

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-04-LED-E1-SL3-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-04-LED-E1-SL3-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 4000K CCT 1050mA 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: 18633.7 lumens
Efficiency: N/A
Efficacy: 82.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short - Non-Cutoff
BUG Rating: B2 - U0 - G3

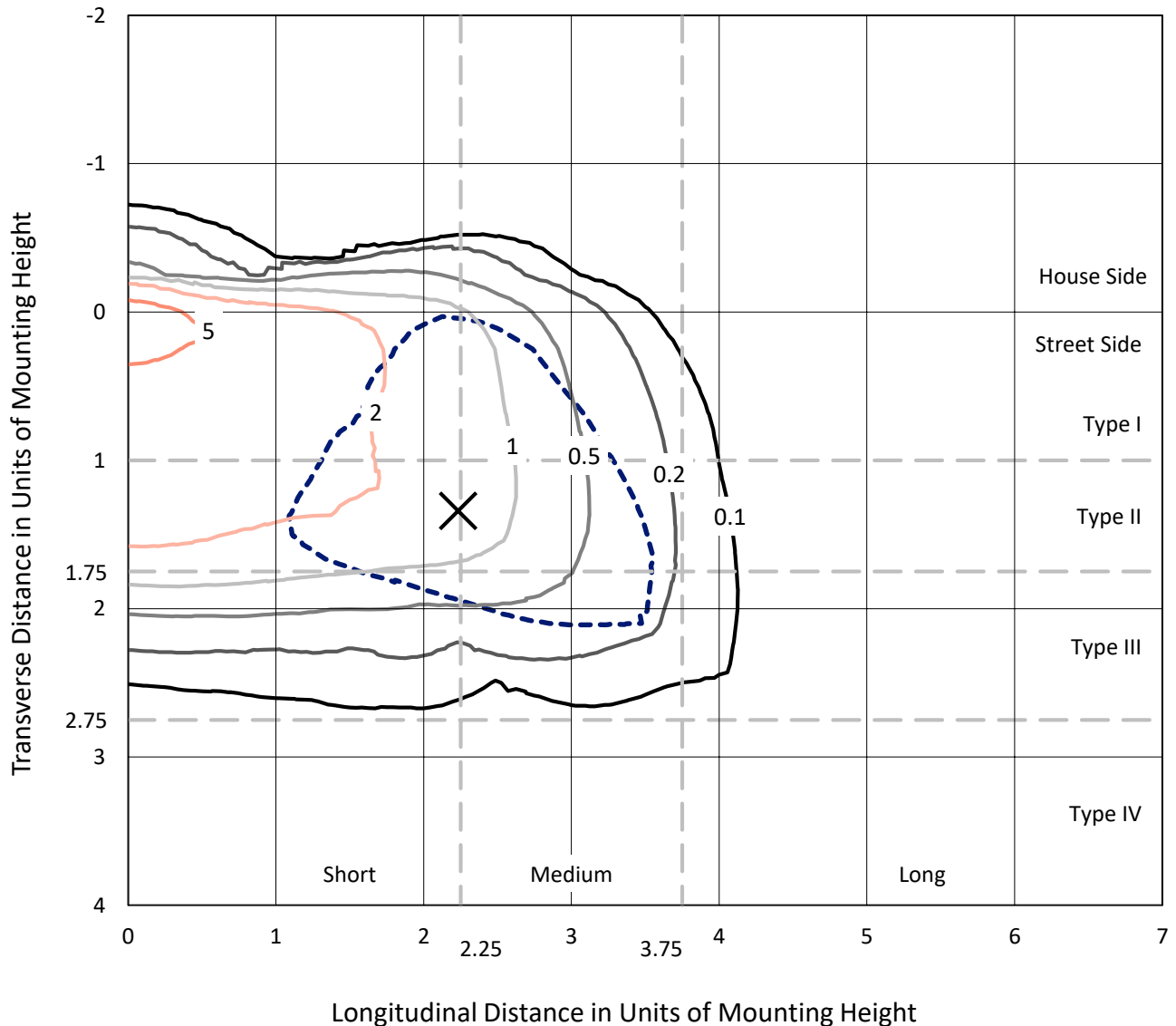
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

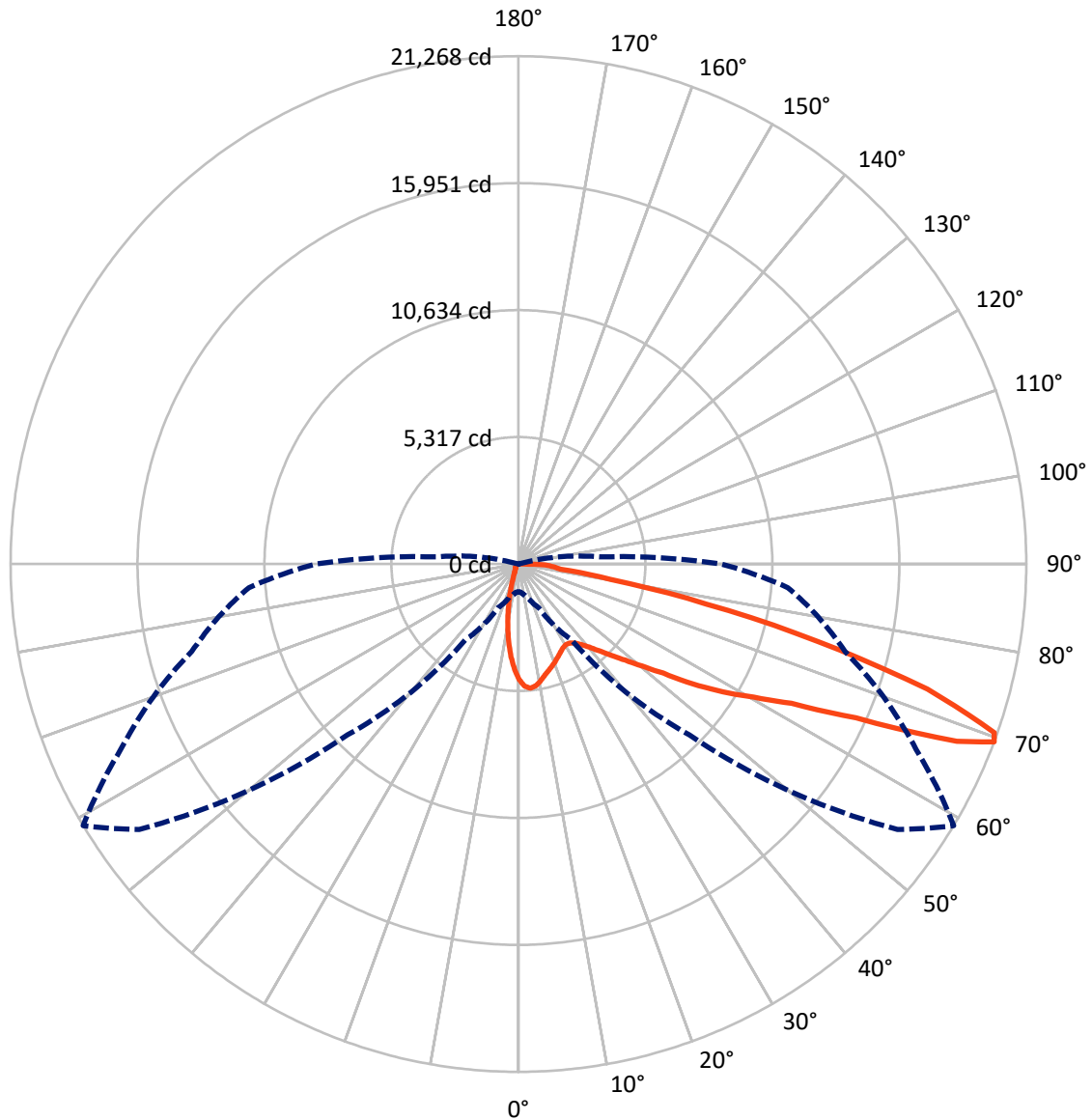
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.8 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
House Side	Lumens	1517.5	0.0	1517.5
	% Fixture	8.1	0.0	8.1
Street Side	Lumens	17116.2	0.0	17116.2
	% Fixture	91.9	0.0	91.9
Total	Lumens	18633.7	0.0	18633.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	393.7	2.1
10°-20°	813.5	4.4
20°-30°	1094.6	5.9
30°-40°	1589.3	8.5
40°-50°	2646.3	14.2
50°-60°	4128.2	22.2
60°-70°	5108.4	27.4
70°-80°	2588.9	13.9
80°-90°	270.9	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°	18633.7	100.0
0°-180°	18633.7	100.0



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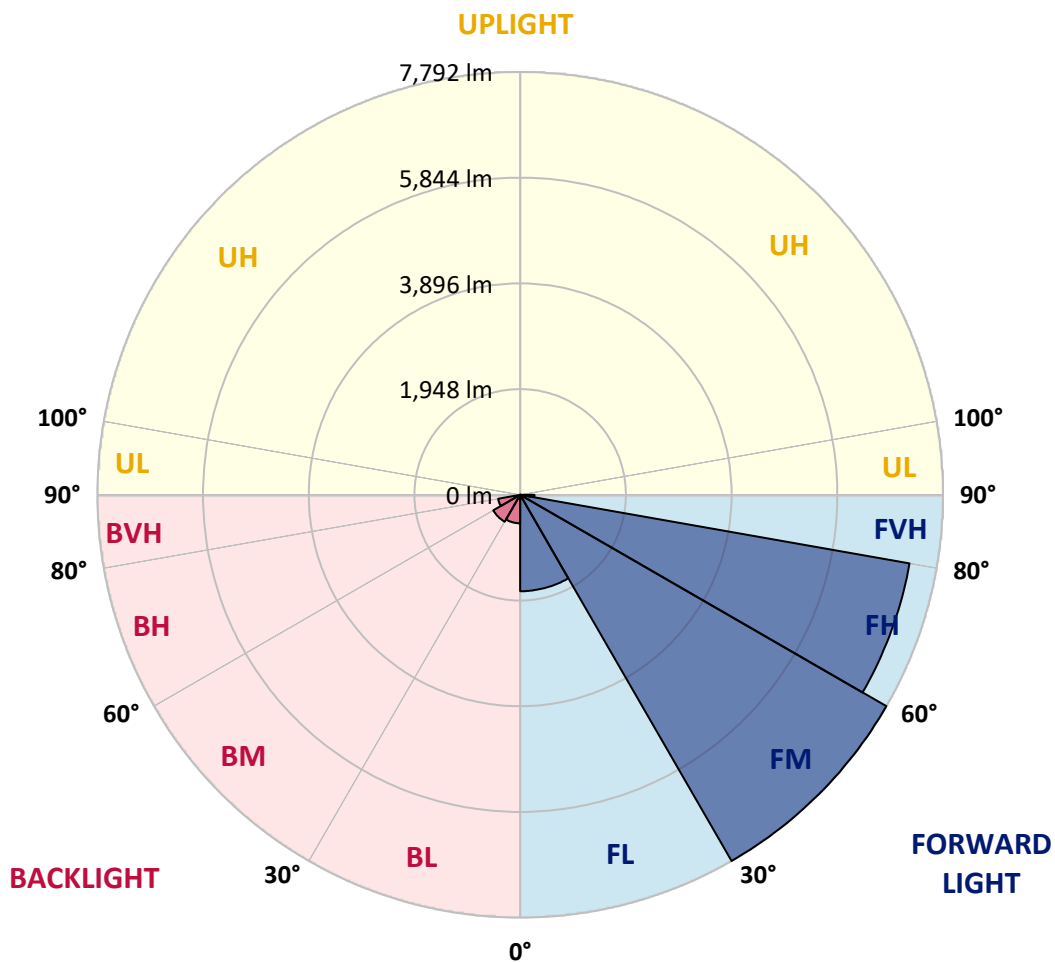
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1776.5	9.5			
FM	(30°-60°)	7792.1	41.8			
FH	(60°-80°)	7285.1	39.1			G3/7500
FVH	(80°-90°)	262.5	1.4			G3/500
BL	(0°-30°)	525.2	2.8	B2/1000		
BM	(30°-60°)	571.8	3.1	B1/1000		
BH	(60°-80°)	412.1	2.2	B1/500		G1/500
BVH	(80°-90°)	8.3	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	4850.0	4850.0	4850.0	4850.0	4850.0	4850.0	4850.0	4850.0	4850.0	4850.0	4850.0
2.5°	5315.8	5313.8	5290.5	5280.0	5260.9	5221.0	5158.8	5126.3	5073.6	4981.7	4858.6
5°	5267.3	5292.8	5306.2	5307.5	5321.2	5306.2	5250.4	5223.2	5150.5	5002.8	4781.7
7.5°	4938.7	4947.9	4987.2	5020.7	5086.1	5148.3	5168.4	5156.6	5113.5	4955.6	4661.5
10°	4586.8	4596.1	4642.6	4686.7	4775.3	4871.0	4972.2	4993.5	5011.4	4888.0	4545.6
12.5°	4283.1	4292.7	4340.2	4397.9	4501.3	4619.3	4776.3	4811.1	4890.2	4823.8	4452.8
15°	4021.8	4026.0	4072.5	4144.0	4267.5	4419.0	4597.3	4653.2	4774.4	4778.5	4371.8
17.5°	3799.5	3810.0	3838.7	3907.0	4041.9	4229.5	4437.2	4517.3	4659.2	4740.6	4292.7
20°	3663.6	3674.1	3673.1	3711.1	3832.3	4032.4	4277.0	4372.7	4545.6	4701.6	4222.2
22.5°	3637.4	3637.4	3610.0	3604.6	3676.3	3843.8	4110.5	4227.3	4443.2	4684.7	4172.7
25°	3731.2	3726.7	3658.5	3602.6	3605.8	3705.7	3949.1	4088.2	4357.1	4696.2	4146.2
27.5°	3929.3	3923.9	3837.4	3731.2	3645.7	3644.7	3826.9	3976.5	4288.5	4751.1	4156.8
30°	4203.0	4201.1	4107.3	3973.3	3818.6	3676.3	3784.8	3920.7	4244.2	4850.0	4181.0
32.5°	4502.3	4499.1	4428.6	4287.6	4091.4	3818.6	3829.1	3943.0	4256.9	4981.7	4240.0
35°	4819.7	4814.3	4783.6	4660.5	4444.5	4080.8	3974.6	4063.0	4337.0	5178.9	4355.8
37.5°	5162.9	5168.4	5190.4	5072.3	4845.8	4448.7	4218.0	4278.0	4498.1	5446.5	4544.4
40°	5669.9	5668.9	5676.2	5521.2	5303.3	4898.5	4558.1	4577.2	4768.0	5801.6	4831.2
42.5°	6589.6	6525.5	6330.5	6014.4	5795.2	5412.7	4987.2	4967.1	5097.9	6240.9	5232.5
45°	7825.8	7688.6	7182.9	6577.1	6296.7	5992.4	5514.8	5450.7	5534.0	6768.9	5727.9
47.5°	8888.7	8746.4	8031.2	7162.9	6828.8	6542.4	6133.4	6017.6	6045.0	7360.0	6355.7
50°	9250.2	9180.6	8556.0	7673.0	7344.1	7234.6	6851.2	6709.8	6670.9	8043.7	7083.7
52.5°	9124.8	9119.7	8703.4	8003.8	7816.2	7951.1	7754.0	7590.6	7447.4	8764.6	7824.5
55°	8923.5	8950.0	8763.4	8293.4	8287.1	8605.4	8988.9	8853.0	8438.0	9547.5	8463.2
57.5°	8368.4	8481.0	8729.9	8841.5	9100.5	9426.3	10017.4	10097.5	9606.5	10146.9	8993.0
60°	6789.9	7037.5	7851.0	8920.3	10149.2	10960.4	11258.7	11327.0	10565.1	10645.2	9708.6
62.5°	4819.7	5072.3	6104.0	7913.2	10164.8	12975.9	13107.7	12839.1	11621.1	11384.1	10942.5
65°	2558.2	2753.4	3596.3	5712.0	8813.1	13443.9	16341.6	15540.8	13483.8	12836.9	12536.7
67.5°	1308.6	1367.6	1702.9	2795.5	6058.7	11941.4	19240.1	19803.8	16694.4	14278.5	12459.8
69°	1158.0	1192.8	1415.2	2021.0	3879.5	10114.4	19381.5	21267.5	18375.3	14158.2	11322.8
70°	1121.0	1151.6	1353.9	1829.2	3032.6	8482.0	18840.7	21138.9	18805.0	13701.1	10473.6
72.5°	951.6	977.8	1205.6	1616.5	2464.7	4210.4	15304.8	17912.7	16874.6	11413.4	7581.1
75°	636.4	722.9	1157.1	1515.3	2292.8	2392.0	10090.1	12944.4	12024.6	7698.2	3949.1
77.5°	152.8	164.3	326.7	1205.6	2096.9	2105.2	5189.4	8046.8	6563.4	2743.9	933.4
80°	82.3	79.1	91.6	239.3	1952.4	1975.7	2336.1	3906.0	2343.5	455.2	307.5
82.5°	58.1	54.9	59.0	100.2	614.4	1799.6	1690.1	1768.0	971.4	174.8	138.1
85°	21.1	20.1	32.5	90.6	192.7	1034.6	1736.4	1458.2	787.0	80.1	101.1
87.5°	7.3	6.4	12.8	49.4	59.0	440.6	1071.6	1102.2	309.8	48.5	47.5
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°	4850.0	4850.0	4850.0	4850.0	4850.0	4850.0	4850.0	4850.0	4850.0	4850.0	4850.0
2.5°	4806.9	4741.5	4621.6	4498.1	4384.2	4247.4	4178.8	4111.5	4083.1	4072.5	4023.1
5°	4667.8	4557.1	4302.2	4046.1	3810.0	3559.3	3394.0	3261.3	3183.1	3145.2	3085.2
7.5°	4489.8	4308.6	3921.7	3526.7	3158.9	2796.5	2527.9	2321.2	2178.9	2110.6	2048.4
10°	4316.9	4075.7	3525.8	2987.3	2487.7	2007.2	1636.2	1367.6	1196.0	1116.9	1066.5
12.5°	4162.2	3849.2	3143.3	2461.5	1834.3	1271.9	894.5	680.8	574.2	537.2	519.4
15°	4024.1	3640.6	2781.8	1961.9	1242.2	727.0	489.1	416.3	399.4	399.4	397.2
17.5°	3893.3	3436.1	2432.8	1493.0	779.7	444.7	372.0	362.4	362.4	366.5	366.5
20°	3767.9	3241.2	2095.6	1071.6	491.0	352.8	336.2	334.0	336.2	341.3	341.3
22.5°	3660.4	3064.1	1780.7	735.3	364.6	318.1	309.8	306.6	307.5	310.7	313.0
25°	3580.3	2914.5	1483.7	498.3	313.9	289.7	280.4	275.0	270.8	270.8	272.8
27.5°	3529.9	2788.2	1196.0	362.4	282.3	263.5	248.5	240.2	230.6	225.5	227.5
30°	3492.9	2667.9	926.1	296.0	253.0	233.8	215.0	201.3	187.6	181.2	183.4
32.5°	3479.2	2570.9	692.3	261.3	226.5	205.4	182.2	164.3	149.6	144.2	145.5
35°	3516.2	2494.1	506.9	236.1	205.4	179.0	152.8	132.7	121.2	118.0	119.0
37.5°	3613.2	2452.9	379.3	215.0	186.6	157.0	127.6	108.5	101.1	101.1	102.1
40°	3796.3	2452.0	304.7	200.3	169.7	135.9	105.3	91.6	87.4	89.6	90.6
42.5°	4063.9	2507.8	265.4	186.6	155.0	115.8	87.4	77.8	76.9	79.1	80.1
45°	4429.5	2609.9	244.4	174.8	139.1	97.0	73.7	67.3	67.3	70.5	71.8
47.5°	4877.4	2759.5	226.5	163.3	123.1	81.0	63.2	59.0	60.0	63.2	64.1
50°	5416.9	2948.3	208.6	150.6	111.7	67.3	54.9	51.7	52.6	56.8	58.1
52.5°	6031.3	3202.3	194.0	139.1	97.0	55.8	46.3	44.3	46.3	50.7	51.7
55°	6558.0	3429.7	176.1	129.5	77.8	46.3	38.0	38.0	40.2	45.3	46.3
57.5°	7064.9	3667.7	160.1	111.7	61.3	37.0	31.6	32.5	35.7	41.2	42.1
60°	7808.9	4071.3	141.3	93.8	46.3	29.3	26.5	27.4	31.6	37.0	38.0
62.5°	9072.2	4685.7	122.2	77.8	35.7	23.3	21.1	23.3	28.4	34.8	35.7
65°	10212.3	4935.5	100.2	65.4	27.4	17.9	17.9	21.1	27.4	33.8	34.8
67.5°	9576.8	4154.5	77.8	51.7	21.1	13.7	14.7	20.1	26.5	33.8	34.8
69°	8469.5	3397.2	66.4	41.2	17.9	12.8	13.7	20.1	26.5	32.5	33.8
70°	7606.6	2868.3	59.0	34.8	16.0	12.8	13.7	18.8	26.5	32.5	33.8
72.5°	5094.7	1548.8	47.5	25.2	14.7	11.5	11.5	18.8	25.2	31.6	32.5
75°	2189.4	427.8	38.0	17.9	12.8	10.5	10.5	17.9	24.2	30.6	32.5
77.5°	400.4	108.5	30.6	16.0	12.8	10.5	9.6	16.9	23.3	29.3	30.6
80°	159.2	53.6	24.2	13.7	11.5	9.6	8.3	16.0	22.0	28.4	29.3
82.5°	96.0	30.6	20.1	12.8	11.5	8.3	7.3	13.7	21.1	27.4	28.4
85°	77.8	21.1	16.0	12.8	10.5	8.3	6.4	12.8	18.8	26.5	27.4
87.5°	38.0	14.7	14.7	11.5	10.5	8.3	6.4	11.5	17.9	25.2	26.5
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)