

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-SL3-7027-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-SL3-7027-HSS  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(4) 70 CRI, 2700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III  
w/Spill Control WITH HOUSESIDE SHEILD OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

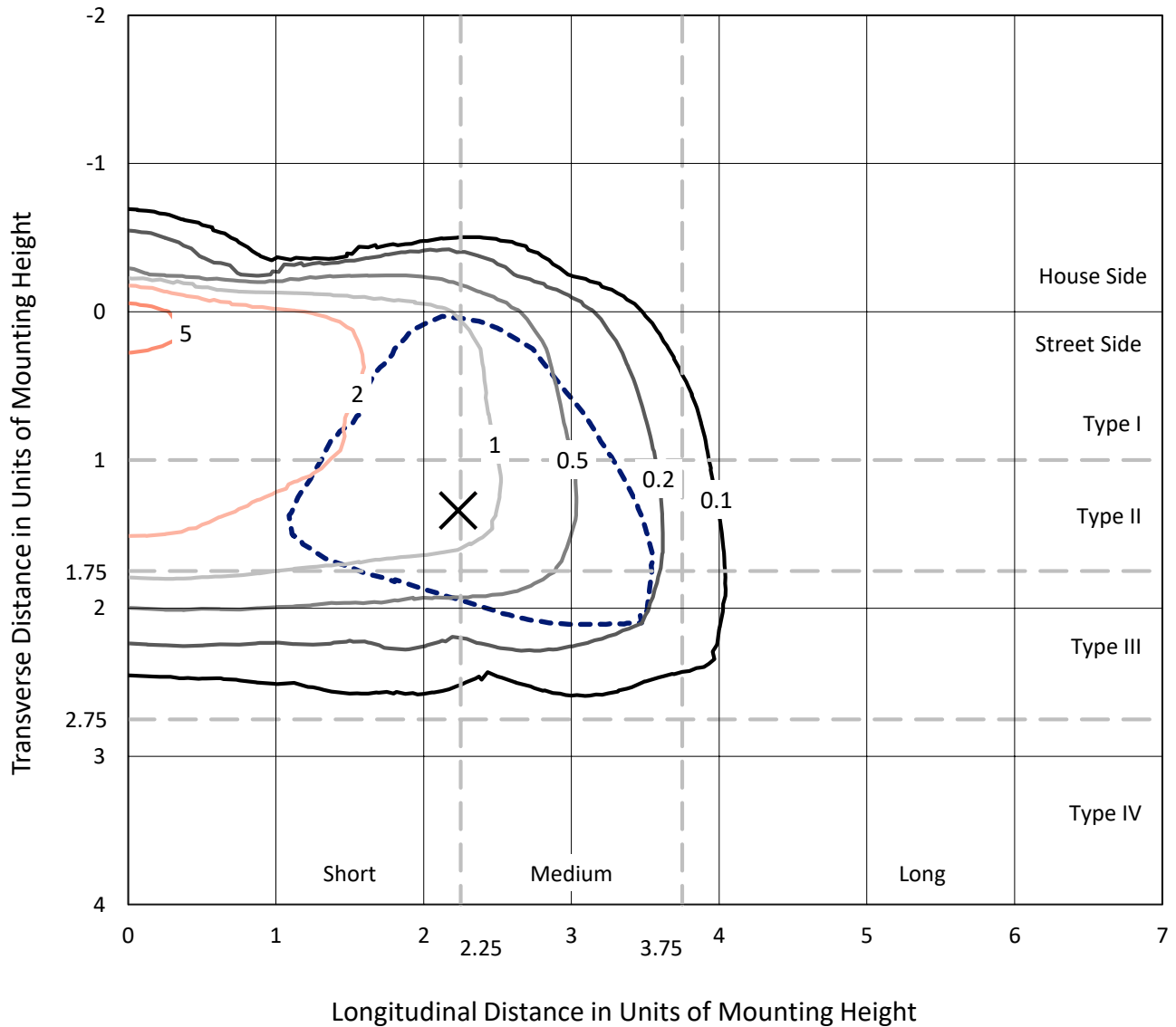
Lumens per Lamp: N/A  
Luminaire Lumens: 16189.7 lumens  
Efficiency: N/A  
Efficacy: 72.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G3  
  
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (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

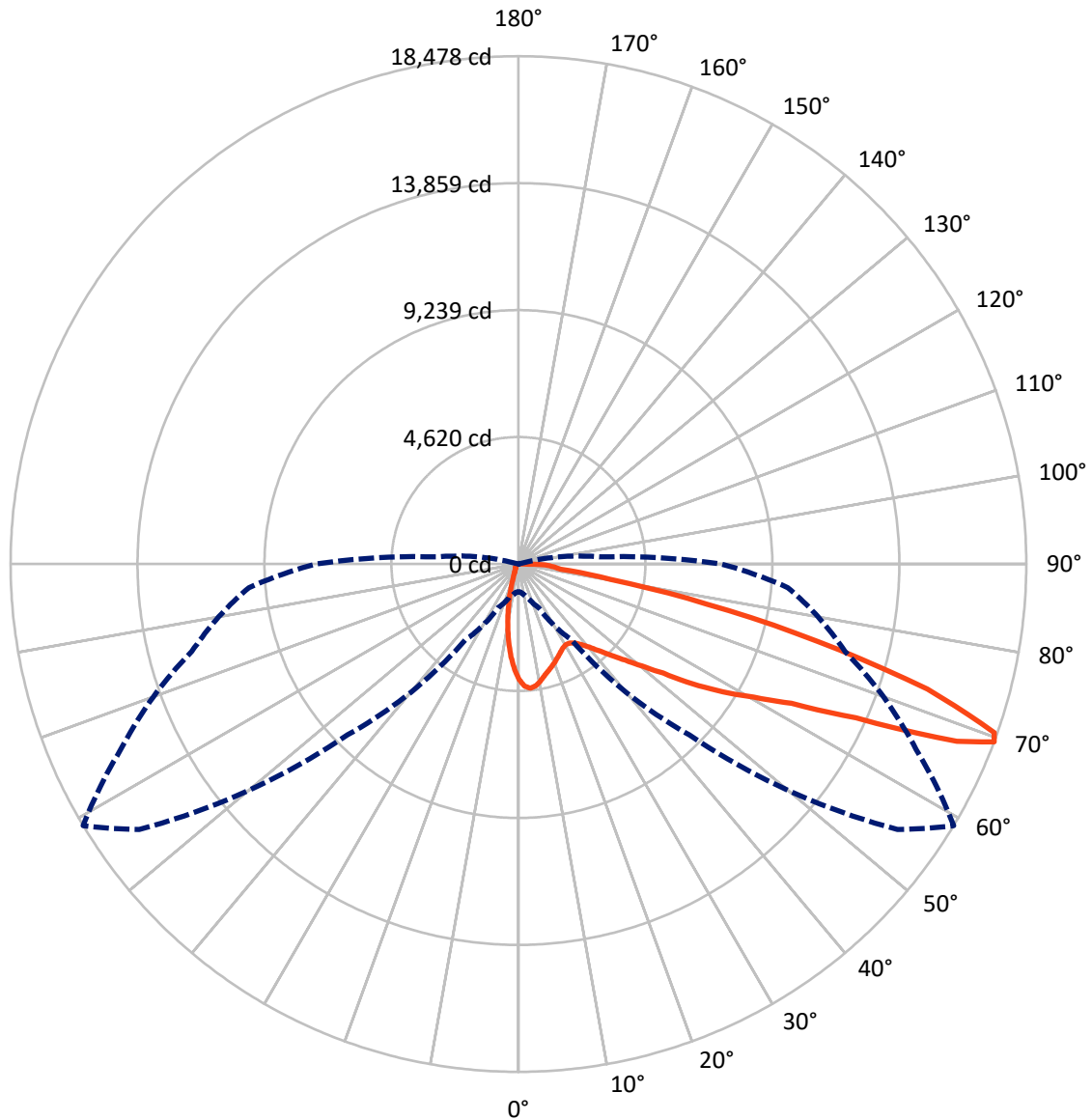
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.8 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
<b>House Side</b>	Lumens	1318.4	0.0	1318.4
	% Fixture	8.1	0.0	8.1
<b>Street Side</b>	Lumens	14871.2	0.0	14871.2
	% Fixture	91.9	0.0	91.9
<b>Total</b>	Lumens	16189.7	0.0	16189.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	342.0	2.1
10°-20°	706.8	4.4
20°-30°	951.0	5.9
30°-40°	1380.9	8.5
40°-50°	2299.2	14.2
50°-60°	3586.7	22.2
60°-70°	4438.3	27.4
70°-80°	2249.3	13.9
80°-90°	235.4	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°	16189.7	100.0
0°-180°	16189.7	100.0



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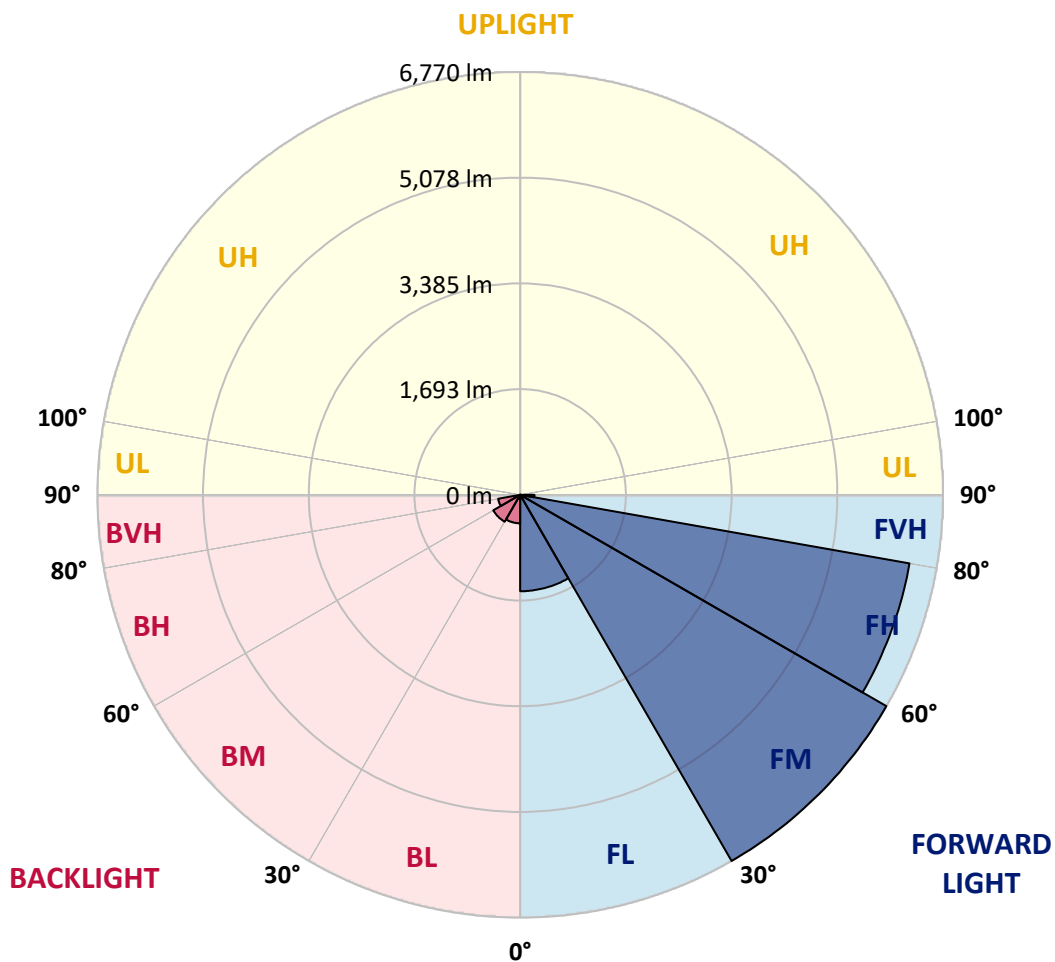
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1543.5	9.5			
FM	(30°-60°)	6770.0	41.8			
FH	(60°-80°)	6329.6	39.1			G3/7500
FVH	(80°-90°)	228.1	1.4			G3/500
BL	(0°-30°)	456.3	2.8	B1/500		
BM	(30°-60°)	496.8	3.1	B1/1000		
BH	(60°-80°)	358.1	2.2	B1/500		G1/500
BVH	(80°-90°)	7.2	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G3**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	4213.9	4213.9	4213.9	4213.9	4213.9	4213.9	4213.9	4213.9	4213.9	4213.9	4213.9
2.5°	4618.5	4616.9	4596.6	4587.5	4570.9	4536.2	4482.2	4453.9	4408.2	4328.3	4221.3
5°	4576.4	4598.6	4610.2	4611.3	4623.2	4610.2	4561.7	4538.2	4475.0	4346.6	4154.5
7.5°	4290.9	4299.0	4333.0	4362.1	4419.0	4473.0	4490.5	4480.2	4442.8	4305.6	4050.0
10°	3985.2	3993.2	4033.7	4071.9	4149.0	4232.2	4320.0	4338.6	4354.1	4246.8	3949.4
12.5°	3721.3	3729.6	3770.9	3821.1	3910.9	4013.5	4149.8	4180.0	4248.8	4191.1	3868.8
15°	3494.3	3497.9	3538.4	3600.5	3707.7	3839.4	3994.3	4042.8	4148.2	4151.8	3798.4
17.5°	3301.1	3310.3	3335.2	3394.5	3511.8	3674.8	3855.2	3924.8	4048.1	4118.8	3729.6
20°	3183.1	3192.2	3191.4	3224.4	3329.7	3503.5	3716.1	3799.2	3949.4	4085.0	3668.4
22.5°	3160.3	3160.3	3136.5	3131.8	3194.1	3339.7	3571.4	3672.8	3860.5	4070.3	3625.4
25°	3241.8	3237.9	3178.6	3130.1	3132.9	3219.6	3431.1	3552.0	3785.6	4080.3	3602.4
27.5°	3413.9	3409.2	3334.1	3241.8	3167.5	3166.7	3325.0	3455.0	3726.0	4127.9	3611.6
30°	3651.8	3650.1	3568.6	3452.2	3317.8	3194.1	3288.4	3406.5	3687.5	4213.9	3632.6
32.5°	3911.7	3909.0	3847.7	3725.2	3554.7	3317.8	3326.9	3425.9	3698.6	4328.3	3683.9
35°	4187.5	4182.8	4156.2	4049.2	3861.6	3545.6	3453.3	3530.1	3768.2	4499.6	3784.5
37.5°	4485.8	4490.5	4509.6	4407.0	4210.3	3865.2	3664.8	3716.9	3908.1	4732.2	3948.3
40°	4926.2	4925.4	4931.7	4797.0	4607.7	4256.0	3960.2	3976.9	4142.6	5040.7	4197.5
42.5°	5725.3	5669.6	5500.2	5225.5	5035.1	4702.8	4333.0	4315.6	4429.2	5422.3	4546.2
45°	6799.3	6680.1	6240.8	5714.5	5470.8	5206.4	4791.5	4735.8	4808.1	5881.1	4976.6
47.5°	7722.9	7599.2	6977.8	6223.4	5933.2	5684.3	5328.9	5228.3	5252.1	6394.7	5522.1
50°	8036.9	7976.5	7433.8	6666.6	6380.8	6285.7	5952.6	5829.8	5796.0	6988.6	6154.6
52.5°	7928.0	7923.5	7561.8	6954.0	6791.0	6908.3	6737.0	6595.1	6470.6	7615.0	6798.2
55°	7753.1	7776.1	7613.9	7205.7	7200.1	7476.7	7809.9	7691.8	7331.2	8295.2	7353.1
57.5°	7270.8	7368.6	7584.8	7681.8	7906.9	8189.9	8703.5	8773.1	8346.5	8816.0	7813.5
60°	5899.3	6114.4	6821.2	7750.3	8818.0	9522.8	9782.0	9841.3	9179.4	9249.0	8435.2
62.5°	4187.5	4407.0	5303.4	6875.3	8831.6	11274.0	11388.5	11155.1	10096.9	9890.9	9507.3
65°	2222.6	2392.3	3124.6	4962.8	7657.2	11680.6	14198.2	13502.5	11715.3	11153.2	10892.3
67.5°	1137.0	1188.2	1479.5	2428.9	5264.1	10375.1	16716.6	17206.3	14504.7	12405.7	10825.5
69°	1006.1	1036.3	1229.5	1755.9	3370.7	8787.8	16839.4	18478.0	15965.2	12301.2	9837.7
70°	974.0	1000.6	1176.3	1589.3	2634.8	7369.5	16369.6	18366.3	16338.5	11904.0	9099.9
72.5°	826.8	849.5	1047.4	1404.4	2141.4	3658.1	13297.4	15563.3	14661.3	9916.4	6586.7
75°	553.0	628.1	1005.3	1316.6	1992.0	2078.2	8766.7	11246.6	10447.5	6688.5	3431.1
77.5°	132.8	142.7	283.8	1047.4	1821.9	1829.1	4508.8	6991.4	5702.6	2384.0	811.0
80°	71.5	68.7	79.5	207.9	1696.3	1716.5	2029.7	3393.7	2036.1	395.5	267.2
82.5°	50.4	47.7	51.3	87.0	533.8	1563.5	1468.5	1536.1	844.0	151.9	120.0
85°	18.3	17.5	28.3	78.7	167.4	898.9	1508.7	1267.0	683.8	69.6	87.9
87.5°	6.4	5.5	11.1	43.0	51.3	382.8	931.0	957.6	269.1	42.1	41.3
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°	4213.9	4213.9	4213.9	4213.9	4213.9	4213.9	4213.9	4213.9	4213.9	4213.9	4213.9
2.5°	4176.4	4119.6	4015.4	3908.1	3809.2	3690.3	3630.7	3572.2	3547.5	3538.4	3495.4
5°	4055.6	3959.4	3738.0	3515.4	3310.3	3092.4	2948.8	2833.5	2765.6	2732.6	2680.5
7.5°	3900.9	3743.5	3407.3	3064.1	2744.6	2429.7	2196.3	2016.7	1893.1	1833.8	1779.7
10°	3750.7	3541.2	3063.3	2595.4	2161.4	1744.0	1421.6	1188.2	1039.1	970.4	926.6
12.5°	3616.3	3344.4	2731.0	2138.7	1593.7	1105.1	777.2	591.5	498.9	466.8	451.2
15°	3496.3	3163.1	2416.9	1704.6	1079.3	631.7	424.9	361.7	347.0	347.0	345.1
17.5°	3382.6	2985.4	2113.7	1297.2	677.4	386.4	323.2	314.9	314.9	318.5	318.5
20°	3273.7	2816.1	1820.7	931.0	426.6	306.6	292.1	290.2	292.1	296.6	296.6
22.5°	3180.3	2662.2	1547.2	638.9	316.8	276.3	269.1	266.4	267.2	270.0	271.9
25°	3110.7	2532.3	1289.1	432.9	272.7	251.7	243.6	238.9	235.3	235.3	237.0
27.5°	3066.9	2422.5	1039.1	314.9	245.3	228.9	215.9	208.7	200.4	196.0	197.6
30°	3034.8	2318.0	804.6	257.2	219.8	203.2	186.8	174.9	163.0	157.4	159.4
32.5°	3022.8	2233.7	601.5	227.0	196.8	178.5	158.3	142.7	130.0	125.3	126.4
35°	3055.0	2166.9	440.4	205.1	178.5	155.5	132.8	115.3	105.3	102.6	103.4
37.5°	3139.3	2131.2	329.6	186.8	162.1	136.4	110.9	94.2	87.9	87.9	88.7
40°	3298.4	2130.4	264.7	174.1	147.5	118.1	91.5	79.5	75.9	77.9	78.7
42.5°	3530.9	2178.9	230.6	162.1	134.7	100.6	75.9	67.6	66.8	68.7	69.6
45°	3848.5	2267.6	212.3	151.9	120.8	84.3	64.0	58.5	58.5	61.3	62.4
47.5°	4237.7	2397.5	196.8	141.9	107.0	70.4	54.9	51.3	52.1	54.9	55.7
50°	4706.4	2561.6	181.3	130.8	97.0	58.5	47.7	44.9	45.7	49.3	50.4
52.5°	5240.2	2782.3	168.5	120.8	84.3	48.5	40.2	38.5	40.2	44.1	44.9
55°	5697.8	2979.9	153.0	112.5	67.6	40.2	33.0	33.0	34.9	39.4	40.2
57.5°	6138.3	3186.7	139.1	97.0	53.2	32.2	27.4	28.3	31.0	35.8	36.6
60°	6784.6	3537.3	122.8	81.5	40.2	25.5	23.0	23.8	27.4	32.2	33.0
62.5°	7882.2	4071.1	106.2	67.6	31.0	20.2	18.3	20.2	24.7	30.2	31.0
65°	8872.9	4288.1	87.0	56.8	23.8	15.5	15.5	18.3	23.8	29.4	30.2
67.5°	8320.7	3609.6	67.6	44.9	18.3	11.9	12.7	17.5	23.0	29.4	30.2
69°	7358.7	2951.6	57.7	35.8	15.5	11.1	11.9	17.5	23.0	28.3	29.4
70°	6608.9	2492.1	51.3	30.2	13.9	11.1	11.9	16.4	23.0	28.3	29.4
72.5°	4426.5	1345.7	41.3	21.9	12.7	10.0	10.0	16.4	21.9	27.4	28.3
75°	1902.2	371.7	33.0	15.5	11.1	9.1	9.1	15.5	21.1	26.6	28.3
77.5°	347.9	94.2	26.6	13.9	11.1	9.1	8.3	14.7	20.2	25.5	26.6
80°	138.3	46.6	21.1	11.9	10.0	8.3	7.2	13.9	19.1	24.7	25.5
82.5°	83.4	26.6	17.5	11.1	10.0	7.2	6.4	11.9	18.3	23.8	24.7
85°	67.6	18.3	13.9	11.1	9.1	7.2	5.5	11.1	16.4	23.0	23.8
87.5°	33.0	12.7	12.7	10.0	9.1	7.2	5.5	10.0	15.5	21.9	23.0
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)