

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-09-LED-E1-SL3-600-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-09-LED-E1-SL3-600-HSS  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(9) 70 CRI, 4000K 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: 27204.6 lumens  
Efficiency: N/A  
Efficacy: 93.8 lumens/watt  
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')  
IES Classification: Type III - Short - Non-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

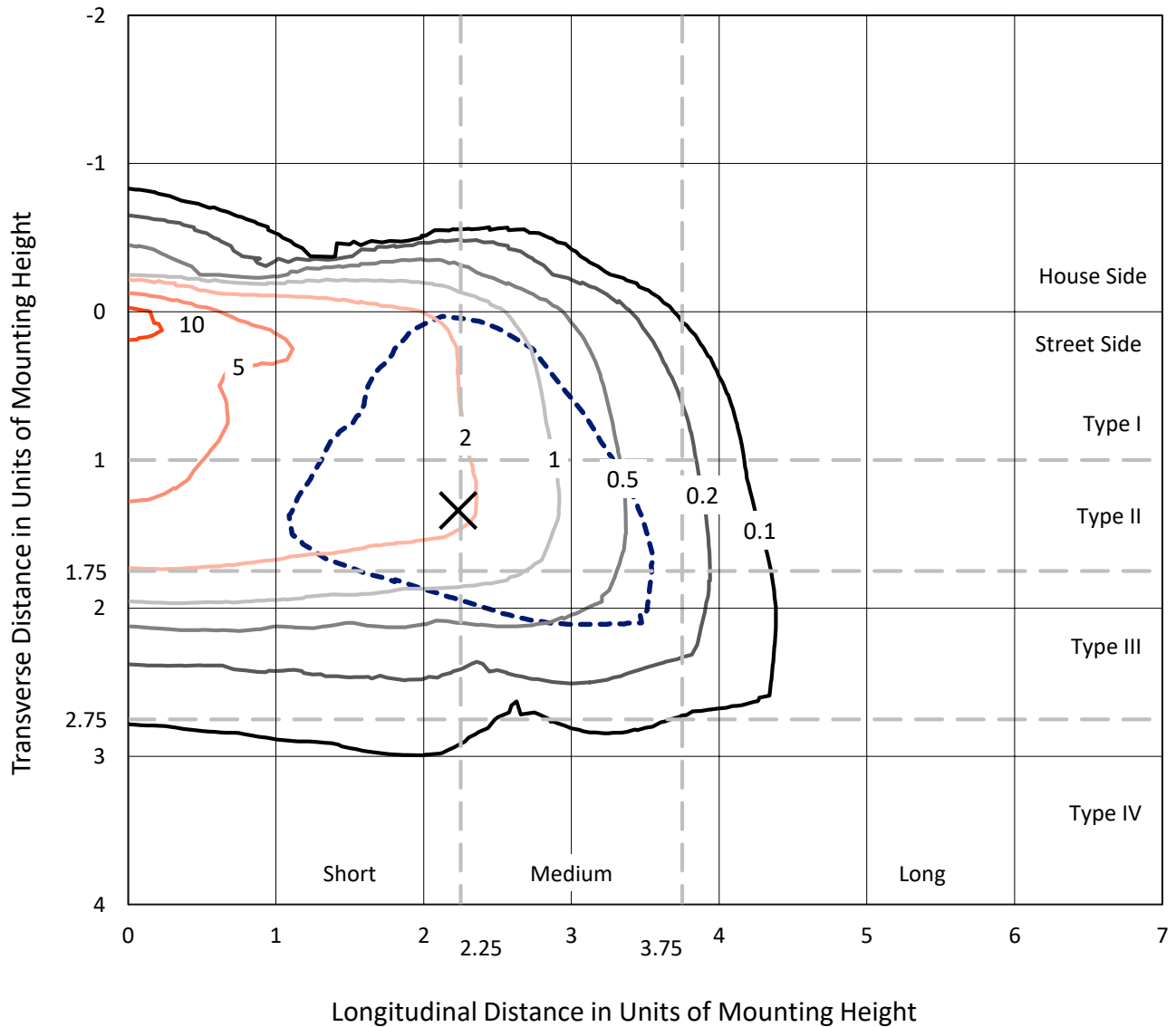


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

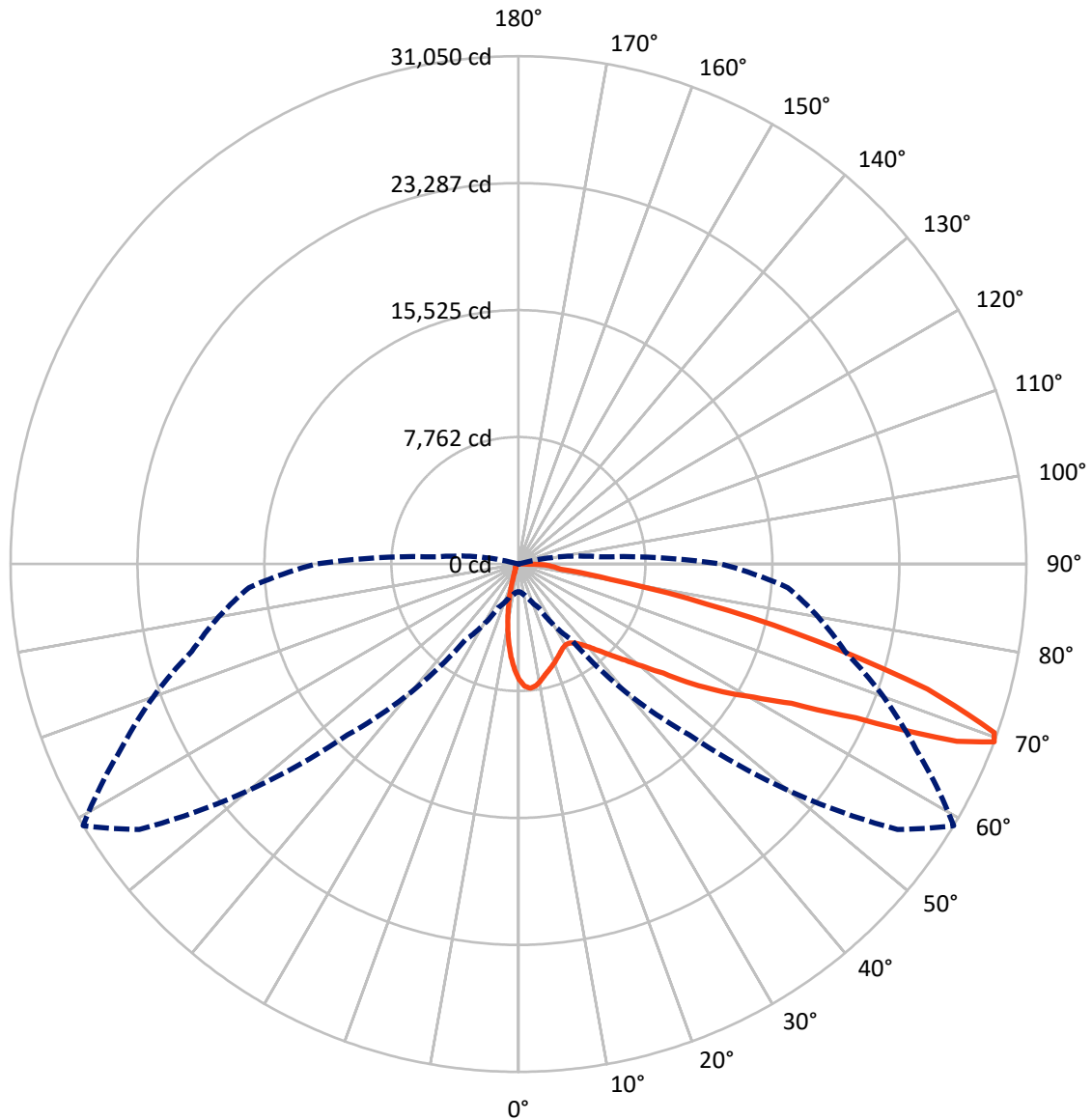


Based on 25 foot mounting height. Maximum calculated value = 11.4 fc  
 Type III - Short - Non-Cutoff

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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	2215.4	0.0	2215.4
	% Fixture	8.1	0.0	8.1
<b>Street Side</b>	Lumens	24989.2	0.0	24989.2
	% Fixture	91.9	0.0	91.9
<b>Total</b>	Lumens	27204.6	0.0	27204.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	574.8	2.1
10°-20°	1187.6	4.4
20°-30°	1598.1	5.9
30°-40°	2320.3	8.5
40°-50°	3863.5	14.2
50°-60°	6027.1	22.2
60°-70°	7458.0	27.4
70°-80°	3779.7	13.9
80°-90°	395.5	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°	27204.6	100.0
0°-180°	27204.6	100.0



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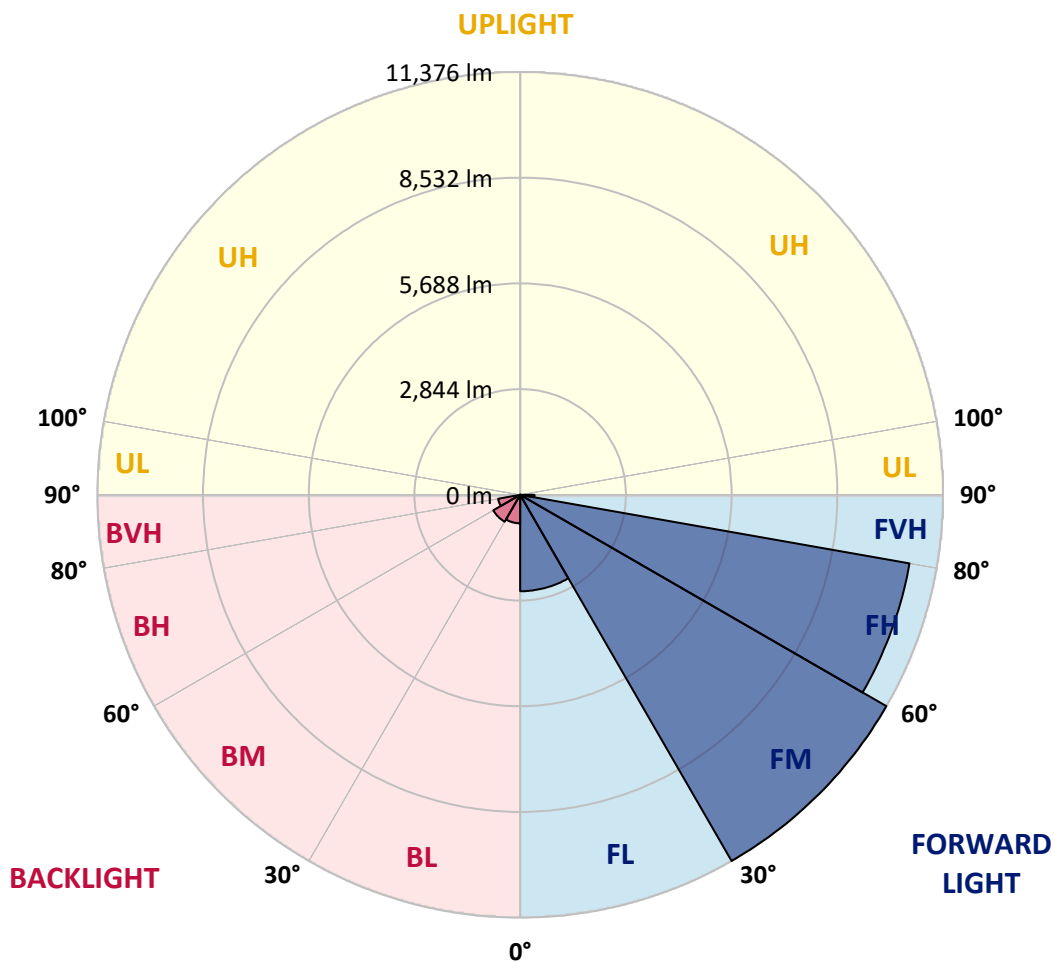
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2593.7	9.5			
FM	(30°-60°)	11376.2	41.8			
FH	(60°-80°)	10636.0	39.1			G4/12000
FVH	(80°-90°)	383.3	1.4			G3/500
BL	(0°-30°)	766.8	2.8	B2/1000		
BM	(30°-60°)	834.8	3.1	B1/1000		
BH	(60°-80°)	601.7	2.2	B2/1000		G2/1000
BVH	(80°-90°)	12.2	0.0			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 III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	7080.8	7080.8	7080.8	7080.8	7080.8	7080.8	7080.8	7080.8	7080.8	7080.8	7080.8
2.5°	7760.8	7758.1	7724.1	7708.7	7680.7	7622.5	7531.7	7484.2	7407.3	7273.2	7093.4
5°	7690.1	7727.3	7746.9	7748.7	7768.8	7746.9	7665.4	7625.8	7519.6	7303.9	6981.2
7.5°	7210.3	7223.8	7281.1	7330.0	7425.5	7516.3	7545.7	7528.4	7465.6	7235.0	6805.6
10°	6696.6	6710.1	6778.1	6842.4	6971.9	7111.6	7259.2	7290.4	7316.5	7136.3	6636.5
12.5°	6253.2	6267.2	6336.6	6420.9	6571.8	6744.1	6973.3	7024.0	7139.5	7042.7	6501.0
15°	5871.8	5877.8	5945.8	6050.1	6230.4	6451.6	6712.0	6793.5	6970.5	6976.5	6382.7
17.5°	5547.1	5562.5	5604.4	5704.1	5901.1	6175.0	6478.2	6595.1	6802.3	6921.1	6267.2
20°	5348.7	5364.1	5362.7	5418.1	5595.1	5887.1	6244.4	6384.1	6636.5	6864.3	6164.2
22.5°	5310.5	5310.5	5270.5	5262.5	5367.3	5611.9	6001.2	6171.7	6487.0	6839.6	6092.1
25°	5447.5	5440.9	5341.3	5259.8	5264.4	5410.2	5765.6	5968.6	6361.3	6856.4	6053.4
27.5°	5736.7	5728.8	5602.5	5447.5	5322.6	5321.2	5587.2	5805.6	6261.1	6936.5	6068.8
30°	6136.3	6133.5	5996.6	5801.0	5575.1	5367.3	5525.7	5724.1	6196.4	7080.8	6104.2
32.5°	6573.2	6568.5	6465.6	6259.7	5973.3	5575.1	5590.4	5756.7	6215.0	7273.2	6190.3
35°	7036.6	7028.7	6984.0	6804.2	6488.9	5957.9	5802.8	5931.8	6331.9	7561.0	6359.4
37.5°	7537.8	7545.7	7577.8	7405.5	7074.8	6494.9	6158.2	6245.8	6567.1	7951.8	6634.7
40°	8277.8	8276.4	8287.1	8060.8	7742.7	7151.6	6654.7	6682.6	6961.1	8470.2	7053.4
42.5°	9620.6	9527.0	9242.4	8780.8	8460.9	7902.4	7281.1	7251.8	7442.7	9111.5	7639.3
45°	11425.4	11225.1	10486.9	9602.4	9193.0	8748.7	8051.5	7957.9	8079.4	9882.4	8362.6
47.5°	12977.3	12769.6	11725.3	10457.6	9969.9	9551.7	8954.6	8785.5	8825.6	10745.4	9279.2
50°	13505.0	13403.4	12491.5	11202.3	10722.1	10562.4	10002.5	9796.2	9739.4	11743.5	10342.1
52.5°	13321.9	13314.5	12706.7	11685.3	11411.4	11608.4	11320.6	11082.1	10873.0	12796.1	11423.5
55°	13028.0	13066.7	12794.2	12108.2	12098.9	12563.7	13123.5	12925.1	12319.2	13939.1	12356.0
57.5°	12217.6	12382.1	12745.3	12908.4	13286.5	13762.1	14625.1	14742.0	14025.2	14814.2	13129.6
60°	9913.1	10274.5	11462.2	13023.4	14817.5	16001.9	16437.4	16537.0	15424.8	15541.7	14174.3
62.5°	7036.6	7405.5	8911.7	11553.0	14840.3	18944.5	19136.9	18744.7	16966.5	16620.4	15975.8
65°	3734.9	4019.9	5250.4	8339.3	12866.9	19627.8	23858.2	22689.2	19686.0	18741.4	18303.2
67.5°	1910.5	1996.7	2486.2	4081.4	8845.6	17434.1	28090.0	28913.0	24373.3	20846.2	18190.9
69°	1690.7	1741.5	2066.1	2950.5	5664.0	14766.7	28296.4	31049.9	26827.4	20670.6	16531.0
70°	1636.7	1681.4	1976.7	2670.6	4427.5	12383.4	27506.9	30862.2	27454.8	20003.2	15291.1
72.5°	1389.3	1427.5	1760.1	2360.0	3598.4	6147.0	22344.5	26152.0	24636.5	16663.3	11068.2
75°	929.2	1055.4	1689.3	2212.3	3347.4	3492.2	14731.3	18898.4	17555.6	11239.1	5765.6
77.5°	223.1	239.9	476.9	1760.1	3061.4	3073.5	7576.4	11748.2	9582.4	4005.9	1362.8
80°	120.2	115.5	133.7	349.3	2850.4	2884.4	3410.7	5702.7	3421.4	664.6	449.0
82.5°	84.8	80.1	86.2	146.2	897.0	2627.3	2467.6	2581.2	1418.2	255.2	201.7
85°	30.7	29.3	47.5	132.3	281.3	1510.4	2535.1	2129.0	1149.0	116.9	147.6
87.5°	10.7	9.3	18.6	72.2	86.2	643.2	1564.5	1609.2	452.2	70.8	69.4
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°	7080.8	7080.8	7080.8	7080.8	7080.8	7080.8	7080.8	7080.8	7080.8	7080.8	7080.8
2.5°	7018.0	6922.5	6747.4	6567.1	6400.8	6201.0	6100.9	6002.6	5961.2	5945.8	5873.6
5°	6814.9	6653.3	6281.1	5907.1	5562.5	5196.4	4955.1	4761.4	4647.3	4591.9	4504.3
7.5°	6555.0	6290.5	5725.5	5148.9	4611.9	4082.8	3690.6	3388.8	3181.1	3081.4	2990.6
10°	6302.6	5950.5	5147.5	4361.3	3631.9	2930.5	2388.8	1996.7	1746.1	1630.6	1557.0
12.5°	6076.7	5619.8	4589.1	3593.8	2678.1	1857.0	1306.0	993.9	838.4	784.3	758.2
15°	5875.0	5315.2	4061.4	2864.4	1813.6	1061.5	714.0	607.8	583.1	583.1	579.9
17.5°	5684.1	5016.6	3551.8	2179.7	1138.3	649.3	543.1	529.1	529.1	535.2	535.2
20°	5501.0	4732.1	3059.5	1564.5	716.8	515.1	490.9	487.6	490.9	498.4	498.4
22.5°	5344.1	4473.6	2599.8	1073.6	532.4	464.4	452.2	447.6	449.0	453.6	456.9
25°	5227.1	4255.1	2166.2	727.5	458.3	422.9	409.4	401.5	395.4	395.4	398.2
27.5°	5153.6	4070.7	1746.1	529.1	412.2	384.7	362.8	350.7	336.7	329.3	332.1
30°	5099.5	3895.1	1352.1	432.2	369.3	341.4	313.9	293.9	273.9	264.5	267.8
32.5°	5079.5	3753.5	1010.7	381.5	330.7	299.9	265.9	239.9	218.4	210.5	212.4
35°	5133.5	3641.3	740.1	344.7	299.9	261.3	223.1	193.8	177.0	172.3	173.7
37.5°	5275.1	3581.2	553.8	313.9	272.5	229.2	186.3	158.4	147.6	147.6	149.0
40°	5542.5	3579.8	444.8	292.5	247.8	198.4	153.7	133.7	127.6	130.9	132.3
42.5°	5933.2	3661.3	387.5	272.5	226.4	169.1	127.6	113.6	112.2	115.5	116.9
45°	6467.0	3810.3	356.8	255.2	203.1	141.6	107.6	98.3	98.3	102.9	104.8
47.5°	7120.9	4028.8	330.7	238.5	179.8	118.3	92.2	86.2	87.6	92.2	93.6
50°	7908.5	4304.5	304.6	219.8	163.0	98.3	80.1	75.5	76.8	82.9	84.8
52.5°	8805.5	4675.2	283.2	203.1	141.6	81.5	67.5	64.7	67.5	74.1	75.5
55°	9574.5	5007.3	257.1	189.1	113.6	67.5	55.4	55.4	58.7	66.1	67.5
57.5°	10314.6	5354.8	233.8	163.0	89.4	54.0	46.1	47.5	52.2	60.1	61.5
60°	11400.7	5943.9	206.3	136.9	67.5	42.8	38.7	40.1	46.1	54.0	55.4
62.5°	13245.1	6841.0	178.4	113.6	52.2	34.0	30.7	34.0	41.5	50.8	52.2
65°	14909.7	7205.7	146.2	95.5	40.1	26.1	26.1	30.7	40.1	49.4	50.8
67.5°	13981.9	6065.5	113.6	75.5	30.7	20.0	21.4	29.3	38.7	49.4	50.8
69°	12365.3	4959.8	96.9	60.1	26.1	18.6	20.0	29.3	38.7	47.5	49.4
70°	11105.4	4187.6	86.2	50.8	23.3	18.6	20.0	27.5	38.7	47.5	49.4
72.5°	7438.1	2261.2	69.4	36.8	21.4	16.8	16.8	27.5	36.8	46.1	47.5
75°	3196.5	624.6	55.4	26.1	18.6	15.4	15.4	26.1	35.4	44.7	47.5
77.5°	584.5	158.4	44.7	23.3	18.6	15.4	14.0	24.7	34.0	42.8	44.7
80°	232.4	78.2	35.4	20.0	16.8	14.0	12.1	23.3	32.1	41.5	42.8
82.5°	140.2	44.7	29.3	18.6	16.8	12.1	10.7	20.0	30.7	40.1	41.5
85°	113.6	30.7	23.3	18.6	15.4	12.1	9.3	18.6	27.5	38.7	40.1
87.5°	55.4	21.4	21.4	16.8	15.4	12.1	9.3	16.8	26.1	36.8	38.7
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)