

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: P301828

Luminaire Tested: **GLNA-AF-05-LED-E1-SL4-7050-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P301828  
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-05-LED-E1-SL4-7050-HSS  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(5) 70 CRI, 5000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV  
w/Spill Control WITH HOUSESIDE SHEILD OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

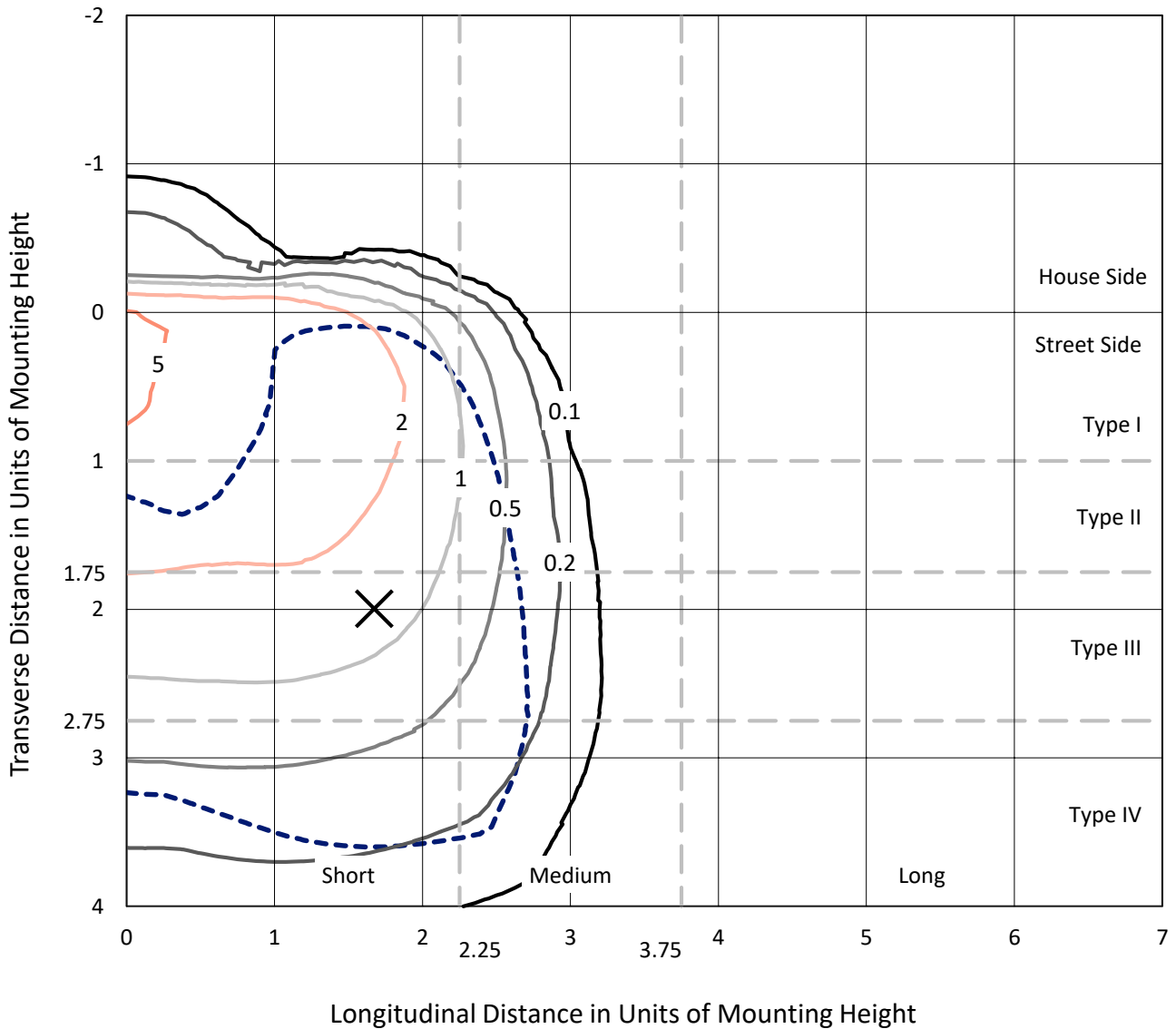
Lumens per Lamp: N/A  
Luminaire Lumens: 21938.6 lumens  
Efficiency: N/A  
Efficacy: 78.6 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G4  
  
Input Watts (W): 279  
Input Voltage (V): NR  
Input Current (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

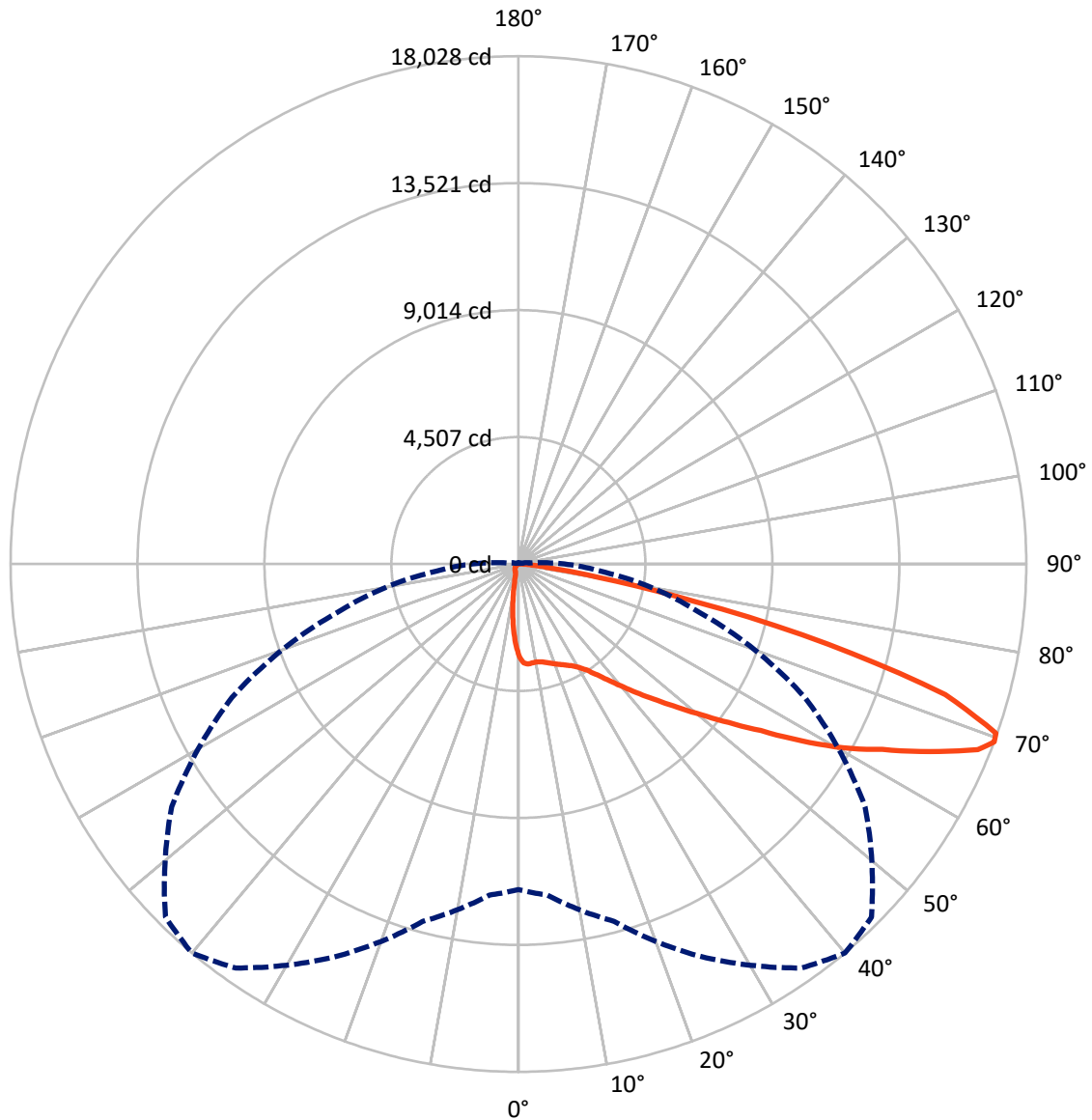
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.7 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
<b>House Side</b>	Lumens	1283.5	0.0	1283.5
	% Fixture	5.9	0.0	5.9
<b>Street Side</b>	Lumens	20655.1	0.0	20655.1
	% Fixture	94.1	0.0	94.1
<b>Total</b>	Lumens	21938.6	0.0	21938.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	265.8	1.2
10°-20°	653.6	3.0
20°-30°	1100.8	5.0
30°-40°	1802.1	8.2
40°-50°	3120.2	14.2
50°-60°	4914.6	22.4
60°-70°	6418.3	29.3
70°-80°	3305.7	15.1
80°-90°	357.6	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°	21938.6	100.0
0°-180°	21938.6	100.0



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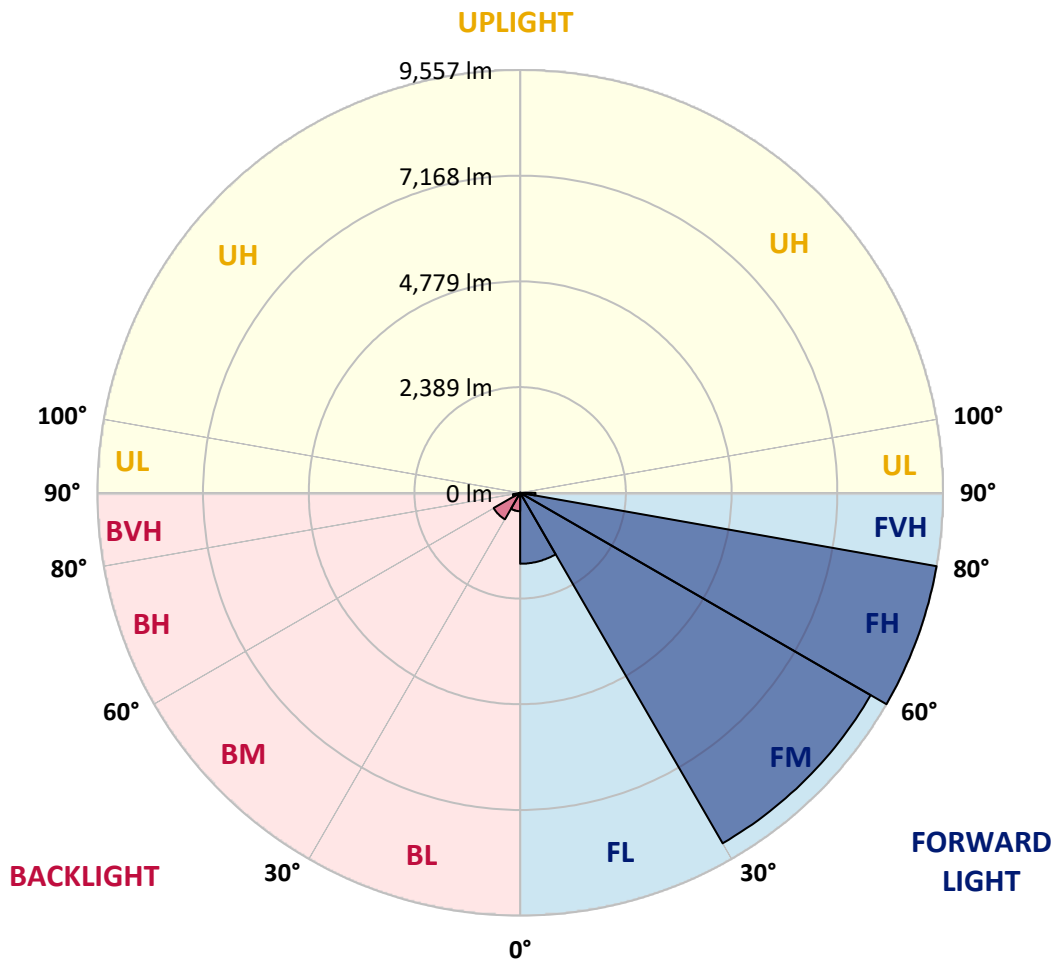
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1604.3	7.3			
FM	(30°-60°)	9147.0	41.7			
FH	(60°-80°)	9557.4	43.6			G4/12000
FVH	(80°-90°)	346.4	1.6			G3/500
BL	(0°-30°)	415.8	1.9	B1/500		
BM	(30°-60°)	689.9	3.1	B1/1000		
BH	(60°-80°)	166.7	0.8	B1/500		G1/500
BVH	(80°-90°)	11.2	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G4**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	3277.7	3277.7	3277.7	3277.7	3277.7	3277.7	3277.7	3277.7	3277.7	3277.7	3277.7
2.5°	3599.0	3579.4	3567.6	3552.0	3532.4	3515.4	3508.9	3460.6	3414.9	3352.2	3280.4
5°	3665.6	3659.1	3638.2	3617.3	3593.8	3567.6	3553.3	3495.8	3430.5	3339.1	3213.8
7.5°	3672.1	3664.3	3638.2	3609.4	3576.8	3545.4	3520.6	3463.2	3403.1	3310.4	3157.6
10°	3661.7	3652.5	3632.9	3601.6	3561.1	3531.1	3506.3	3451.4	3400.5	3316.9	3147.2
12.5°	3649.9	3640.8	3631.6	3616.0	3580.7	3559.8	3538.9	3486.7	3441.0	3370.5	3185.0
15°	3661.7	3656.4	3666.9	3660.4	3640.8	3622.5	3601.6	3554.6	3512.8	3454.0	3254.2
17.5°	3711.3	3711.3	3743.9	3747.9	3729.6	3703.5	3673.4	3626.4	3591.2	3541.5	3336.5
20°	3827.5	3823.6	3865.4	3873.2	3828.8	3788.3	3743.9	3686.5	3659.1	3627.7	3417.5
22.5°	4027.3	4009.0	4033.8	4026.0	3938.5	3875.8	3821.0	3750.5	3736.1	3721.7	3507.6
25°	4287.2	4276.7	4293.7	4216.7	4062.6	3977.7	3912.4	3832.7	3832.7	3847.1	3609.4
27.5°	4664.6	4625.4	4567.9	4432.1	4201.0	4092.6	4022.1	3937.2	3959.4	4012.9	3743.9
30°	5051.1	5008.0	4876.1	4667.2	4369.5	4255.8	4173.6	4084.8	4137.0	4234.9	3924.1
32.5°	5432.4	5384.1	5197.4	4933.6	4611.0	4497.4	4417.8	4319.8	4407.3	4571.9	4187.9
35°	5802.0	5758.9	5543.4	5232.6	4932.3	4838.3	4765.1	4680.2	4792.6	5022.4	4560.1
37.5°	6217.3	6170.3	5907.8	5570.9	5322.7	5254.8	5201.3	5116.4	5312.3	5649.2	5078.5
40°	6727.9	6648.2	6294.3	5958.7	5774.6	5741.9	5705.4	5693.6	5997.9	6464.1	5769.3
42.5°	7312.9	7182.3	6699.1	6367.4	6270.8	6294.3	6285.2	6337.4	6855.8	7477.4	6610.3
45°	7897.9	7729.5	7149.7	6803.6	6816.7	6898.9	6949.9	7158.8	7930.6	8639.7	7515.3
47.5°	8394.2	8228.3	7581.9	7275.0	7431.7	7593.7	7732.1	8127.8	9035.3	9783.6	8219.2
50°	8818.6	8661.9	8040.3	7793.5	8146.0	8407.2	8631.8	9218.2	10223.7	10654.6	8712.8
52.5°	9165.9	9061.5	8515.6	8387.6	8962.2	9344.8	9673.9	10376.5	11276.2	11362.4	9096.7
55°	9504.1	9429.7	9026.2	9094.1	9920.7	10441.8	10858.3	11605.3	12182.5	11952.7	9465.0
57.5°	9893.3	9825.4	9608.6	9989.9	11180.9	11836.4	12290.9	12694.4	12980.4	12556.0	9812.3
60°	10290.3	10251.1	10256.3	10985.0	12627.8	13257.2	13508.0	13612.4	13763.9	13124.0	9831.9
62.5°	10669.0	10743.4	10996.8	12092.4	14013.3	14496.5	14623.2	14726.3	14548.7	13214.1	9083.7
65°	11310.2	11431.6	12036.2	13574.6	15537.3	16054.4	16185.0	15831.1	14672.8	12049.3	7388.6
67.5°	11623.6	11845.6	12924.2	14956.2	17015.5	17590.1	17541.8	15902.9	13167.1	9188.1	4741.6
69°	11558.3	11794.6	13129.2	15379.3	17506.5	18027.6	17720.7	15024.1	11217.5	6656.0	2910.8
70°	11299.7	11538.7	13023.5	15363.6	17569.2	17981.9	17389.0	13938.9	9484.6	4867.0	1820.4
72.5°	9436.2	9642.6	11562.2	13886.7	16185.0	15849.4	14547.4	9656.9	4621.5	1325.5	410.0
75°	5808.5	5923.4	8296.2	10461.3	12224.3	11362.4	9692.2	4804.3	1377.7	374.8	227.2
77.5°	3068.8	3121.0	4541.8	6166.3	7749.1	6411.8	4967.5	1873.9	634.7	235.1	164.5
80°	1813.9	1853.0	2445.9	2819.4	3353.5	2801.1	1986.2	1150.5	454.4	147.6	146.3
82.5°	1038.2	1063.0	1773.4	1567.0	1321.5	1128.3	988.5	1090.4	272.9	99.2	151.5
85°	381.3	386.5	997.7	1192.3	786.1	467.5	491.0	903.7	73.1	62.7	118.8
87.5°	177.6	173.7	513.2	730.0	459.7	296.4	382.6	198.5	28.7	40.5	32.6
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°	3277.7	3277.7	3277.7	3277.7	3277.7	3277.7	3277.7	3277.7	3277.7	3277.7	3277.7
2.5°	3238.6	3190.2	3102.8	3012.6	2921.2	2850.7	2781.5	2726.7	2708.4	2674.4	2677.0
5°	3139.3	3050.5	2867.7	2682.3	2489.0	2329.7	2179.5	2058.1	1999.3	1939.2	1939.2
7.5°	3053.1	2923.8	2637.9	2336.2	2024.1	1761.6	1525.3	1347.7	1249.7	1171.4	1170.1
10°	3020.5	2845.5	2445.9	2013.7	1578.8	1221.0	940.2	760.0	667.3	607.2	604.6
12.5°	3034.8	2818.1	2298.3	1715.9	1170.1	784.8	544.5	428.3	389.2	370.9	370.9
15°	3076.6	2810.2	2150.8	1424.7	826.6	491.0	361.7	330.4	327.8	327.8	327.8
17.5°	3127.6	2812.9	1999.3	1141.3	562.8	351.3	312.1	308.2	310.8	310.8	310.8
20°	3179.8	2814.2	1836.1	878.9	397.0	305.6	293.8	292.5	295.1	295.1	296.4
22.5°	3243.8	2820.7	1672.8	656.9	327.8	288.6	279.5	279.5	280.8	280.8	279.5
25°	3316.9	2833.7	1503.1	487.1	299.0	276.8	269.0	267.7	269.0	267.7	266.4
27.5°	3408.3	2852.0	1313.7	381.3	286.0	265.1	258.6	258.6	257.3	256.0	254.6
30°	3523.2	2872.9	1100.9	323.9	272.9	254.6	248.1	246.8	245.5	242.9	242.9
32.5°	3698.2	2918.6	890.6	293.8	258.6	240.3	235.1	235.1	232.4	229.8	228.5
35°	3967.2	3008.7	702.6	275.5	242.9	224.6	218.1	218.1	215.5	214.2	212.9
37.5°	4339.4	3145.8	545.9	258.6	227.2	207.6	201.1	199.8	197.2	194.6	193.3
40°	4834.3	3315.6	429.6	242.9	211.6	190.7	185.4	182.8	177.6	173.7	173.7
42.5°	5455.9	3508.9	348.7	225.9	193.3	175.0	171.1	167.2	158.0	154.1	152.8
45°	6106.3	3682.6	295.1	206.3	175.0	159.3	156.7	150.2	138.4	134.5	134.5
47.5°	6575.1	3723.0	259.9	188.0	158.0	142.3	141.0	129.3	118.8	116.2	114.9
50°	6867.6	3643.4	231.1	169.8	142.3	126.7	122.8	108.4	101.9	99.2	97.9
52.5°	7064.8	3501.0	207.6	154.1	128.0	112.3	103.2	92.7	87.5	84.9	84.9
55°	7222.8	3299.9	184.1	139.7	116.2	100.6	87.5	79.7	74.4	71.8	71.8
57.5°	7267.2	3027.0	160.6	128.0	104.5	88.8	74.4	69.2	62.7	61.4	61.4
60°	6944.6	2534.7	142.3	113.6	94.0	77.0	65.3	58.8	52.2	50.9	49.6
62.5°	6094.5	1961.4	125.4	100.6	82.3	66.6	56.2	48.3	43.1	43.1	43.1
65°	4648.9	1315.0	109.7	87.5	71.8	56.2	48.3	39.2	36.6	36.6	37.9
67.5°	2782.8	715.6	94.0	74.4	61.4	47.0	40.5	34.0	32.6	34.0	34.0
69°	1631.0	420.5	84.9	66.6	53.5	41.8	35.3	30.0	32.6	34.0	34.0
70°	1006.8	283.4	78.4	60.1	48.3	37.9	32.6	28.7	31.3	32.6	32.6
72.5°	280.8	146.3	62.7	47.0	39.2	31.3	26.1	26.1	30.0	31.3	31.3
75°	182.8	108.4	48.3	35.3	30.0	24.8	22.2	24.8	28.7	30.0	30.0
77.5°	151.5	88.8	39.2	28.7	24.8	23.5	20.9	22.2	26.1	27.4	27.4
80°	138.4	62.7	31.3	26.1	22.2	20.9	19.6	18.3	23.5	24.8	24.8
82.5°	131.9	49.6	27.4	23.5	20.9	18.3	17.0	18.3	20.9	22.2	23.5
85°	82.3	32.6	24.8	22.2	18.3	17.0	17.0	17.0	19.6	20.9	20.9
87.5°	30.0	26.1	22.2	18.3	15.7	15.7	15.7	15.7	17.0	19.6	19.6
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)