

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: P301959

Luminaire Tested: **GLNA-AF-07-LED-E1-SL4-600-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P301959  
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-07-LED-E1-SL4-600-HSS  
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE  
(7) 70 CRI, 4000K CCT 600mA 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: 20453.1 lumens  
Efficiency: N/A  
Efficacy: 90.5 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G4

Input Watts (W): 226  
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

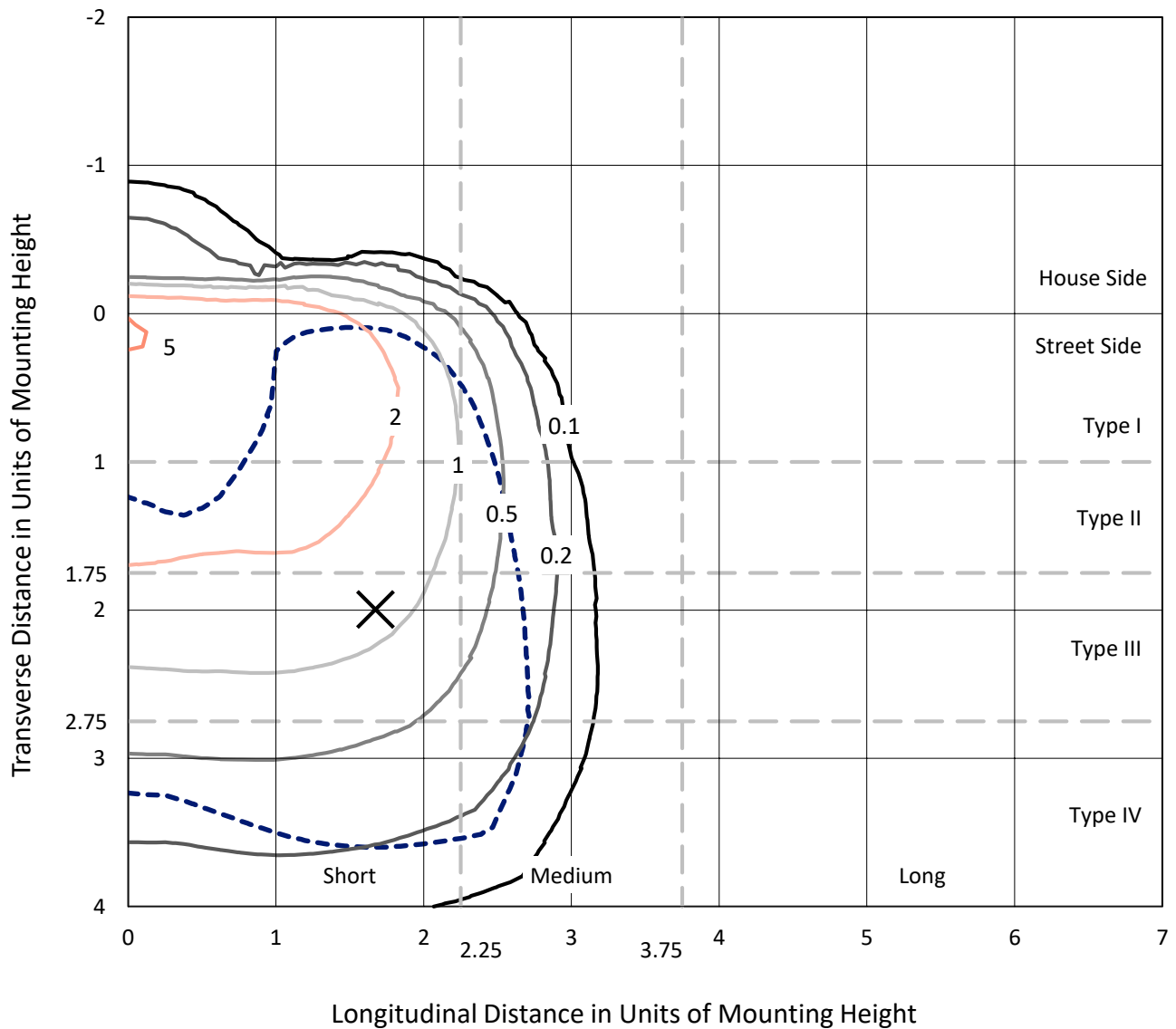


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### Iso-Footcandle Lines of Horizontal Illumination

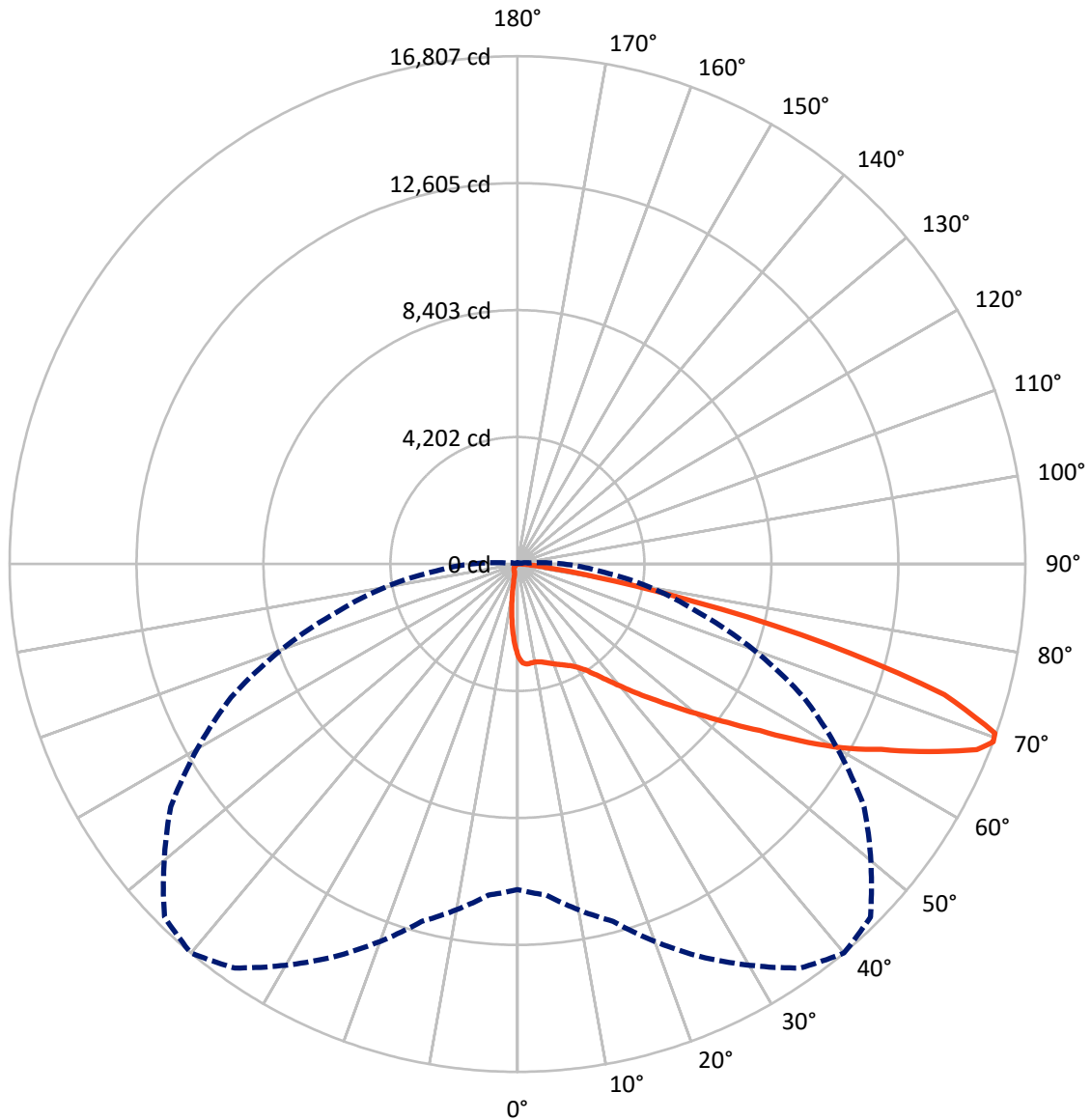
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.4 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	1196.6	0.0	1196.6
	% Fixture	5.9	0.0	5.9
<b>Street Side</b>	Lumens	19256.5	0.0	19256.5
	% Fixture	94.1	0.0	94.1
<b>Total</b>	Lumens	20453.1	0.0	20453.1
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	247.8	1.2
10°-20°	609.3	3.0
20°-30°	1026.3	5.0
30°-40°	1680.0	8.2
40°-50°	2908.9	14.2
50°-60°	4581.9	22.4
60°-70°	5983.7	29.3
70°-80°	3081.9	15.1
80°-90°	333.4	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°	20453.1	100.0
0°-180°	20453.1	100.0



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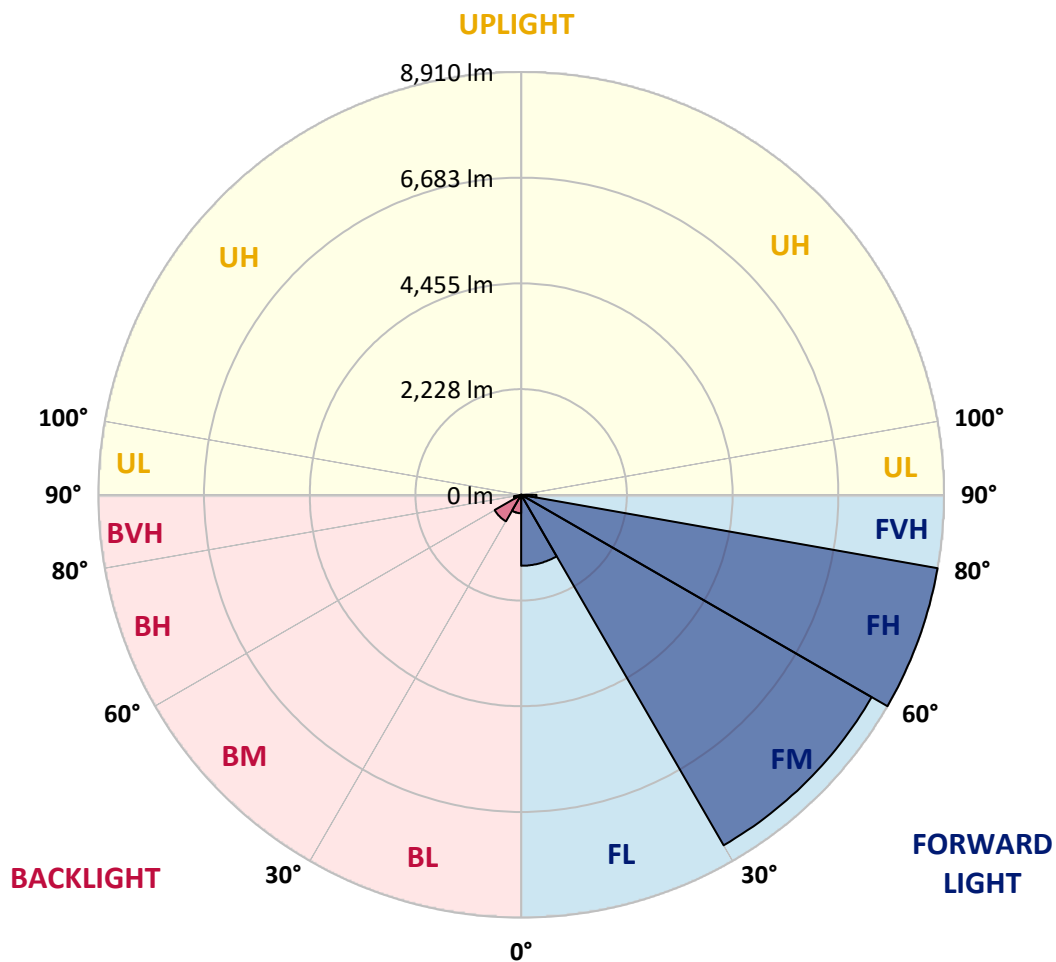
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1495.7	7.3			
FM	(30°-60°)	8527.7	41.7			
FH	(60°-80°)	8910.2	43.6			G4/12000
FVH	(80°-90°)	322.9	1.6			G3/500
BL	(0°-30°)	387.6	1.9	B1/500		
BM	(30°-60°)	643.2	3.1	B1/1000		
BH	(60°-80°)	155.4	0.8	B1/500		G1/500
BVH	(80°-90°)	10.5	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°	3055.8	3055.8	3055.8	3055.8	3055.8	3055.8	3055.8	3055.8	3055.8	3055.8	3055.8
2.5°	3355.3	3337.0	3326.1	3311.5	3293.2	3277.4	3271.3	3226.2	3183.6	3125.2	3058.2
5°	3417.4	3411.3	3391.8	3372.3	3350.4	3326.1	3312.7	3259.1	3198.2	3113.0	2996.1
7.5°	3423.5	3416.2	3391.8	3365.0	3334.6	3305.4	3282.2	3228.7	3172.7	3086.2	2943.8
10°	3413.7	3405.2	3386.9	3357.7	3320.0	3292.0	3268.9	3217.7	3170.2	3092.3	2934.1
12.5°	3402.8	3394.3	3385.7	3371.1	3338.2	3318.8	3299.3	3250.6	3208.0	3142.2	2969.4
15°	3413.7	3408.9	3418.6	3412.5	3394.3	3377.2	3357.7	3313.9	3274.9	3220.2	3033.9
17.5°	3460.0	3460.0	3490.4	3494.1	3477.0	3452.7	3424.7	3380.9	3348.0	3301.7	3110.6
20°	3568.3	3564.7	3603.7	3611.0	3569.6	3531.8	3490.4	3436.9	3411.3	3382.1	3186.1
22.5°	3754.6	3737.6	3760.7	3753.4	3671.8	3613.4	3562.3	3496.5	3483.1	3469.7	3270.1
25°	3996.9	3987.1	4003.0	3931.1	3787.5	3708.4	3647.5	3573.2	3573.2	3586.6	3365.0
27.5°	4348.7	4312.2	4258.6	4132.0	3916.5	3815.5	3749.7	3670.6	3691.3	3741.2	3490.4
30°	4709.1	4668.9	4546.0	4351.2	4073.6	3967.7	3891.0	3808.2	3856.9	3948.2	3658.4
32.5°	5064.6	5019.5	4845.5	4599.5	4298.8	4192.9	4118.6	4027.3	4108.9	4262.3	3904.4
35°	5409.1	5369.0	5168.1	4878.3	4598.3	4510.7	4442.5	4363.3	4468.0	4682.3	4251.3
37.5°	5796.3	5752.5	5507.7	5193.6	4962.3	4899.0	4849.1	4770.0	4952.6	5266.7	4734.7
40°	6272.3	6198.0	5868.1	5555.2	5383.6	5353.1	5319.0	5308.1	5591.7	6026.4	5378.7
42.5°	6817.7	6696.0	6245.5	5936.3	5846.2	5868.1	5859.6	5908.3	6391.6	6971.1	6162.7
45°	7363.1	7206.1	6665.5	6342.9	6355.1	6431.8	6479.3	6674.1	7393.6	8054.6	7006.4
47.5°	7825.8	7671.2	7068.5	6782.4	6928.5	7079.5	7208.5	7577.4	8423.5	9121.1	7662.6
50°	8221.4	8075.3	7495.8	7265.7	7594.5	7837.9	8047.3	8594.0	9531.4	9933.2	8122.8
52.5°	8545.3	8447.9	7939.0	7819.7	8355.4	8712.1	9018.9	9673.9	10512.7	10593.0	8480.8
55°	8860.6	8791.2	8415.0	8478.3	9249.0	9734.7	10123.1	10819.5	11357.6	11143.3	8824.1
57.5°	9223.4	9160.1	8958.0	9313.5	10423.8	11035.0	11458.6	11834.8	12101.5	11705.8	9147.9
60°	9593.5	9557.0	9561.9	10241.2	11772.7	12359.6	12593.3	12690.7	12831.9	12235.4	9166.2
62.5°	9946.6	10016.0	10252.1	11273.6	13064.5	13514.9	13633.0	13729.2	13563.6	12319.4	8468.6
65°	10544.3	10657.6	11221.2	12655.4	14485.2	14967.3	15089.1	14759.1	13679.3	11233.4	6888.3
67.5°	10836.5	11043.5	12049.1	13943.5	15863.4	16399.0	16354.0	14826.1	12275.5	8566.0	4420.6
69°	10775.6	10996.0	12240.2	14337.9	16321.1	16806.9	16520.8	14006.8	10457.9	6205.3	2713.7
70°	10534.6	10757.4	12141.6	14323.3	16379.6	16764.3	16211.6	12995.1	8842.3	4537.4	1697.1
72.5°	8797.3	8989.6	10779.3	12946.4	15089.1	14776.2	13562.4	9003.0	4308.6	1235.7	382.3
75°	5415.2	5522.4	7734.5	9753.0	11396.5	10593.0	9035.9	4479.0	1284.4	349.4	211.8
77.5°	2861.0	2909.7	4234.3	5748.8	7224.3	5977.7	4631.2	1747.0	591.7	219.1	153.4
80°	1691.0	1727.6	2280.3	2628.5	3126.4	2611.4	1851.7	1072.6	423.7	137.6	136.4
82.5°	967.9	991.0	1653.3	1460.9	1232.1	1051.9	921.6	1016.6	254.4	92.5	141.2
85°	355.5	360.4	930.1	1111.5	732.9	435.8	457.8	842.5	68.2	58.4	110.8
87.5°	165.6	161.9	478.5	680.6	428.5	276.4	356.7	185.1	26.8	37.7	30.4
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°	3055.8	3055.8	3055.8	3055.8	3055.8	3055.8	3055.8	3055.8	3055.8	3055.8	3055.8
2.5°	3019.3	2974.2	2892.7	2808.7	2723.4	2657.7	2593.2	2542.0	2525.0	2493.3	2495.8
5°	2926.7	2844.0	2673.5	2500.6	2320.5	2171.9	2031.9	1918.7	1863.9	1807.9	1807.9
7.5°	2846.4	2725.9	2459.2	2178.0	1887.0	1642.3	1422.0	1256.4	1165.1	1092.1	1090.8
10°	2816.0	2652.8	2280.3	1877.3	1471.9	1138.3	876.6	708.6	622.1	566.1	563.7
12.5°	2829.4	2627.3	2142.7	1599.7	1090.8	731.7	507.7	399.3	362.8	345.8	345.8
15°	2868.3	2620.0	2005.1	1328.2	770.6	457.8	337.2	308.0	305.6	305.6	305.6
17.5°	2915.8	2622.4	1863.9	1064.1	524.7	327.5	291.0	287.3	289.8	289.8	289.8
20°	2964.5	2623.6	1711.7	819.3	370.1	284.9	273.9	272.7	275.1	275.1	276.4
22.5°	3024.1	2629.7	1559.6	612.4	305.6	269.1	260.5	260.5	261.8	261.8	260.5
25°	3092.3	2641.9	1401.3	454.1	278.8	258.1	250.8	249.6	250.8	249.6	248.4
27.5°	3177.5	2658.9	1224.8	355.5	266.6	247.1	241.1	241.1	239.8	238.6	237.4
30°	3284.7	2678.4	1026.3	301.9	254.4	237.4	231.3	230.1	228.9	226.4	226.4
32.5°	3447.8	2721.0	830.3	273.9	241.1	224.0	219.1	219.1	216.7	214.3	213.1
35°	3698.6	2805.0	655.0	256.9	226.4	209.4	203.3	203.3	200.9	199.7	198.4
37.5°	4045.6	2932.8	508.9	241.1	211.8	193.6	187.5	186.3	183.8	181.4	180.2
40°	4507.0	3091.1	400.5	226.4	197.2	177.7	172.9	170.4	165.6	161.9	161.9
42.5°	5086.5	3271.3	325.1	210.6	180.2	163.1	159.5	155.8	147.3	143.7	142.4
45°	5692.8	3433.2	275.1	192.4	163.1	148.5	146.1	140.0	129.0	125.4	125.4
47.5°	6129.9	3470.9	242.3	175.3	147.3	132.7	131.5	120.5	110.8	108.4	107.1
50°	6402.6	3396.7	215.5	158.3	132.7	118.1	114.4	101.0	95.0	92.5	91.3
52.5°	6586.4	3264.0	193.6	143.7	119.3	104.7	96.2	86.4	81.6	79.1	79.1
55°	6733.7	3076.5	171.7	130.3	108.4	93.7	81.6	74.3	69.4	67.0	67.0
57.5°	6775.1	2822.0	149.7	119.3	97.4	82.8	69.4	64.5	58.4	57.2	57.2
60°	6474.4	2363.1	132.7	105.9	87.7	71.8	60.9	54.8	48.7	47.5	46.3
62.5°	5681.8	1828.6	116.9	93.7	76.7	62.1	52.4	45.0	40.2	40.2	40.2
65°	4334.1	1226.0	102.3	81.6	67.0	52.4	45.0	36.5	34.1	34.1	35.3
67.5°	2594.4	667.2	87.7	69.4	57.2	43.8	37.7	31.7	30.4	31.7	31.7
69°	1520.6	392.0	79.1	62.1	49.9	39.0	32.9	28.0	30.4	31.7	31.7
70°	938.7	264.2	73.0	56.0	45.0	35.3	30.4	26.8	29.2	30.4	30.4
72.5°	261.8	136.4	58.4	43.8	36.5	29.2	24.3	24.3	28.0	29.2	29.2
75°	170.4	101.0	45.0	32.9	28.0	23.1	20.7	23.1	26.8	28.0	28.0
77.5°	141.2	82.8	36.5	26.8	23.1	21.9	19.5	20.7	24.3	25.6	25.6
80°	129.0	58.4	29.2	24.3	20.7	19.5	18.3	17.0	21.9	23.1	23.1
82.5°	123.0	46.3	25.6	21.9	19.5	17.0	15.8	17.0	19.5	20.7	21.9
85°	76.7	30.4	23.1	20.7	17.0	15.8	15.8	15.8	18.3	19.5	19.5
87.5°	28.0	24.3	20.7	17.0	14.6	14.6	14.6	14.6	15.8	18.3	18.3
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)