

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: P301011

Luminaire Tested: **GLNA-AF-09-LED-E1-SL4-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301011
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24301)
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-SL4-600
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V
Square Wide OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 33194.1 lumens
Efficiency: N/A
Efficacy: 114.5 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G5

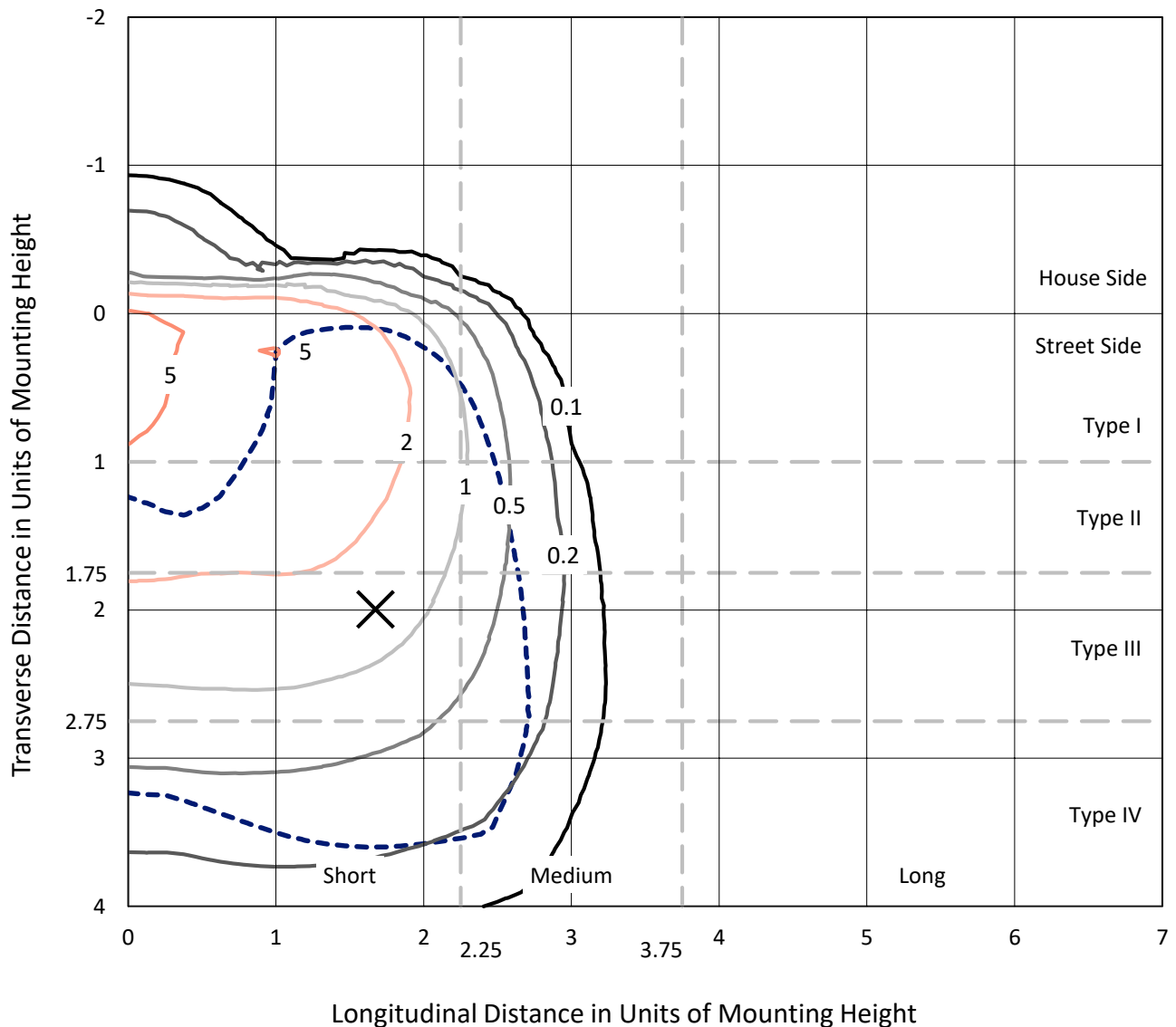
Input Watts (W): 290
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

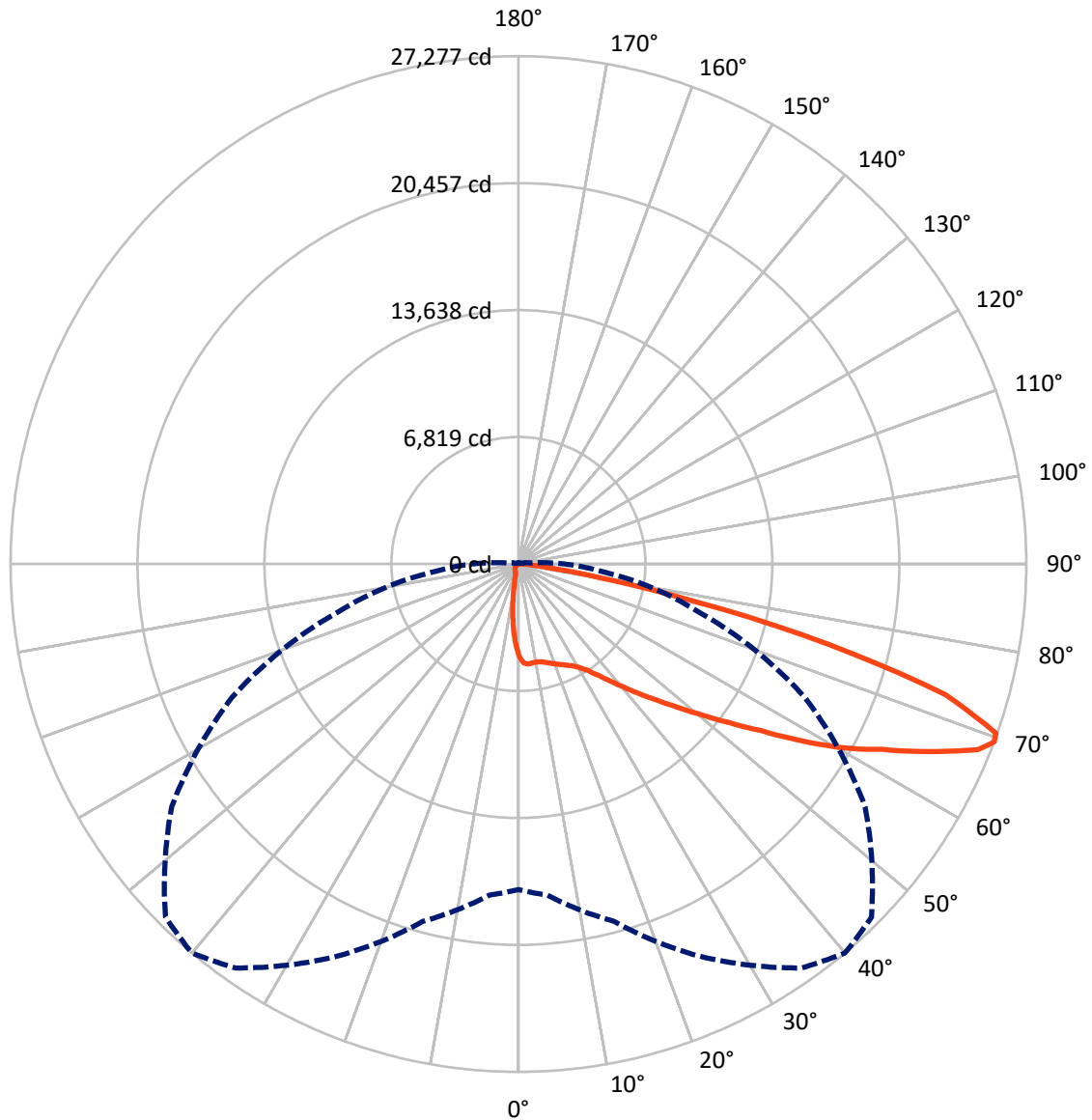
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1942.0	0.0	1942.0
	% Fixture	5.9	0.0	5.9
Street Side	Lumens	31252.0	0.0	31252.0
	% Fixture	94.1	0.0	94.1
Total	Lumens	33194.1	0.0	33194.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	402.1	1.2
10°-20°	988.8	3.0
20°-30°	1665.6	5.0
30°-40°	2726.6	8.2
40°-50°	4721.0	14.2
50°-60°	7436.0	22.4
60°-70°	9711.2	29.3
70°-80°	5001.7	15.1
80°-90°	541.0	1.6
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°	33194.1	100.0
0°-180°	33194.1	100.0



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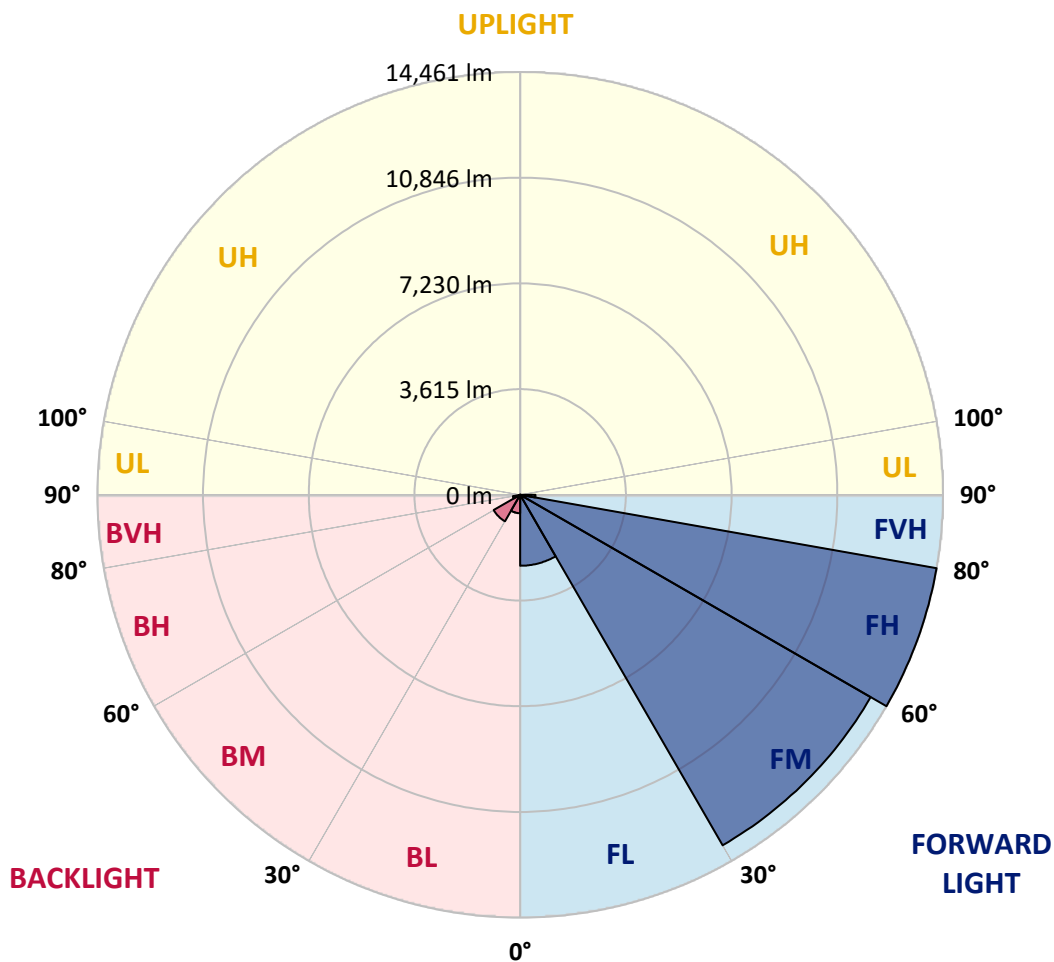
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2427.4	7.3			
FM	(30°-60°)	13839.8	41.7			
FH	(60°-80°)	14460.7	43.6			G5
FVH	(80°-90°)	524.0	1.6			G4/750
BL	(0°-30°)	629.1	1.9	B2/1000		
BM	(30°-60°)	1043.8	3.1	B2/2500		
BH	(60°-80°)	252.2	0.8	B1/500		G1/500
BVH	(80°-90°)	17.0	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-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	4959.4	4959.4	4959.4	4959.4	4959.4	4959.4	4959.4	4959.4	4959.4	4959.4	4959.4
2.5°	5445.4	5415.8	5398.0	5374.3	5344.7	5319.0	5309.1	5236.0	5166.8	5072.0	4963.3
5°	5546.2	5536.3	5504.7	5473.1	5437.5	5398.0	5376.3	5289.3	5190.5	5052.2	4862.5
7.5°	5556.1	5544.2	5504.7	5461.2	5411.8	5364.4	5326.9	5239.9	5149.0	5008.8	4777.6
10°	5540.3	5526.4	5496.8	5449.4	5388.1	5342.7	5305.1	5222.1	5145.1	5018.6	4761.8
12.5°	5522.5	5508.6	5494.8	5471.1	5417.8	5386.1	5354.5	5275.5	5206.3	5099.6	4819.1
15°	5540.3	5532.4	5548.2	5538.3	5508.6	5481.0	5449.4	5378.2	5315.0	5226.1	4923.8
17.5°	5615.3	5615.3	5664.7	5670.7	5643.0	5603.5	5558.0	5486.9	5433.6	5358.5	5048.3
20°	5791.2	5785.3	5848.5	5860.3	5793.2	5731.9	5664.7	5577.8	5536.3	5488.9	5170.8
22.5°	6093.5	6065.8	6103.4	6091.5	5959.1	5864.3	5781.3	5674.6	5652.9	5631.1	5307.1
25°	6486.7	6470.9	6496.6	6380.0	6146.8	6018.4	5919.6	5799.1	5799.1	5820.8	5461.2
27.5°	7057.7	6998.4	6911.5	6706.0	6356.3	6192.3	6085.6	5957.2	5990.8	6071.8	5664.7
30°	7642.6	7577.4	7377.8	7061.7	6611.2	6439.3	6314.8	6180.4	6259.5	6407.7	5937.4
32.5°	8219.5	8146.4	7863.8	7464.7	6976.7	6804.8	6684.3	6536.1	6668.5	6917.4	6336.5
35°	8778.7	8713.5	8387.4	7917.2	7462.8	7320.5	7209.8	7081.4	7251.3	7599.1	6899.6
37.5°	9407.0	9335.9	8938.7	8428.9	8053.5	7950.8	7869.8	7741.3	8037.7	8547.5	7684.0
40°	10179.5	10059.0	9523.6	9015.8	8737.2	8687.8	8632.5	8614.7	9075.0	9780.4	8729.3
42.5°	11064.7	10867.1	10136.1	9634.2	9488.0	9523.6	9509.7	9588.8	10373.2	11313.7	10001.7
45°	11949.9	11695.0	10817.7	10294.1	10313.9	10438.4	10515.4	10831.6	11999.3	13072.2	11371.0
47.5°	12700.7	12449.8	11471.7	11007.4	11244.5	11489.5	11699.0	12297.6	13670.8	14803.0	12435.9
50°	13342.9	13105.8	12165.3	11791.8	12325.3	12720.5	13060.3	13947.5	15468.9	16120.9	13182.8
52.5°	13868.4	13710.4	12884.5	12690.8	13560.2	14139.1	14637.0	15700.0	17061.4	17191.8	13763.7
55°	14380.2	14267.6	13657.0	13759.8	15010.5	15798.8	16429.1	17559.3	18432.6	18084.9	14320.9
57.5°	14969.0	14866.2	14538.2	15115.2	16917.2	17909.0	18596.6	19207.2	19639.9	18997.7	14846.5
60°	15569.6	15510.4	15518.3	16620.8	19106.4	20058.7	20438.1	20596.2	20825.4	19857.2	14876.1
62.5°	16142.6	16255.2	16638.6	18296.3	21202.8	21933.8	22125.5	22281.6	22012.9	19993.5	13744.0
65°	17112.8	17296.5	18211.3	20538.9	23508.6	24291.0	24488.6	23953.1	22200.6	18231.1	11179.3
67.5°	17587.0	17922.9	19554.9	22629.3	25745.2	26614.6	26541.5	24061.8	19922.4	13902.0	7174.3
69°	17488.2	17845.8	19865.1	23269.5	26488.1	27276.5	26812.2	22732.1	16972.5	10070.9	4404.2
70°	17097.0	17458.5	19705.1	23245.8	26583.0	27207.3	26310.3	21090.1	14350.5	7364.0	2754.3
72.5°	14277.4	14589.6	17494.1	21011.1	24488.6	23980.8	22010.9	14611.3	6992.5	2005.5	620.4
75°	8788.5	8962.4	12552.5	15828.5	18495.9	17191.8	14664.7	7269.1	2084.5	567.1	343.8
77.5°	4643.2	4722.3	6872.0	9329.9	11724.6	9701.4	7516.1	2835.3	960.3	355.7	249.0
80°	2744.4	2803.7	3700.8	4265.8	5074.0	4238.2	3005.3	1740.7	687.6	223.3	221.3
82.5°	1570.8	1608.3	2683.2	2371.0	1999.6	1707.1	1495.7	1649.8	413.0	150.2	229.2
85°	576.9	584.8	1509.5	1803.9	1189.5	707.4	742.9	1367.3	110.6	94.8	179.8
87.5°	268.7	262.8	776.5	1104.5	695.5	448.5	578.9	300.3	43.5	61.3	49.4
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°	4959.4	4959.4	4959.4	4959.4	4959.4	4959.4	4959.4	4959.4	4959.4	4959.4	4959.4
2.5°	4900.1	4827.0	4694.6	4558.3	4420.0	4313.3	4208.5	4125.6	4097.9	4046.5	4050.5
5°	4749.9	4615.6	4338.9	4058.4	3766.0	3524.9	3297.7	3113.9	3025.0	2934.1	2934.1
7.5°	4619.5	4423.9	3991.2	3534.8	3062.6	2665.4	2307.8	2039.1	1890.9	1772.3	1770.4
10°	4570.1	4305.4	3700.8	3046.7	2388.8	1847.4	1422.6	1149.9	1009.7	918.8	914.8
12.5°	4591.9	4263.9	3477.5	2596.3	1770.4	1187.5	823.9	648.1	588.8	561.1	561.1
15°	4655.1	4252.0	3254.2	2155.6	1250.7	742.9	547.3	499.9	495.9	495.9	495.9
17.5°	4732.1	4256.0	3025.0	1726.9	851.6	531.5	472.2	466.3	470.3	470.3	470.3
20°	4811.2	4257.9	2778.0	1329.7	600.7	462.3	444.6	442.6	446.5	446.5	448.5
22.5°	4908.0	4267.8	2531.1	993.8	495.9	436.7	422.8	422.8	424.8	424.8	422.8
25°	5018.6	4287.6	2274.2	737.0	452.5	418.9	407.0	405.0	407.0	405.0	403.1
27.5°	5156.9	4315.2	1987.7	576.9	432.7	401.1	391.2	391.2	389.2	387.3	385.3
30°	5330.8	4346.9	1665.6	490.0	413.0	385.3	375.4	373.4	371.5	367.5	367.5
32.5°	5595.6	4416.0	1347.5	444.6	391.2	363.6	355.7	355.7	351.7	347.7	345.8
35°	6002.6	4552.3	1063.0	416.9	367.5	339.8	330.0	330.0	326.0	324.0	322.1
37.5°	6565.7	4759.8	825.9	391.2	343.8	314.2	304.3	302.3	298.4	294.4	292.4
40°	7314.6	5016.7	650.1	367.5	320.1	288.5	280.6	276.6	268.7	262.8	262.8
42.5°	8255.1	5309.1	527.5	341.8	292.4	264.8	258.8	252.9	239.1	233.1	231.2
45°	9239.0	5571.9	446.5	312.2	264.8	241.1	237.1	227.2	209.4	203.5	203.5
47.5°	9948.4	5633.1	393.2	284.5	239.1	215.4	213.4	195.6	179.8	175.8	173.9
50°	10391.0	5512.6	349.7	256.9	215.4	191.7	185.7	164.0	154.1	150.2	148.2
52.5°	10689.3	5297.2	314.2	233.1	193.6	169.9	156.1	140.3	132.4	128.4	128.4
55°	10928.4	4993.0	278.6	211.4	175.8	152.1	132.4	120.5	112.6	108.7	108.7
57.5°	10995.6	4580.0	243.0	193.6	158.1	134.4	112.6	104.7	94.8	92.9	92.9
60°	10507.5	3835.1	215.4	171.9	142.3	116.6	98.8	88.9	79.0	77.1	75.1
62.5°	9221.3	2967.7	189.7	152.1	124.5	100.8	85.0	73.1	65.2	65.2	65.2
65°	7034.0	1989.7	166.0	132.4	108.7	85.0	73.1	59.3	55.3	55.3	57.3
67.5°	4210.5	1082.8	142.3	112.6	92.9	71.1	61.3	51.4	49.4	51.4	51.4
69°	2467.8	636.2	128.4	100.8	81.0	63.2	53.3	45.4	49.4	51.4	51.4
70°	1523.4	428.8	118.6	90.9	73.1	57.3	49.4	43.5	47.4	49.4	49.4
72.5°	424.8	221.3	94.8	71.1	59.3	47.4	39.5	39.5	45.4	47.4	47.4
75°	276.6	164.0	73.1	53.3	45.4	37.5	33.6	37.5	43.5	45.4	45.4
77.5°	229.2	134.4	59.3	43.5	37.5	35.6	31.6	33.6	39.5	41.5	41.5
80°	209.4	94.8	47.4	39.5	33.6	31.6	29.6	27.7	35.6	37.5	37.5
82.5°	199.6	75.1	41.5	35.6	31.6	27.7	25.7	27.7	31.6	33.6	35.6
85°	124.5	49.4	37.5	33.6	27.7	25.7	25.7	25.7	29.6	31.6	31.6
87.5°	45.4	39.5	33.6	27.7	23.7	23.7	23.7	23.7	25.7	29.6	29.6
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)