

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: P299743

Luminaire Tested: **GLNA-AF-09-LED-E1-SL2-7027-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299743
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-09-LED-E1-SL2-7027-600-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 2700K 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: 22916 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G4

Input Watts (W): 290
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

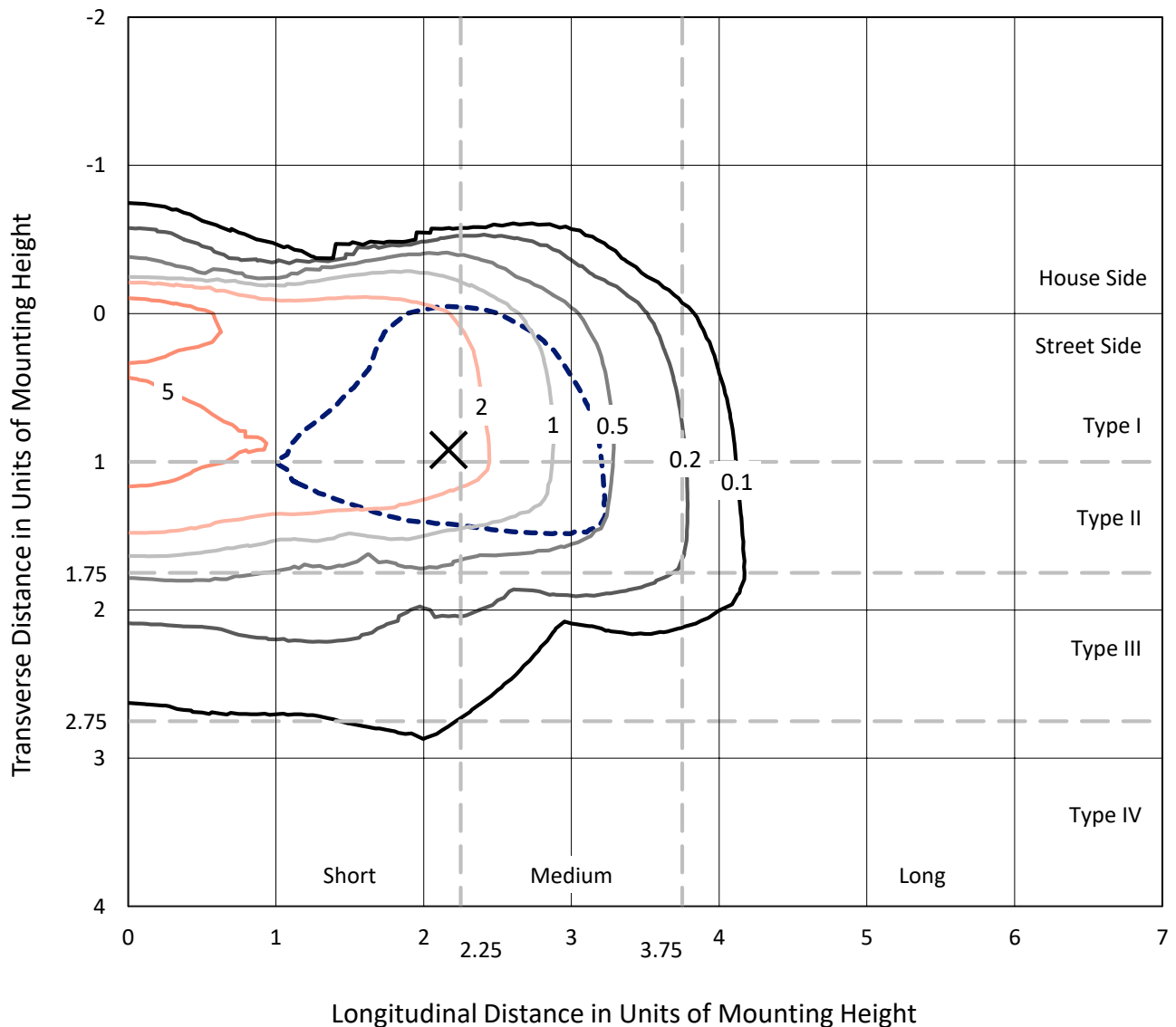


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

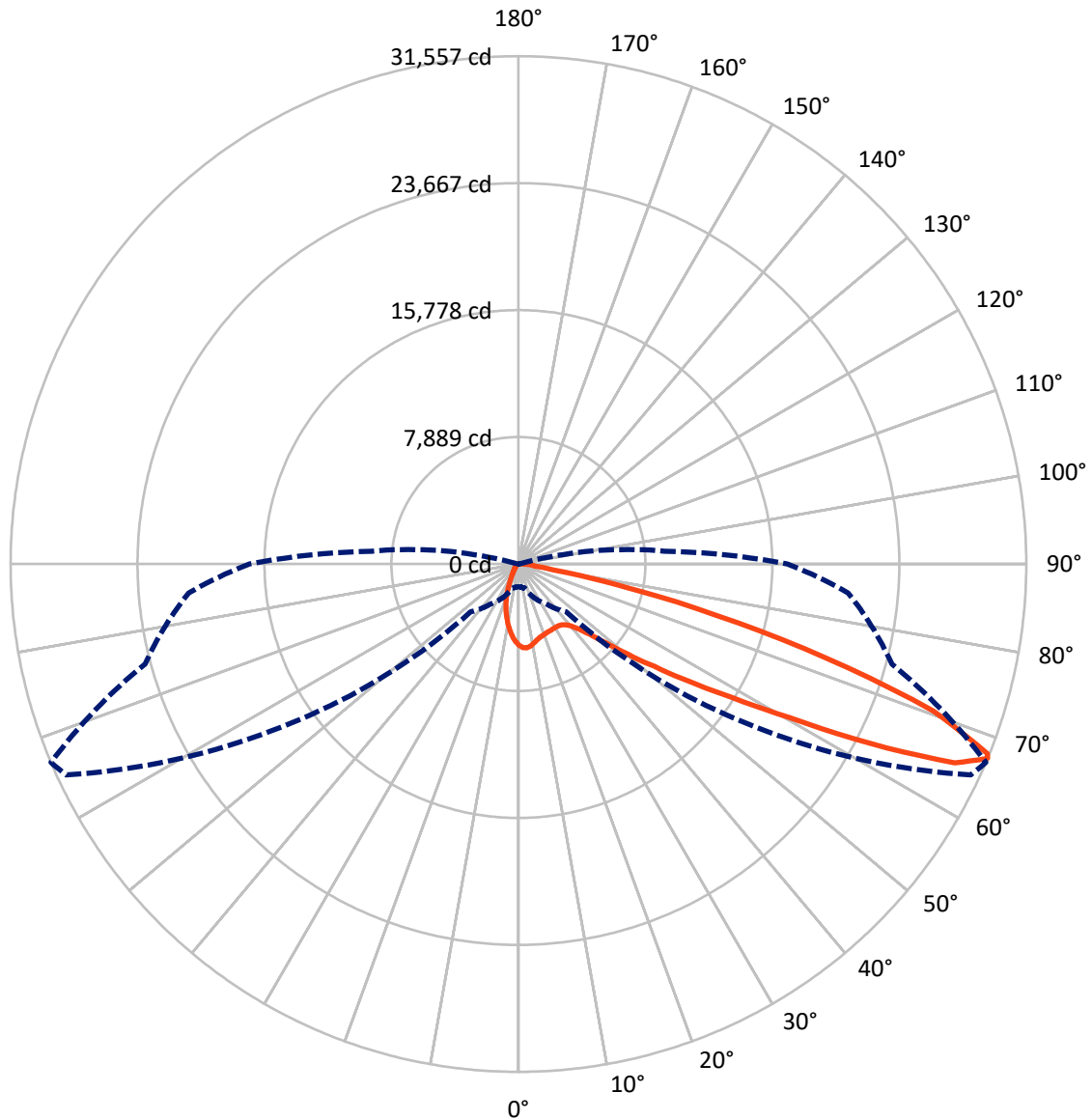


Based on 25 foot mounting height. Maximum calculated value = 8.1 fc
 Type II - Short - Semi-Cutoff

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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	2379.4	0.0	2379.4
	% Fixture	10.4	0.0	10.4
Street Side	Lumens	20536.6	0.0	20536.6
	% Fixture	89.6	0.0	89.6
Total	Lumens	22916.0	0.0	22916.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	411.2	1.8
10°-20°	875.2	3.8
20°-30°	1272.5	5.6
30°-40°	1985.2	8.7
40°-50°	3516.6	15.3
50°-60°	5564.7	24.3
60°-70°	6373.6	27.8
70°-80°	2643.7	11.5
80°-90°	273.1	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°	22916.0	100.0
0°-180°	22916.0	100.0



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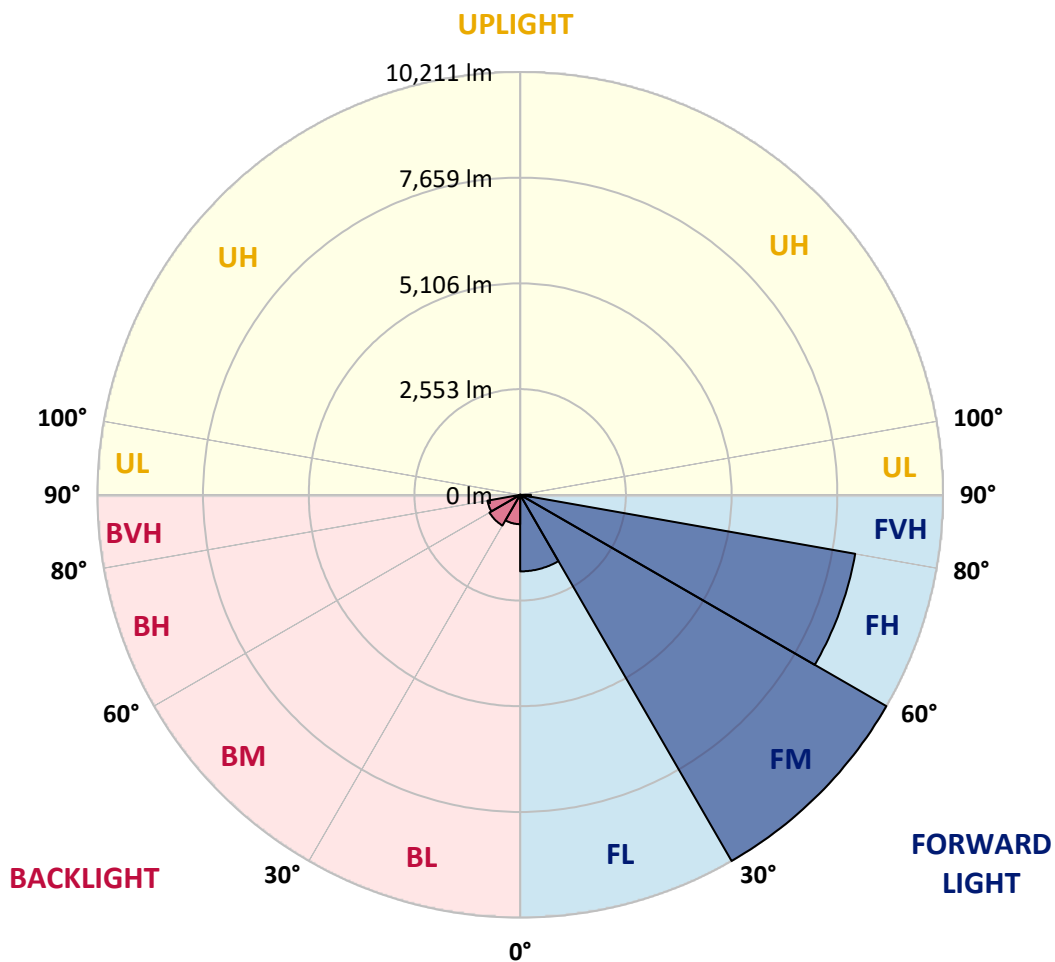
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1849.0	8.1			
FM (30°-60°)	10211.4	44.6			
FH (60°-80°)	8215.4	35.9			G4/12000
FVH (80°-90°)	260.8	1.1			G3/500
BL (0°-30°)	710.0	3.1	B2/1000		
BM (30°-60°)	855.1	3.7	B1/1000		
BH (60°-80°)	801.9	3.5	B2/1000		G2/1000
BVH (80°-90°)	12.3	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-G4

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	5053.8	5053.8	5053.8	5053.8	5053.8	5053.8	5053.8	5053.8	5053.8	5053.8	5053.8
2.5°	5224.9	5235.6	5234.3	5242.3	5261.0	5262.3	5243.6	5207.5	5199.5	5152.7	5071.2
5°	4818.6	4849.3	4868.0	4944.2	5029.8	5132.7	5210.2	5238.3	5234.3	5200.8	5077.9
7.5°	4354.8	4385.5	4406.9	4496.4	4610.1	4786.5	4988.3	5154.1	5168.8	5204.9	5072.5
10°	4046.0	4051.3	4080.7	4166.3	4285.3	4465.7	4706.3	4996.3	5040.5	5172.8	5059.2
12.5°	3792.0	3796.0	3834.8	3927.0	4054.0	4235.8	4488.4	4823.9	4892.1	5132.7	5056.5
15°	3611.6	3626.3	3661.0	3757.3	3892.3	4072.7	4332.0	4696.9	4778.5	5118.0	5080.6
17.5°	3551.4	3567.5	3578.2	3647.7	3770.6	3947.1	4213.1	4614.1	4706.3	5126.0	5127.3
20°	3614.3	3626.3	3602.2	3619.6	3695.8	3853.5	4112.8	4543.2	4652.8	5135.4	5187.5
22.5°	3848.2	3853.5	3788.0	3711.8	3698.5	3785.4	4034.0	4487.1	4604.7	5160.8	5258.3
25°	4249.2	4239.8	4132.9	3968.5	3813.4	3773.3	3987.2	4452.3	4580.7	5187.5	5331.8
27.5°	4733.0	4746.4	4599.4	4360.1	4064.7	3853.5	3980.5	4437.6	4570.0	5206.2	5396.0
30°	5321.1	5339.9	5171.4	4870.7	4447.0	4051.3	4042.0	4435.0	4563.3	5194.2	5401.3
32.5°	5921.3	5944.0	5811.7	5501.6	4957.6	4382.8	4181.0	4464.4	4576.6	5152.7	5370.6
35°	6549.5	6581.6	6493.4	6227.4	5650.0	4861.3	4425.6	4553.9	4639.5	5148.7	5339.9
37.5°	7417.0	7446.4	7280.7	6998.6	6488.0	5502.9	4818.6	4722.3	4787.8	5212.9	5347.9
40°	8712.2	8708.2	8280.5	7848.7	7409.0	6318.3	5370.6	5027.1	5060.5	5406.7	5446.8
42.5°	10123.7	10117.0	9484.8	8828.5	8431.5	7322.1	6096.4	5553.7	5531.0	5763.6	5703.4
45°	11211.7	11210.4	10694.4	9955.3	9662.5	8474.3	7034.7	6286.2	6251.4	6343.7	6176.6
47.5°	11675.5	11683.5	11424.2	10904.3	11027.2	10032.8	8217.6	7347.5	7295.4	7257.9	7004.0
50°	11314.6	11330.7	11352.0	11250.5	12028.4	12127.3	9804.2	8843.2	8817.8	8650.7	8253.7
52.5°	10135.7	10217.2	10468.5	10790.7	12375.9	14137.6	12291.7	10701.1	10564.8	10387.0	9949.9
55°	8149.5	8239.0	8716.2	9498.1	11858.6	15458.2	15777.6	13096.4	12869.1	12338.5	11707.6
57.5°	5393.3	5532.3	6224.7	7219.2	10356.3	15670.7	19255.6	16420.6	15629.3	14176.4	13465.3
60°	2971.3	3105.0	3856.2	4757.1	7479.8	14620.1	21594.7	20748.6	19350.5	16230.8	15599.9
62.5°	1829.9	1902.0	2456.7	3294.8	4485.7	11539.2	22078.5	26187.4	24568.7	18876.0	18178.2
65°	1456.9	1487.7	1759.0	2693.3	3215.9	6863.6	20516.0	30333.6	29793.6	22078.5	20486.6
67°	1414.2	1426.2	1554.5	2312.4	3031.5	4207.7	17187.8	31008.6	31556.6	24016.7	20558.8
67.5°	1423.5	1436.9	1558.5	2206.8	3026.1	3866.9	16041.0	30742.6	31435.0	24170.4	20239.3
70°	1372.7	1414.2	1784.4	2205.4	2877.8	3213.3	9606.4	26636.5	27356.9	22458.2	17173.1
72.5°	486.5	489.2	771.2	1784.4	3129.1	3248.0	4823.9	19526.9	20060.2	17179.8	12381.3
75°	288.7	245.9	256.6	507.9	2990.1	3154.5	2782.9	12477.5	12676.7	9844.3	6270.2
77.5°	199.2	173.8	179.1	224.6	1138.8	3110.4	2210.8	6506.7	6294.2	3452.5	1335.3
80°	113.6	100.2	106.9	196.5	414.4	2901.8	2085.2	2638.5	2249.6	585.4	368.9
82.5°	60.1	50.8	61.5	161.7	288.7	1808.5	2089.2	1275.2	1010.5	197.8	251.3
85°	21.4	17.4	29.4	110.9	192.5	554.7	1936.8	1072.0	842.1	96.2	191.1
87.5°	4.0	4.0	12.0	45.4	77.5	169.8	1145.5	636.2	426.4	57.5	131.0
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°	5053.8	5053.8	5053.8	5053.8	5053.8	5053.8	5053.8	5053.8	5053.8	5053.8	5053.8
2.5°	5037.8	4980.3	4902.8	4807.9	4695.6	4596.7	4523.2	4447.0	4430.9	4404.2	4400.2
5°	5004.4	4905.5	4713.0	4492.4	4257.2	4044.7	3872.2	3718.5	3650.4	3591.5	3584.9
7.5°	4954.9	4806.5	4479.1	4123.5	3755.9	3421.8	3138.4	2937.9	2753.5	2665.3	2651.9
10°	4897.4	4684.9	4215.7	3722.5	3214.6	2742.8	2321.7	1968.9	1755.0	1628.0	1612.0
12.5°	4844.0	4565.9	3947.1	3306.8	2631.8	2000.9	1459.6	1122.8	898.2	807.3	796.6
15°	4818.6	4469.7	3695.8	2881.8	2022.3	1273.8	798.0	617.5	544.0	522.6	521.3
17.5°	4815.9	4388.2	3449.9	2442.0	1416.8	740.5	520.0	474.5	459.8	454.5	454.5
20°	4814.6	4310.7	3203.9	1986.2	899.6	493.2	433.1	422.4	411.7	405.0	405.0
22.5°	4829.3	4241.1	2947.3	1521.1	566.7	399.7	380.9	370.2	356.9	347.5	346.2
25°	4844.0	4187.7	2685.3	1082.7	410.3	347.5	328.8	314.1	295.4	283.4	282.0
27.5°	4846.6	4120.8	2404.6	724.5	343.5	303.4	279.4	256.6	235.2	223.2	221.9
30°	4806.5	4008.6	2093.2	489.2	303.4	263.3	231.2	207.2	187.1	177.8	177.8
32.5°	4727.7	3869.6	1751.0	368.9	270.0	225.9	191.1	168.4	155.0	151.0	149.7
35°	4656.8	3719.9	1399.5	312.8	241.9	191.1	156.4	141.7	133.7	132.3	131.0
37.5°	4615.4	3599.6	1069.3	283.4	215.2	160.4	132.3	121.6	117.6	115.0	116.3
40°	4647.5	3499.3	790.0	259.3	188.5	133.7	112.3	106.9	102.9	101.6	101.6
42.5°	4787.8	3481.9	586.8	237.9	163.1	110.9	97.6	93.6	90.9	89.6	90.9
45°	5156.7	3588.9	455.8	217.9	137.7	93.6	82.9	81.5	80.2	80.2	80.2
47.5°	5711.4	3809.4	379.6	195.1	115.0	80.2	72.2	70.8	69.5	70.8	70.8
50°	6651.1	4213.1	339.5	172.4	94.9	68.2	61.5	61.5	61.5	61.5	62.8
52.5°	8080.0	5007.0	312.8	149.7	77.5	57.5	52.1	52.1	53.5	53.5	54.8
55°	9671.9	6060.3	288.7	127.0	65.5	48.1	42.8	44.1	45.4	46.8	46.8
57.5°	11398.8	7227.2	268.7	104.3	56.1	38.8	36.1	37.4	38.8	41.4	41.4
60°	13482.6	8490.3	239.3	81.5	46.8	30.7	28.1	30.7	34.8	37.4	38.8
62.5°	15771.0	9712.0	201.8	64.2	38.8	24.1	22.7	28.1	33.4	36.1	37.4
65°	17334.8	10095.6	155.0	52.1	29.4	17.4	18.7	25.4	32.1	36.1	36.1
67°	16701.3	9153.3	127.0	44.1	24.1	13.4	17.4	25.4	32.1	34.8	36.1
67.5°	16261.5	8784.4	121.6	42.8	22.7	13.4	17.4	25.4	32.1	36.1	36.1
70°	13231.4	6599.0	101.6	32.1	18.7	12.0	14.7	24.1	30.7	34.8	34.8
72.5°	9193.4	4068.7	90.9	22.7	16.0	10.7	13.4	22.7	29.4	33.4	34.8
75°	4370.8	1473.0	77.5	17.4	14.7	9.4	12.0	22.7	29.4	33.4	33.4
77.5°	891.5	342.2	62.8	14.7	12.0	9.4	10.7	21.4	28.1	32.1	32.1
80°	292.7	132.3	46.8	13.4	12.0	9.4	10.7	20.0	28.1	30.7	32.1
82.5°	211.2	66.8	30.7	13.4	12.0	9.4	9.4	20.0	26.7	30.7	30.7
85°	161.7	46.8	20.0	13.4	12.0	9.4	9.4	18.7	25.4	29.4	29.4
87.5°	106.9	18.7	16.0	13.4	12.0	9.4	9.4	18.7	24.1	28.1	29.4
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)