

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: P299746

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299746
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-SL2-600-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 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: 26375.4 lumens
Efficiency: N/A
Efficacy: 90.9 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

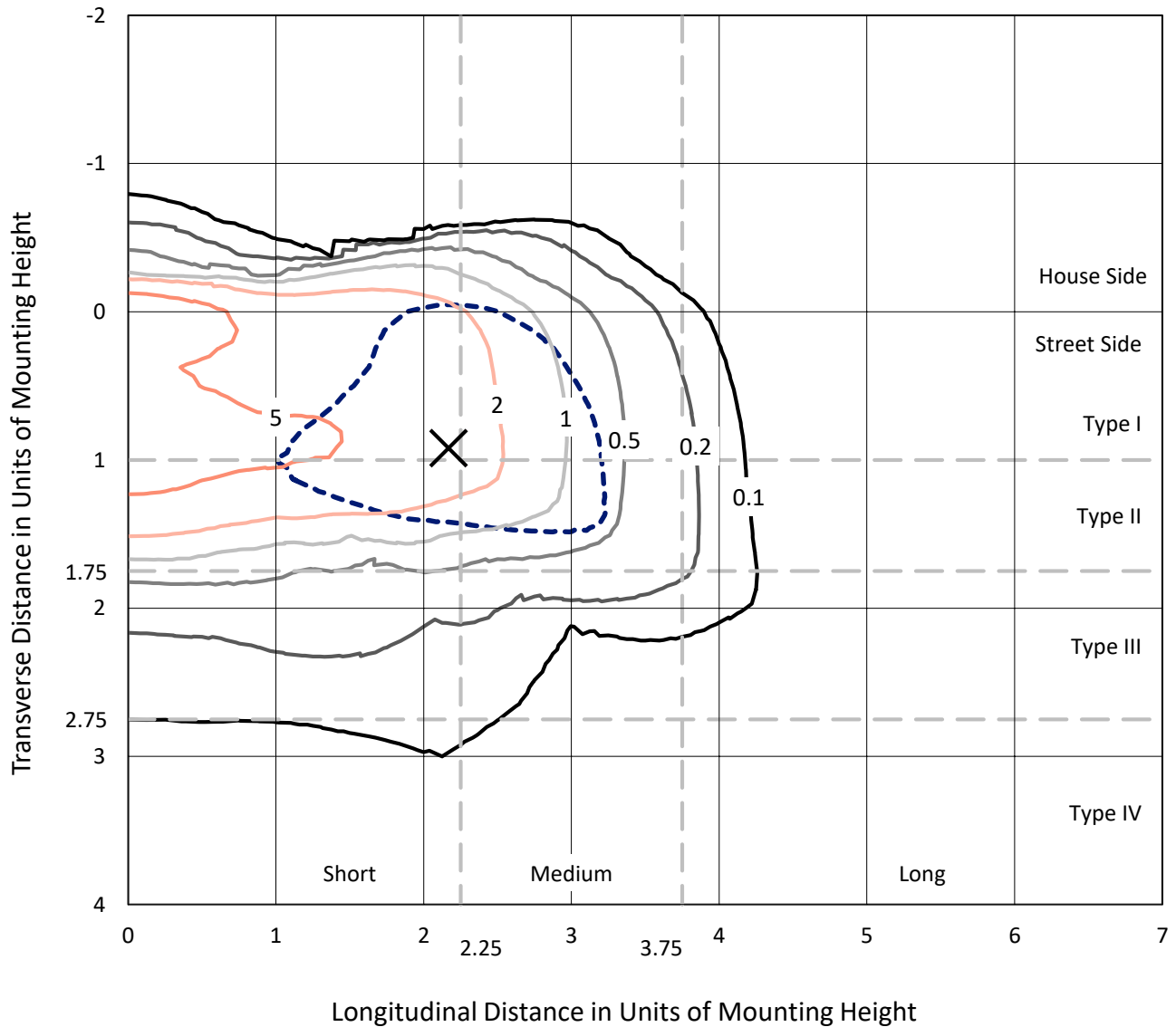


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

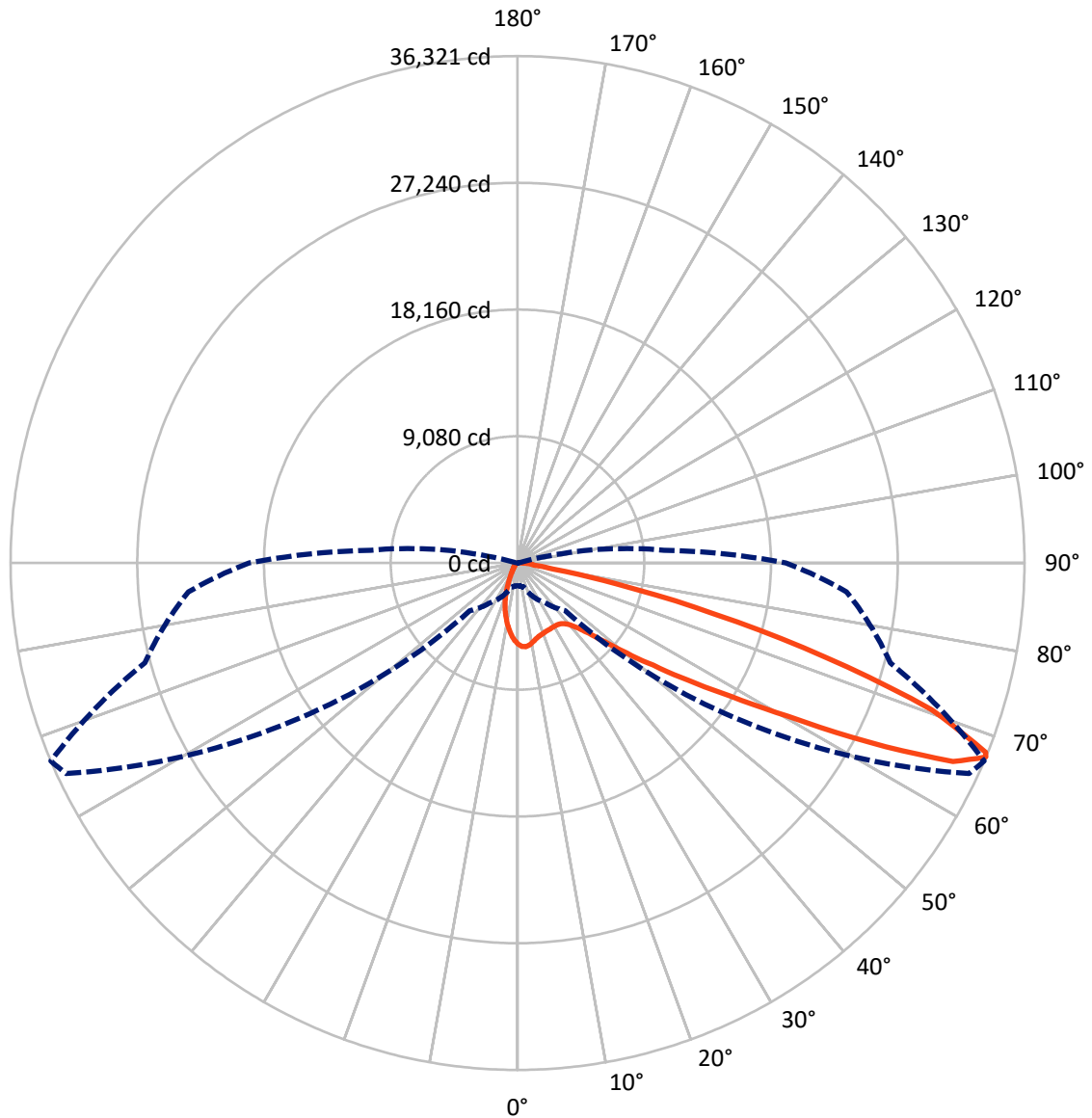


Based on 25 foot mounting height. Maximum calculated value = 9.3 fc
 Type II - Short - Semi-Cutoff

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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	2738.5	0.0	2738.5
	% Fixture	10.4	0.0	10.4
Street Side	Lumens	23636.9	0.0	23636.9
	% Fixture	89.6	0.0	89.6
Total	Lumens	26375.4	0.0	26375.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	473.3	1.8
10°-20°	1007.4	3.8
20°-30°	1464.6	5.6
30°-40°	2284.9	8.7
40°-50°	4047.5	15.3
50°-60°	6404.8	24.3
60°-70°	7335.8	27.8
70°-80°	3042.8	11.5
80°-90°	314.3	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°	26375.4	100.0
0°-180°	26375.4	100.0



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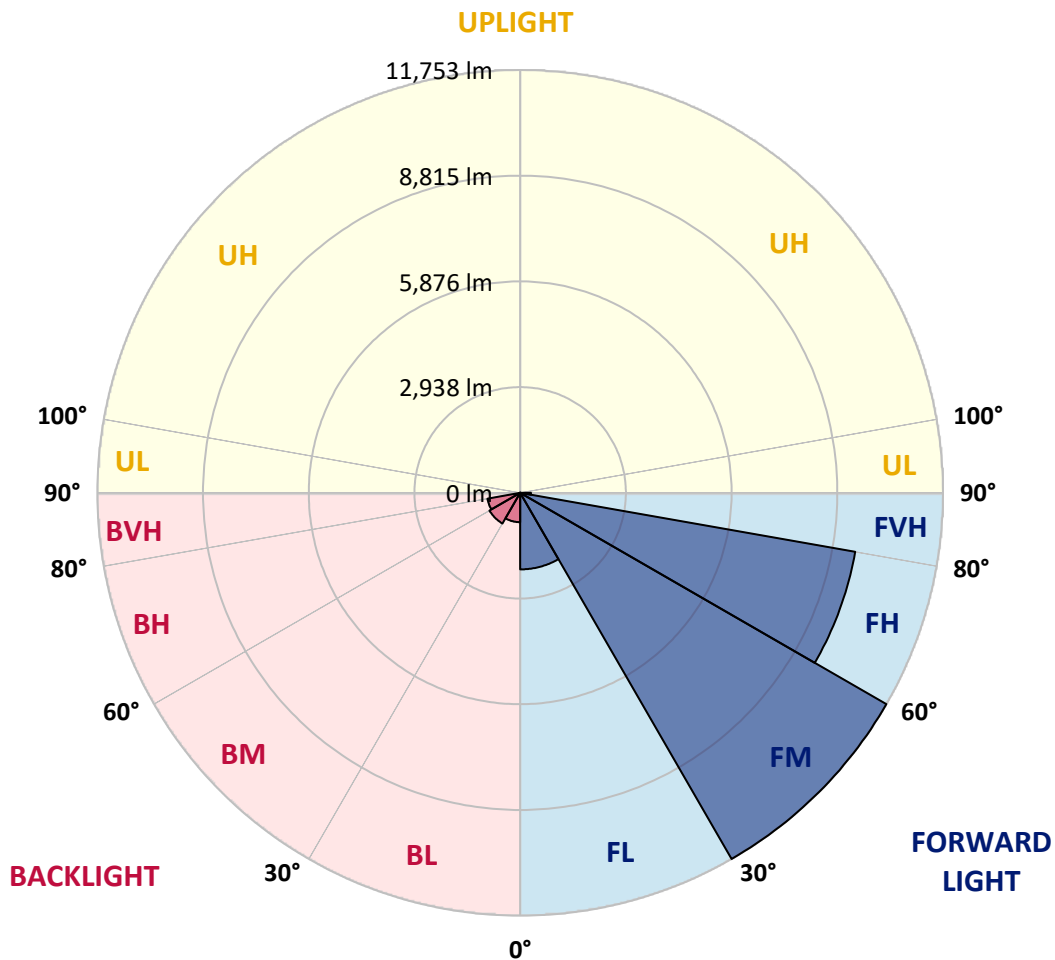
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2128.1	8.1			
FM	(30°-60°)	11753.0	44.6			
FH	(60°-80°)	9455.7	35.9			G4/12000
FVH	(80°-90°)	300.2	1.1			G3/500
BL	(0°-30°)	817.2	3.1	B2/1000		
BM	(30°-60°)	984.2	3.7	B1/1000		
BH	(60°-80°)	923.0	3.5	B2/1000		G2/1000
BVH	(80°-90°)	14.1	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°	5816.8	5816.8	5816.8	5816.8	5816.8	5816.8	5816.8	5816.8	5816.8	5816.8	5816.8
2.5°	6013.7	6026.0	6024.4	6033.7	6055.2	6056.7	6035.2	5993.7	5984.4	5930.6	5836.8
5°	5546.0	5581.4	5602.9	5690.6	5789.1	5907.5	5996.7	6029.1	6024.4	5986.0	5844.4
7.5°	5012.2	5047.5	5072.2	5175.2	5306.0	5509.1	5741.4	5932.1	5949.1	5990.6	5838.3
10°	4656.8	4662.9	4696.8	4795.2	4932.2	5139.8	5416.8	5750.6	5801.4	5953.7	5822.9
12.5°	4364.5	4369.1	4413.7	4519.9	4666.0	4875.2	5166.0	5552.1	5630.6	5907.5	5819.8
15°	4156.8	4173.7	4213.7	4324.5	4479.9	4687.6	4986.0	5406.0	5499.8	5890.6	5847.5
17.5°	4087.6	4106.0	4118.3	4198.3	4339.9	4542.9	4849.1	5310.6	5416.8	5899.8	5901.4
20°	4159.9	4173.7	4146.0	4166.0	4253.7	4435.3	4733.7	5229.1	5355.2	5910.6	5970.6
22.5°	4429.1	4435.3	4359.9	4272.2	4256.8	4356.8	4642.9	5164.5	5299.8	5939.8	6052.1
25°	4890.6	4879.9	4756.8	4567.6	4389.1	4342.9	4589.1	5124.5	5272.2	5970.6	6136.7
27.5°	5447.5	5462.9	5293.7	5018.3	4678.3	4435.3	4581.4	5107.5	5259.8	5992.1	6210.6
30°	6124.4	6146.0	5952.1	5606.0	5118.3	4662.9	4652.2	5104.5	5252.2	5978.3	6216.7
32.5°	6815.2	6841.3	6689.0	6332.1	5706.0	5044.5	4812.2	5138.3	5267.5	5930.6	6181.4
35°	7538.2	7575.2	7473.6	7167.5	6502.9	5595.2	5093.7	5241.4	5339.8	5926.0	6146.0
37.5°	8536.7	8570.5	8379.8	8055.1	7467.5	6333.7	5546.0	5435.2	5510.6	5999.8	6155.2
40°	10027.4	10022.8	9530.5	9033.6	8527.4	7272.1	6181.4	5786.0	5824.4	6222.9	6269.0
42.5°	11652.0	11644.3	10916.6	10161.2	9704.3	8427.4	7016.7	6392.1	6366.0	6633.7	6564.4
45°	12904.2	12902.7	12308.9	11458.1	11121.2	9753.6	8096.7	7235.2	7195.2	7301.3	7109.0
47.5°	13438.1	13447.3	13148.8	12550.4	12691.9	11547.4	9458.2	8456.7	8396.7	8353.6	8061.3
50°	13022.7	13041.2	13065.8	12948.9	13844.2	13958.1	11284.3	10178.2	10148.9	9956.6	9499.7
52.5°	11665.8	11759.7	12048.9	12419.6	14244.2	16271.8	14147.3	12316.6	12159.6	11955.0	11452.0
55°	9379.7	9482.8	10032.0	10932.0	13648.8	17791.8	18159.5	15073.4	14811.9	14201.1	13475.0
57.5°	6207.5	6367.5	7164.4	8309.0	11919.6	18036.4	22162.4	18899.4	17988.7	16316.4	15498.0
60°	3419.9	3573.7	4438.3	5475.2	8609.0	16827.2	24854.7	23880.8	22271.7	18681.0	17954.9
62.5°	2106.1	2189.2	2827.6	3792.2	5162.9	13281.1	25411.6	30140.7	28277.6	21725.5	20922.5
65°	1676.9	1712.3	2024.6	3099.9	3701.4	7899.8	23613.2	34912.8	34291.3	25411.6	23579.3
67°	1627.6	1641.5	1789.2	2661.5	3489.1	4842.9	19782.5	35689.7	36320.5	27642.3	23662.4
67.5°	1638.4	1653.8	1793.8	2539.9	3483.0	4450.6	18462.5	35383.6	36180.5	27819.2	23294.7
70°	1580.0	1627.6	2053.8	2538.4	3312.2	3698.4	11056.6	30657.6	31486.8	25848.5	19765.6
72.5°	560.0	563.1	887.7	2053.8	3601.4	3738.4	5552.1	22474.7	23088.6	19773.3	14250.4
75°	332.3	283.1	295.4	584.6	3441.4	3630.7	3203.0	14361.1	14590.3	11330.4	7216.7
77.5°	229.2	200.0	206.1	258.5	1310.7	3579.9	2544.5	7489.0	7244.4	3973.7	1536.9
80°	130.8	115.4	123.1	226.1	476.9	3339.9	2399.9	3036.8	2589.2	673.8	424.6
82.5°	69.2	58.5	70.8	186.1	332.3	2081.5	2404.5	1467.6	1163.0	227.7	289.2
85°	24.6	20.0	33.8	127.7	221.5	638.4	2229.2	1233.8	969.2	110.8	220.0
87.5°	4.6	4.6	13.8	52.3	89.2	195.4	1318.4	732.3	490.8	66.2	150.8
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°	5816.8	5816.8	5816.8	5816.8	5816.8	5816.8	5816.8	5816.8	5816.8	5816.8	5816.8
2.5°	5798.3	5732.1	5642.9	5533.7	5404.5	5290.6	5206.0	5118.3	5099.9	5069.1	5064.5
5°	5759.8	5646.0	5424.5	5170.6	4899.9	4655.2	4456.8	4279.9	4201.4	4133.7	4126.0
7.5°	5702.9	5532.1	5155.2	4746.0	4322.9	3938.3	3612.2	3381.4	3169.1	3067.6	3052.2
10°	5636.8	5392.1	4852.2	4284.5	3699.9	3156.8	2672.2	2266.1	2019.9	1873.8	1855.3
12.5°	5575.2	5255.2	4542.9	3806.0	3029.1	2303.0	1680.0	1292.3	1033.8	929.2	916.9
15°	5546.0	5144.5	4253.7	3316.8	2327.6	1466.1	918.4	710.7	626.1	601.5	600.0
17.5°	5542.9	5050.6	3970.7	2810.7	1630.7	852.3	598.4	546.1	529.2	523.1	523.1
20°	5541.4	4961.4	3687.6	2286.1	1035.4	567.7	498.4	486.1	473.8	466.1	466.1
22.5°	5558.3	4881.4	3392.2	1750.7	652.3	460.0	438.4	426.1	410.8	400.0	398.4
25°	5575.2	4819.9	3090.7	1246.1	472.3	400.0	378.5	361.5	340.0	326.1	324.6
27.5°	5578.3	4742.9	2767.6	833.8	395.4	349.2	321.5	295.4	270.8	256.9	255.4
30°	5532.1	4613.7	2409.2	563.1	349.2	303.1	266.1	238.5	215.4	204.6	204.6
32.5°	5441.4	4453.7	2015.3	424.6	310.8	260.0	220.0	193.8	178.5	173.8	172.3
35°	5359.8	4281.4	1610.7	360.0	278.5	220.0	180.0	163.1	153.8	152.3	150.8
37.5°	5312.2	4143.0	1230.7	326.1	247.7	184.6	152.3	140.0	135.4	132.3	133.8
40°	5349.1	4027.6	909.2	298.5	216.9	153.8	129.2	123.1	118.5	116.9	116.9
42.5°	5510.6	4007.6	675.4	273.8	187.7	127.7	112.3	107.7	104.6	103.1	104.6
45°	5935.2	4130.6	524.6	250.8	158.5	107.7	95.4	93.8	92.3	92.3	92.3
47.5°	6573.7	4384.5	436.9	224.6	132.3	92.3	83.1	81.5	80.0	81.5	81.5
50°	7655.2	4849.1	390.8	198.5	109.2	78.5	70.8	70.8	70.8	70.8	72.3
52.5°	9299.7	5762.9	360.0	172.3	89.2	66.2	60.0	60.0	61.5	61.5	63.1
55°	11132.0	6975.2	332.3	146.1	75.4	55.4	49.2	50.8	52.3	53.8	53.8
57.5°	13119.6	8318.2	309.2	120.0	64.6	44.6	41.5	43.1	44.6	47.7	47.7
60°	15518.0	9772.0	275.4	93.8	53.8	35.4	32.3	35.4	40.0	43.1	44.6
62.5°	18151.8	11178.1	232.3	73.8	44.6	27.7	26.2	32.3	38.5	41.5	43.1
65°	19951.7	11619.7	178.5	60.0	33.8	20.0	21.5	29.2	36.9	41.5	41.5
67°	19222.5	10535.1	146.1	50.8	27.7	15.4	20.0	29.2	36.9	40.0	41.5
67.5°	18716.4	10110.5	140.0	49.2	26.2	15.4	20.0	29.2	36.9	41.5	41.5
70°	15228.8	7595.2	116.9	36.9	21.5	13.8	16.9	27.7	35.4	40.0	40.0
72.5°	10581.2	4682.9	104.6	26.2	18.5	12.3	15.4	26.2	33.8	38.5	40.0
75°	5030.6	1695.3	89.2	20.0	16.9	10.8	13.8	26.2	33.8	38.5	38.5
77.5°	1026.1	393.8	72.3	16.9	13.8	10.8	12.3	24.6	32.3	36.9	36.9
80°	336.9	152.3	53.8	15.4	13.8	10.8	12.3	23.1	32.3	35.4	36.9
82.5°	243.1	76.9	35.4	15.4	13.8	10.8	10.8	23.1	30.8	35.4	35.4
85°	186.1	53.8	23.1	15.4	13.8	10.8	10.8	21.5	29.2	33.8	33.8
87.5°	123.1	21.5	18.5	15.4	13.8	10.8	10.8	21.5	27.7	32.3	33.8
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)