

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: P299956

Luminaire Tested: **GLNA-AF-04-LED-E1-SL3-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299956  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24288)  
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-SL3-600  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(4) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V  
Square Medium OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15764.4 lumens  
Efficiency: N/A  
Efficacy: 122.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B2 - U0 - G3

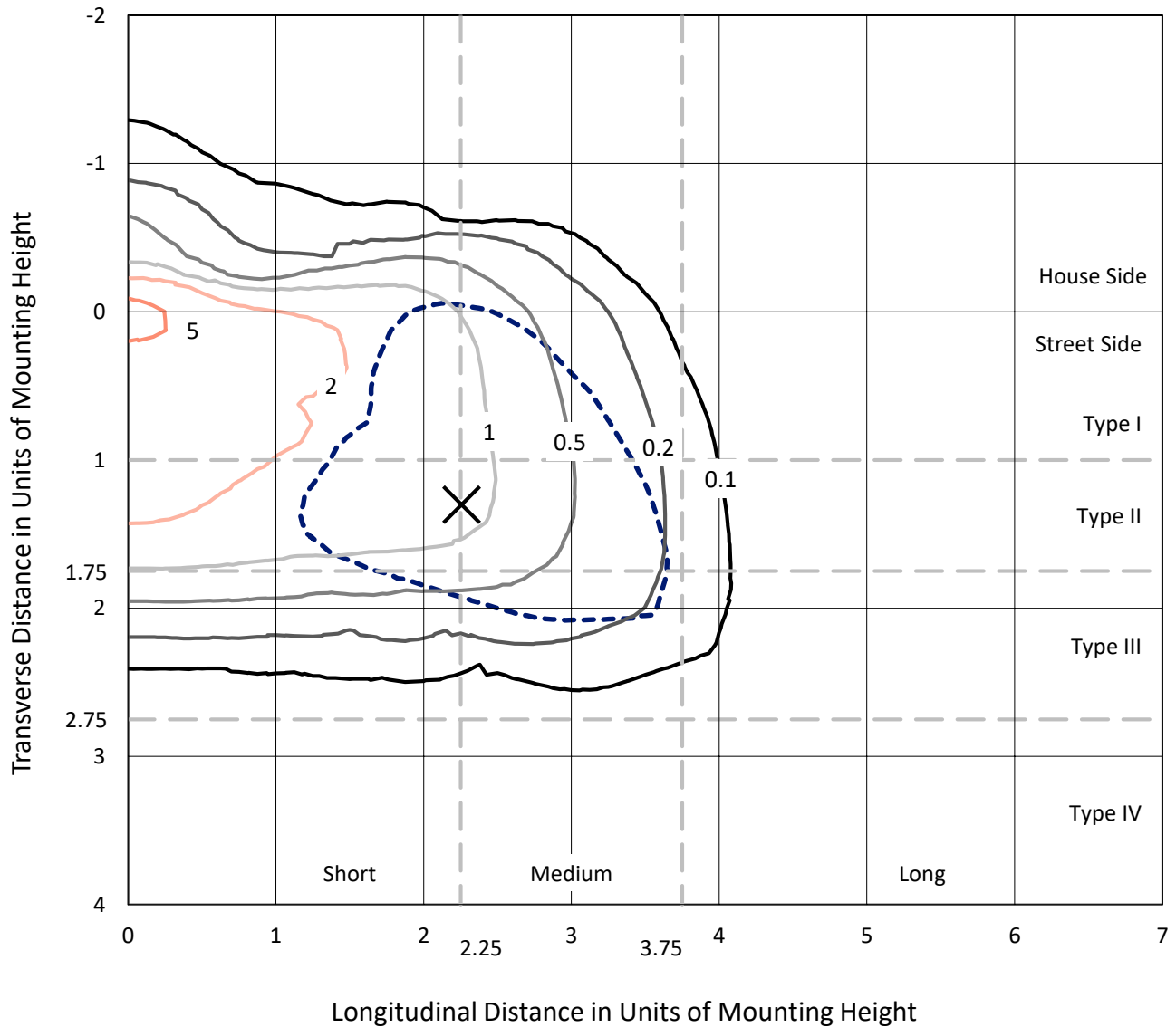
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

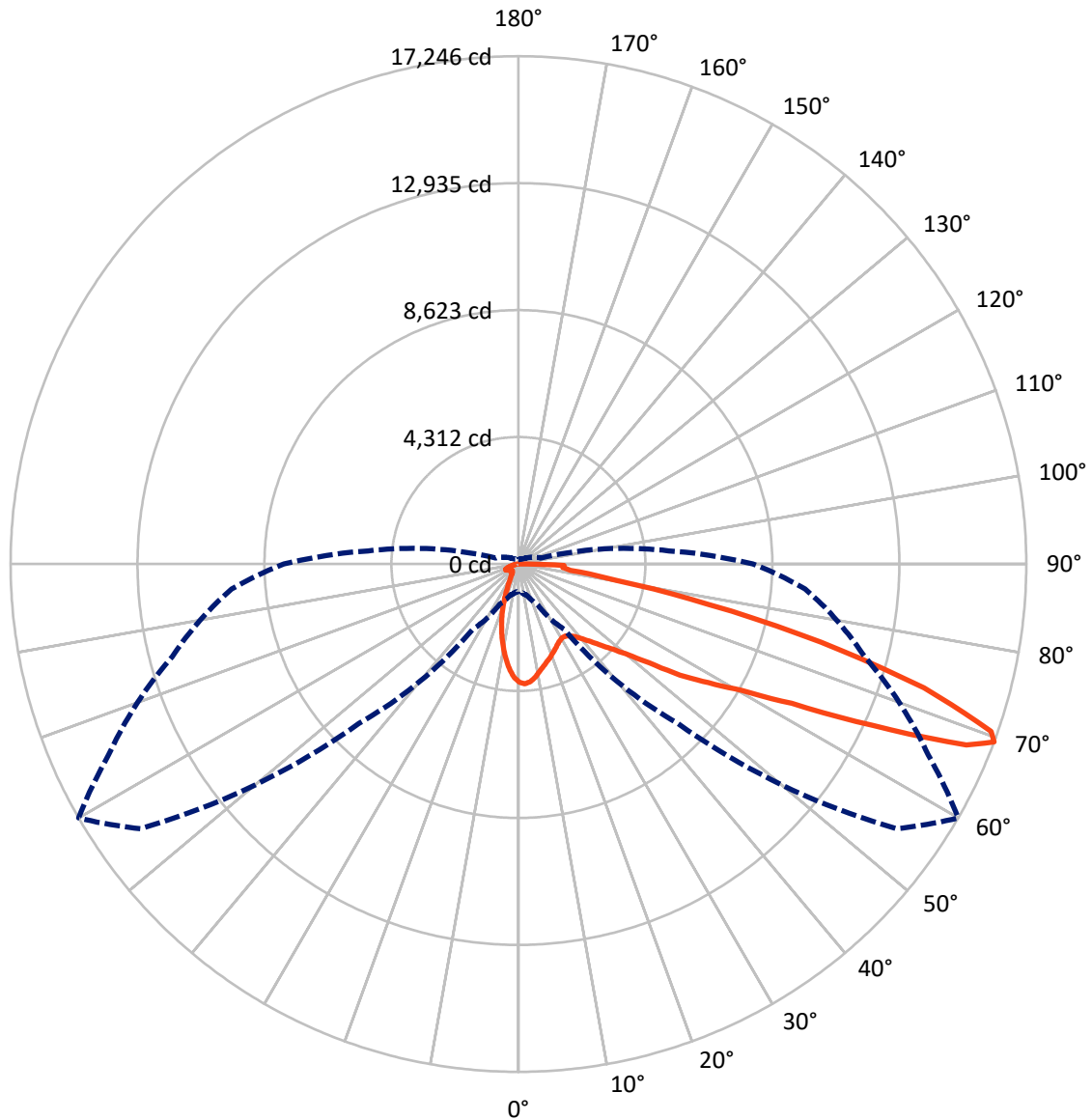
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.4 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2242.8	0.0	2242.8
	% Fixture	14.2	0.0	14.2
<b>Street Side</b>	Lumens	13521.6	0.0	13521.6
	% Fixture	85.8	0.0	85.8
<b>Total</b>	Lumens	15764.4	0.0	15764.4
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	339.7	2.2
10°-20°	723.7	4.6
20°-30°	922.1	5.8
30°-40°	1267.6	8.0
40°-50°	2056.8	13.0
50°-60°	3298.6	20.9
60°-70°	4390.2	27.8
70°-80°	2370.3	15.0
80°-90°	395.5	2.5
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°	15764.4	100.0
0°-180°	15764.4	100.0

**Coefficient of Utilization**



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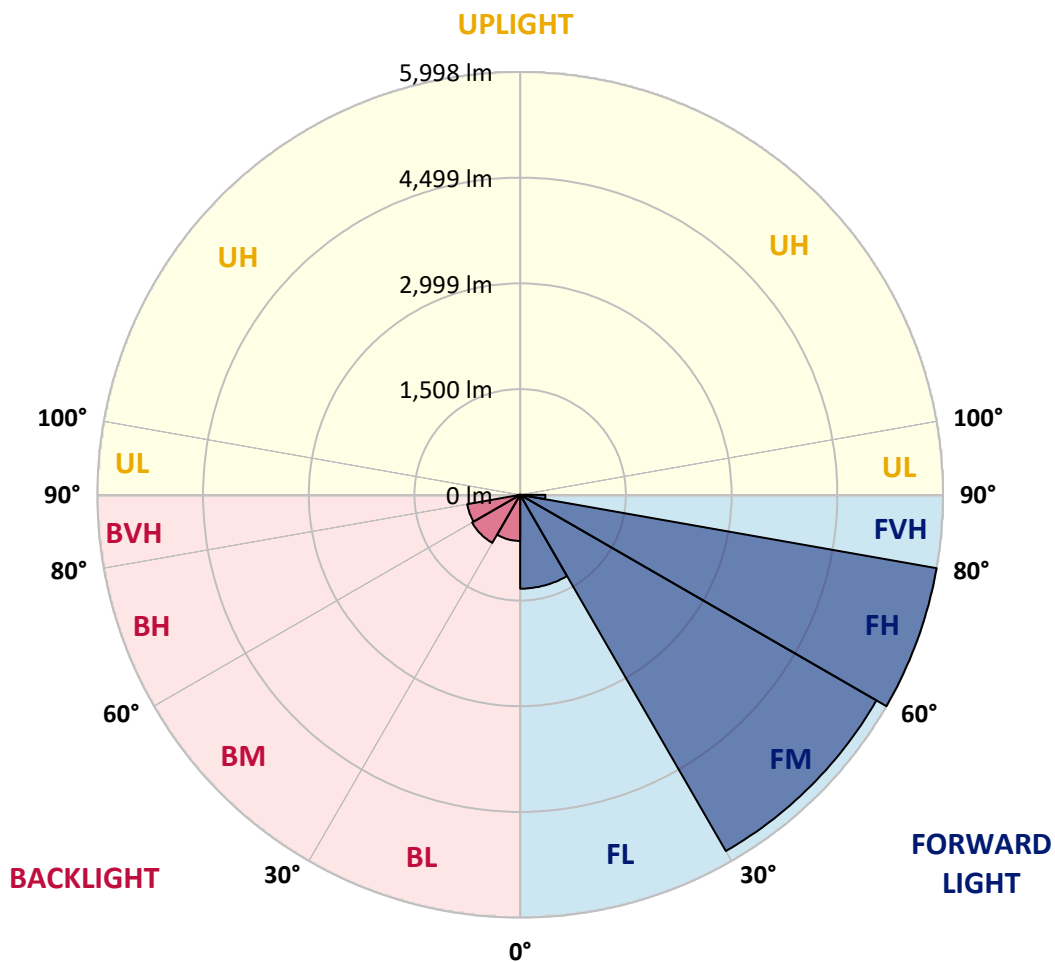
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1331.1	8.4			
FM	(30°-60°)	5835.0	37.0			
FH	(60°-80°)	5998.0	38.0			G3/7500
FVH	(80°-90°)	357.4	2.3			G3/500
BL	(0°-30°)	654.3	4.2	B2/1000		
BM	(30°-60°)	787.9	5.0	B1/1000		
BH	(60°-80°)	762.5	4.8	B2/1000		G2/1000
BVH	(80°-90°)	38.1	0.2			G1/100
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 Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	4017.0	4017.0	4017.0	4017.0	4017.0	4017.0	4017.0	4017.0	4017.0	4017.0	4017.0
2.5°	4099.2	4108.4	4104.6	4102.3	4109.1	4098.5	4076.4	4069.5	4058.9	4033.8	3991.1
5°	3945.4	3972.8	3971.3	3991.9	4026.1	4035.3	4025.4	4026.9	4007.1	3975.9	3905.1
7.5°	3679.6	3691.1	3697.2	3742.1	3804.5	3854.8	3897.4	3911.1	3902.0	3875.4	3784.0
10°	3405.5	3414.6	3429.1	3481.7	3560.9	3630.1	3710.9	3757.3	3777.1	3772.6	3670.5
12.5°	3170.2	3179.3	3198.4	3257.8	3352.2	3437.5	3554.8	3612.6	3659.8	3688.0	3578.4
15°	2959.3	2979.1	2997.3	3065.9	3171.7	3283.7	3416.2	3489.3	3562.4	3625.6	3496.9
17.5°	2794.8	2814.6	2825.2	2887.7	3000.4	3137.4	3292.8	3378.8	3470.2	3573.8	3416.2
20°	2699.6	2708.7	2704.1	2739.2	2840.5	2985.9	3170.2	3270.0	3380.4	3525.1	3335.4
22.5°	2672.9	2673.7	2656.9	2653.1	2718.6	2841.2	3039.2	3160.3	3295.8	3493.1	3266.1
25°	2737.7	2735.4	2689.7	2652.4	2659.2	2730.8	2912.8	3053.7	3225.0	3486.2	3212.8
27.5°	2881.6	2888.4	2820.7	2750.6	2681.3	2679.0	2816.8	2965.3	3167.1	3517.4	3190.0
30°	3083.4	3094.8	3022.5	2933.4	2803.1	2695.8	2779.5	2912.8	3131.4	3582.2	3186.2
32.5°	3304.2	3316.4	3261.6	3167.9	2997.3	2799.3	2805.4	2917.4	3129.8	3672.8	3212.1
35°	3539.5	3553.2	3525.1	3445.9	3256.2	2990.5	2904.4	2991.2	3179.3	3811.4	3281.4
37.5°	3802.3	3823.6	3831.2	3755.8	3553.2	3242.5	3066.6	3131.4	3291.3	4004.1	3408.5
40°	4180.7	4210.4	4208.1	4100.0	3893.6	3582.9	3317.2	3333.9	3465.7	4261.4	3611.9
42.5°	4905.7	4911.8	4722.2	4486.9	4268.3	3940.8	3612.6	3598.9	3706.3	4587.4	3911.1
45°	5827.9	5802.8	5380.9	4926.2	4659.7	4352.1	3997.2	3930.2	4011.7	4984.9	4285.8
47.5°	6593.2	6535.3	6002.3	5374.8	5074.0	4799.1	4448.8	4331.5	4376.4	5435.7	4770.1
50°	6859.0	6815.6	6373.9	5747.9	5466.2	5344.3	5004.7	4838.7	4850.9	5973.3	5337.5
52.5°	6801.9	6795.8	6501.1	5993.9	5833.2	5917.0	5792.1	5567.4	5448.6	6570.4	5949.7
55°	6667.1	6680.0	6573.4	6280.2	6252.8	6469.8	6820.9	6654.9	6285.6	7172.7	6582.5
57.5°	6198.7	6232.2	6466.8	6640.4	6928.3	7251.2	7649.4	7602.2	7186.4	7823.8	7334.9
60°	4994.0	5071.7	5700.7	6570.4	7623.5	8633.3	8811.5	8701.8	8115.5	8631.8	8328.7
62.5°	3499.2	3579.9	4327.7	5688.5	7509.3	10194.4	10888.9	10416.0	9449.7	9822.0	9614.9
65°	1873.3	1912.2	2483.3	3946.9	6339.6	10516.5	13925.1	13205.5	11562.1	11289.5	10715.3
67.5°	1033.4	1054.7	1273.3	1992.9	4060.4	9260.8	15859.3	16403.1	14202.3	12266.5	10515.0
69°	934.4	954.2	1097.3	1509.3	2717.1	7657.0	15670.5	17246.1	15359.8	12169.8	9774.8
70°	913.8	932.1	1060.8	1391.3	2199.3	6311.4	15037.7	17030.5	15635.5	11823.3	9129.1
72.5°	822.4	842.2	967.1	1249.6	1879.4	3146.6	11911.6	14399.5	14195.4	10251.5	6924.5
75°	766.8	785.1	996.8	1223.8	1799.5	1991.4	7852.8	10612.5	10435.1	7171.2	3733.7
77.5°	328.2	326.7	462.2	1035.7	1826.1	1928.2	4219.6	6629.8	6048.7	3065.1	1072.2
80°	219.3	215.5	219.3	304.6	1674.6	1938.8	2210.7	3365.1	2541.9	781.3	528.5
82.5°	188.9	185.8	192.7	185.8	588.7	2213.0	1879.4	1789.6	1208.5	444.0	262.0
85°	127.2	121.8	166.0	166.8	278.0	1966.2	2117.0	1511.6	977.8	263.5	129.5
87.5°	60.9	59.4	96.7	118.0	163.0	798.8	2375.2	1548.9	986.2	134.8	61.7
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°	4017.0	4017.0	4017.0	4017.0	4017.0	4017.0	4017.0	4017.0	4017.0	4017.0	4017.0
2.5°	3978.2	3946.9	3916.5	3879.9	3841.8	3799.2	3777.9	3756.6	3751.2	3745.1	3723.8
5°	3868.5	3824.3	3748.2	3664.4	3576.1	3490.0	3424.5	3383.4	3352.2	3336.2	3308.0
7.5°	3726.9	3662.1	3528.9	3384.2	3235.7	3100.1	2982.9	2909.0	2838.9	2806.2	2768.9
10°	3592.1	3495.4	3288.2	3075.0	2861.8	2656.9	2464.3	2328.0	2206.9	2139.1	2091.1
12.5°	3476.3	3343.8	3056.7	2768.1	2475.7	2184.0	1895.4	1668.5	1478.9	1379.1	1328.1
15°	3363.6	3203.7	2836.6	2470.4	2094.9	1698.2	1318.9	1061.6	904.7	842.2	820.9
17.5°	3261.6	3056.7	2615.8	2170.3	1702.0	1222.2	886.4	744.8	684.6	664.0	657.2
20°	3151.2	2908.2	2386.6	1856.6	1292.3	854.4	692.2	629.8	605.4	599.3	596.3
22.5°	3044.5	2762.0	2167.3	1520.7	928.3	659.5	594.7	568.9	565.0	570.4	570.4
25°	2953.9	2631.0	1930.4	1169.7	681.6	555.1	532.3	526.2	540.7	560.5	564.3
27.5°	2886.1	2523.7	1678.4	863.6	543.0	482.8	482.0	491.9	527.7	565.8	573.4
30°	2839.7	2421.6	1408.8	622.9	455.4	424.9	437.1	458.4	511.0	565.0	579.5
32.5°	2816.1	2346.2	1127.8	482.0	389.9	373.1	393.7	419.6	471.4	521.6	540.7
35°	2834.4	2290.6	862.8	402.1	344.2	331.3	352.6	377.7	408.2	429.5	444.0
37.5°	2902.9	2268.6	651.1	360.2	313.0	300.8	317.6	332.0	344.2	350.3	357.2
40°	3050.6	2292.2	521.6	338.9	295.5	280.2	287.1	292.4	300.0	306.1	309.2
42.5°	3268.4	2363.0	467.6	330.5	286.3	264.2	262.7	265.0	274.9	286.3	288.6
45°	3573.0	2487.9	463.8	335.8	281.8	251.3	244.4	247.5	262.7	280.2	283.3
47.5°	3962.2	2678.3	494.2	351.8	285.6	244.4	233.0	236.8	255.9	279.5	283.3
50°	4433.5	2944.0	545.2	375.4	302.3	246.0	229.2	231.5	251.3	277.2	281.0
52.5°	4990.2	3321.0	600.8	398.3	319.8	255.9	232.3	226.9	245.2	268.1	272.6
55°	5609.3	3804.5	658.0	418.8	329.0	268.1	238.4	220.8	233.8	252.8	256.6
57.5°	6369.3	4480.8	756.9	438.6	335.1	276.4	244.4	214.7	219.3	233.0	236.1
60°	7398.1	5437.2	931.3	471.4	348.8	279.5	243.7	209.4	204.8	212.5	214.0
62.5°	8631.0	6475.9	1076.8	512.5	371.6	281.8	239.1	205.6	192.7	192.7	194.2
65°	9362.8	6753.9	996.1	546.8	390.7	279.5	233.8	201.8	183.5	175.1	175.9
67.5°	8742.2	5939.8	853.7	553.6	389.9	268.8	225.4	194.9	174.4	161.4	160.7
69°	7964.7	5125.0	789.7	535.3	371.6	255.1	214.7	187.3	167.5	153.8	153.1
70°	7338.0	4627.7	747.8	515.5	351.8	245.2	206.4	180.5	162.2	149.3	147.7
72.5°	5335.2	3032.4	638.9	443.2	290.1	205.6	178.2	158.4	144.7	137.1	135.5
75°	2666.1	1446.1	518.6	359.4	222.4	164.5	146.2	132.5	125.7	124.1	123.4
77.5°	875.7	662.5	370.9	268.1	165.2	128.7	118.0	108.1	106.6	111.2	109.7
80°	481.3	385.3	235.3	177.4	112.7	94.4	92.9	87.6	89.9	97.5	96.0
82.5°	245.2	200.3	145.4	106.6	76.2	67.8	73.9	70.8	73.9	80.7	80.0
85°	121.1	109.7	92.1	64.7	50.3	43.4	52.5	54.8	56.4	61.7	61.7
87.5°	70.1	64.7	48.7	30.5	25.1	22.8	30.5	29.7	35.0	38.1	37.3
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)