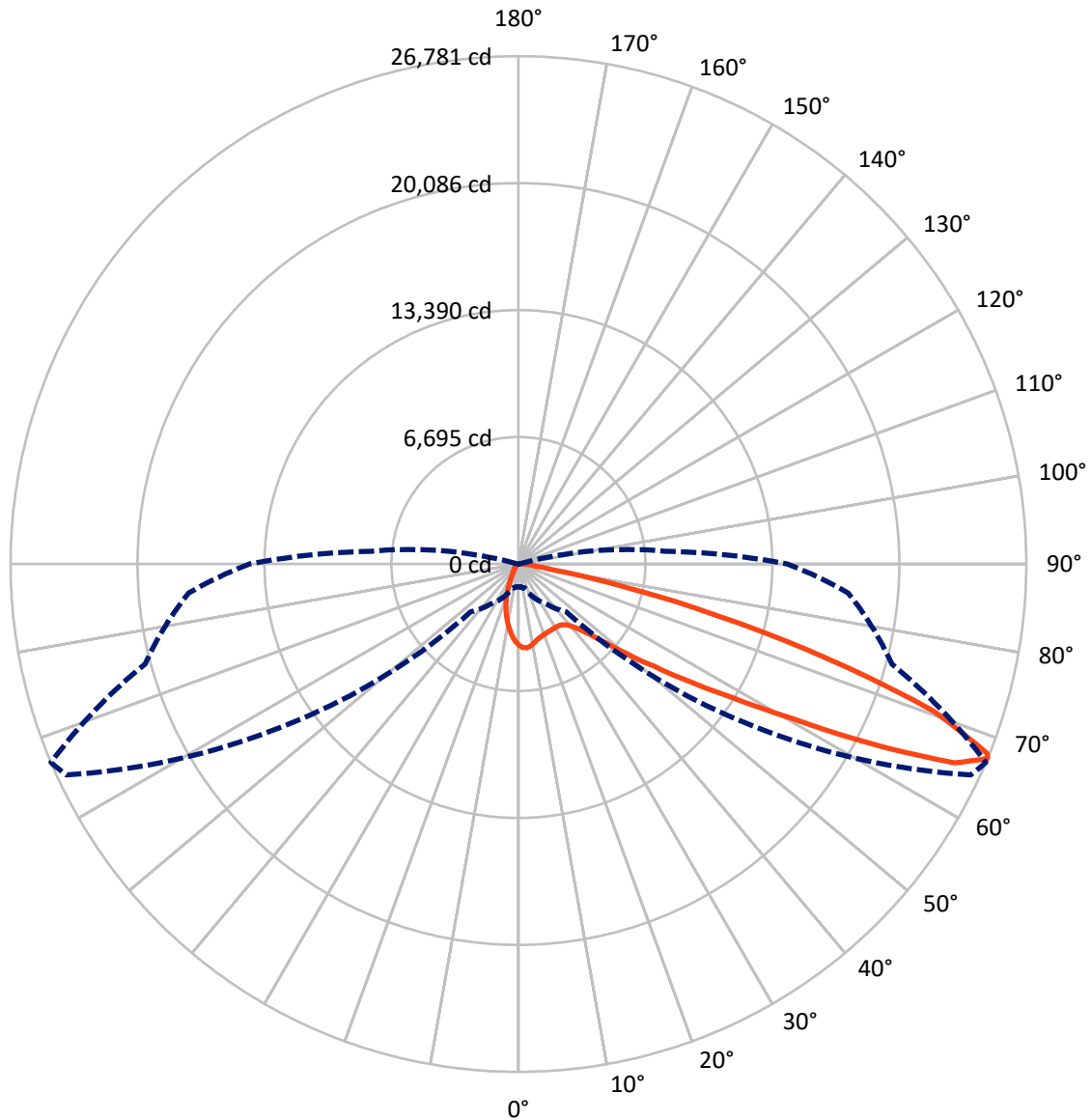
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.9 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
<b>House Side</b>	Lumens	2019.3	0.0	2019.3
	% Fixture	10.4	0.0	10.4
<b>Street Side</b>	Lumens	17428.6	0.0	17428.6
	% Fixture	89.6	0.0	89.6
<b>Total</b>	Lumens	19447.9	0.0	19447.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	349.0	1.8
10°-20°	742.8	3.8
20°-30°	1079.9	5.6
30°-40°	1684.7	8.7
40°-50°	2984.4	15.3
50°-60°	4722.6	24.3
60°-70°	5409.0	27.8
70°-80°	2243.6	11.5
80°-90°	231.8	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°	19447.9	100.0
0°-180°	19447.9	100.0



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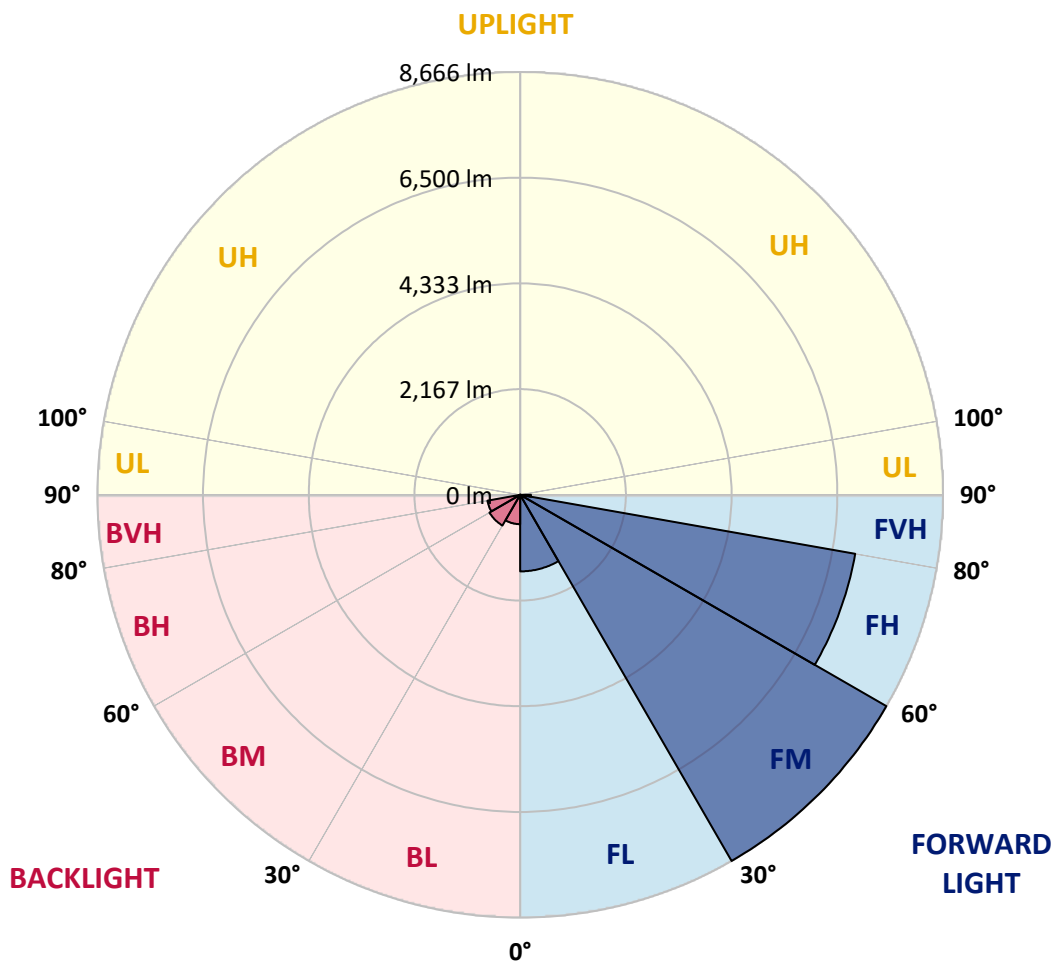
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1569.1	8.1			
FM (30°-60°)	8666.0	44.6			
FH (60°-80°)	6972.1	35.9			G3/7500
FVH (80°-90°)	221.3	1.1			G2/225
BL (0°-30°)	602.6	3.1	B2/1000		
BM (30°-60°)	725.7	3.7	B1/1000		
BH (60°-80°)	680.6	3.5	B2/1000		G2/1000
BVH (80°-90°)	10.4	0.1			G1/100
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°	4289.0	4289.0	4289.0	4289.0	4289.0	4289.0	4289.0	4289.0	4289.0	4289.0	4289.0
2.5°	4434.2	4443.2	4442.1	4448.9	4464.8	4465.9	4450.0	4419.4	4412.6	4372.9	4303.7
5°	4089.3	4115.4	4131.3	4196.0	4268.6	4355.9	4421.7	4445.5	4442.1	4413.8	4309.4
7.5°	3695.7	3721.8	3739.9	3815.9	3912.4	4062.1	4233.4	4374.0	4386.5	4417.2	4304.9
10°	3433.7	3438.2	3463.2	3535.8	3636.7	3789.9	3994.0	4240.2	4277.6	4389.9	4293.5
12.5°	3218.1	3221.6	3254.4	3332.7	3440.5	3594.8	3809.1	4093.9	4151.7	4355.9	4291.2
15°	3065.0	3077.5	3107.0	3188.7	3303.2	3456.4	3676.4	3986.1	4055.3	4343.4	4311.7
17.5°	3014.0	3027.6	3036.7	3095.6	3200.0	3349.7	3575.5	3915.8	3994.0	4350.2	4351.4
20°	3067.3	3077.5	3057.1	3071.8	3136.5	3270.3	3490.4	3855.7	3948.7	4358.2	4402.4
22.5°	3265.8	3270.3	3214.7	3150.1	3138.7	3212.5	3423.5	3808.0	3907.8	4379.7	4462.5
25°	3606.1	3598.2	3507.4	3367.9	3236.3	3202.3	3383.8	3778.5	3887.4	4402.4	4524.9
27.5°	4016.7	4028.1	3903.3	3700.2	3449.6	3270.3	3378.1	3766.0	3878.3	4418.3	4579.4
30°	4515.8	4531.7	4388.8	4133.6	3774.0	3438.2	3430.3	3763.8	3872.7	4408.1	4583.9
32.5°	5025.2	5044.4	4932.1	4669.0	4207.3	3719.5	3548.2	3788.7	3884.0	4372.9	4557.8
35°	5558.3	5585.5	5510.7	5284.9	4794.9	4125.6	3755.8	3864.7	3937.3	4369.5	4531.7
37.5°	6294.5	6319.5	6178.8	5939.4	5506.1	4670.1	4089.3	4007.7	4063.2	4424.0	4538.5
40°	7393.7	7390.3	7027.3	6660.9	6287.7	5362.1	4557.8	4266.3	4294.6	4588.4	4622.5
42.5°	8591.6	8585.9	8049.3	7492.4	7155.5	6214.0	5173.8	4713.2	4693.9	4891.3	4840.3
45°	9514.9	9513.8	9075.9	8448.6	8200.2	7191.8	5970.1	5334.8	5305.3	5383.6	5241.8
47.5°	9908.5	9915.3	9695.3	9254.0	9358.4	8514.4	6974.0	6235.5	6191.3	6159.5	5944.0
50°	9602.3	9615.9	9634.0	9547.8	10208.0	10291.9	8320.4	7504.9	7483.3	7341.5	7004.6
52.5°	8601.8	8671.0	8884.2	9157.6	10502.9	11998.0	10431.5	9081.6	8965.9	8815.0	8444.1
55°	6916.1	6992.1	7397.1	8060.7	10063.9	13118.7	13389.9	11114.3	10921.5	10471.2	9935.8
57.5°	4577.1	4695.1	5282.7	6126.6	8788.9	13299.1	16341.4	13935.5	13263.9	12030.9	11427.4
60°	2521.7	2635.1	3272.6	4037.1	6347.8	12407.5	18326.5	17608.5	16422.0	13774.4	13239.0
62.5°	1552.9	1614.2	2084.9	2796.2	3806.9	9792.8	18737.2	22224.2	20850.5	16019.3	15427.1
65°	1236.4	1262.5	1492.8	2285.7	2729.2	5824.9	17411.1	25742.9	25284.6	18737.2	17386.2
67°	1200.1	1210.4	1319.2	1962.4	2572.7	3570.9	14586.6	26315.8	26780.8	20382.0	17447.4
67.5°	1208.1	1219.4	1322.7	1872.8	2568.2	3281.7	13613.3	26090.0	26677.6	20512.4	17176.3
70°	1165.0	1200.1	1514.4	1871.7	2442.3	2727.0	8152.6	22605.3	23216.7	19059.3	14574.1
72.5°	412.9	415.2	654.5	1514.4	2655.5	2756.5	4093.9	16571.7	17024.3	14579.8	10507.5
75°	245.0	208.7	217.8	431.1	2537.5	2677.1	2361.7	10589.1	10758.2	8354.5	5321.2
77.5°	169.0	147.5	152.0	190.6	966.5	2639.6	1876.2	5522.0	5341.6	2930.0	1133.2
80°	96.4	85.1	90.7	166.7	351.6	2462.7	1769.6	2239.2	1909.1	496.8	313.1
82.5°	51.0	43.1	52.2	137.3	245.0	1534.8	1773.0	1082.2	857.6	167.9	213.3
85°	18.1	14.7	25.0	94.2	163.3	470.8	1643.7	909.7	714.6	81.7	162.2
87.5°	3.4	3.4	10.2	38.6	65.8	144.1	972.1	539.9	361.9	48.8	111.2
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°	4289.0	4289.0	4289.0	4289.0	4289.0	4289.0	4289.0	4289.0	4289.0	4289.0	4289.0
2.5°	4275.4	4226.6	4160.8	4080.3	3985.0	3901.0	3838.6	3774.0	3760.4	3737.7	3734.3
5°	4247.0	4163.1	3999.7	3812.5	3612.9	3432.5	3286.2	3155.8	3097.9	3048.0	3042.3
7.5°	4205.0	4079.1	3801.2	3499.5	3187.5	2903.9	2663.5	2493.3	2336.8	2261.9	2250.5
10°	4156.3	3975.9	3577.7	3159.2	2728.1	2327.7	1970.4	1670.9	1489.4	1381.6	1368.0
12.5°	4110.9	3874.9	3349.7	2806.4	2233.5	1698.1	1238.7	952.9	762.3	685.1	676.1
15°	4089.3	3793.3	3136.5	2445.7	1716.3	1081.0	677.2	524.1	461.7	443.5	442.4
17.5°	4087.1	3724.1	2927.8	2072.5	1202.4	628.4	441.3	402.7	390.2	385.7	385.7
20°	4085.9	3658.3	2719.0	1685.6	763.4	418.6	367.5	358.5	349.4	343.7	343.7
22.5°	4098.4	3599.3	2501.2	1290.9	481.0	339.2	323.3	314.2	302.9	294.9	293.8
25°	4110.9	3553.9	2278.9	918.8	348.2	294.9	279.0	266.6	250.7	240.5	239.3
27.5°	4113.1	3497.2	2040.7	614.8	291.5	257.5	237.1	217.8	199.6	189.4	188.3
30°	4079.1	3401.9	1776.4	415.2	257.5	223.5	196.2	175.8	158.8	150.9	150.9
32.5°	4012.2	3283.9	1486.0	313.1	229.1	191.7	162.2	142.9	131.6	128.2	127.0
35°	3952.1	3156.9	1187.7	265.4	205.3	162.2	132.7	120.2	113.4	112.3	111.2
37.5°	3916.9	3054.8	907.5	240.5	182.6	136.1	112.3	103.2	99.8	97.6	98.7
40°	3944.1	2969.7	670.4	220.1	159.9	113.4	95.3	90.7	87.3	86.2	86.2
42.5°	4063.2	2955.0	498.0	201.9	138.4	94.2	82.8	79.4	77.1	76.0	77.1
45°	4376.3	3045.7	386.8	184.9	116.8	79.4	70.3	69.2	68.1	68.1	68.1
47.5°	4847.1	3232.9	322.2	165.6	97.6	68.1	61.3	60.1	59.0	60.1	60.1
50°	5644.5	3575.5	288.1	146.3	80.5	57.9	52.2	52.2	52.2	52.2	53.3
52.5°	6857.1	4249.3	265.4	127.0	65.8	48.8	44.2	44.2	45.4	45.4	46.5
55°	8208.1	5143.1	245.0	107.8	55.6	40.8	36.3	37.4	38.6	39.7	39.7
57.5°	9673.7	6133.4	228.0	88.5	47.6	32.9	30.6	31.8	32.9	35.2	35.2
60°	11442.2	7205.4	203.0	69.2	39.7	26.1	23.8	26.1	29.5	31.8	32.9
62.5°	13384.2	8242.2	171.3	54.4	32.9	20.4	19.3	23.8	28.4	30.6	31.8
65°	14711.4	8567.7	131.6	44.2	25.0	14.7	15.9	21.6	27.2	30.6	30.6
67°	14173.7	7768.0	107.8	37.4	20.4	11.3	14.7	21.6	27.2	29.5	30.6
67.5°	13800.5	7454.9	103.2	36.3	19.3	11.3	14.7	21.6	27.2	30.6	30.6
70°	11228.9	5600.3	86.2	27.2	15.9	10.2	12.5	20.4	26.1	29.5	29.5
72.5°	7802.1	3453.0	77.1	19.3	13.6	9.1	11.3	19.3	25.0	28.4	29.5
75°	3709.3	1250.1	65.8	14.7	12.5	7.9	10.2	19.3	25.0	28.4	28.4
77.5°	756.6	290.4	53.3	12.5	10.2	7.9	9.1	18.1	23.8	27.2	27.2
80°	248.4	112.3	39.7	11.3	10.2	7.9	9.1	17.0	23.8	26.1	27.2
82.5°	179.2	56.7	26.1	11.3	10.2	7.9	7.9	17.0	22.7	26.1	26.1
85°	137.3	39.7	17.0	11.3	10.2	7.9	7.9	15.9	21.6	25.0	25.0
87.5°	90.7	15.9	13.6	11.3	10.2	7.9	7.9	15.9	20.4	23.8	25.0
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)