

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: P299356

Luminaire Tested: **GLNA-AF-04-LED-E1-5NQ**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299356  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24141)  
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-E1-5NQ  
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE  
(4) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II  
w/Spill Control OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24682.9 lumens  
Efficiency: N/A  
Efficacy: 109.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B4 - U0 - G2

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

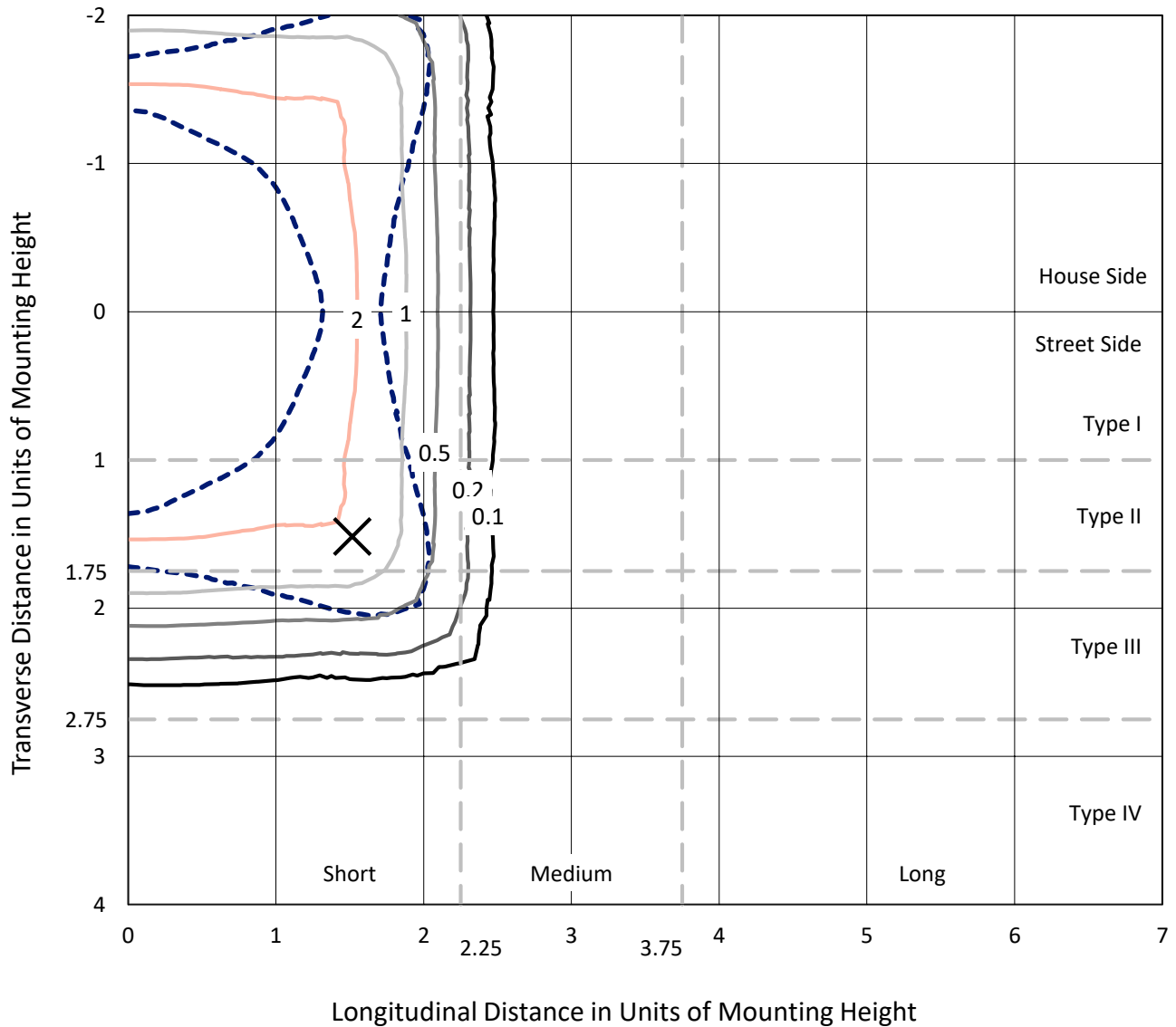


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

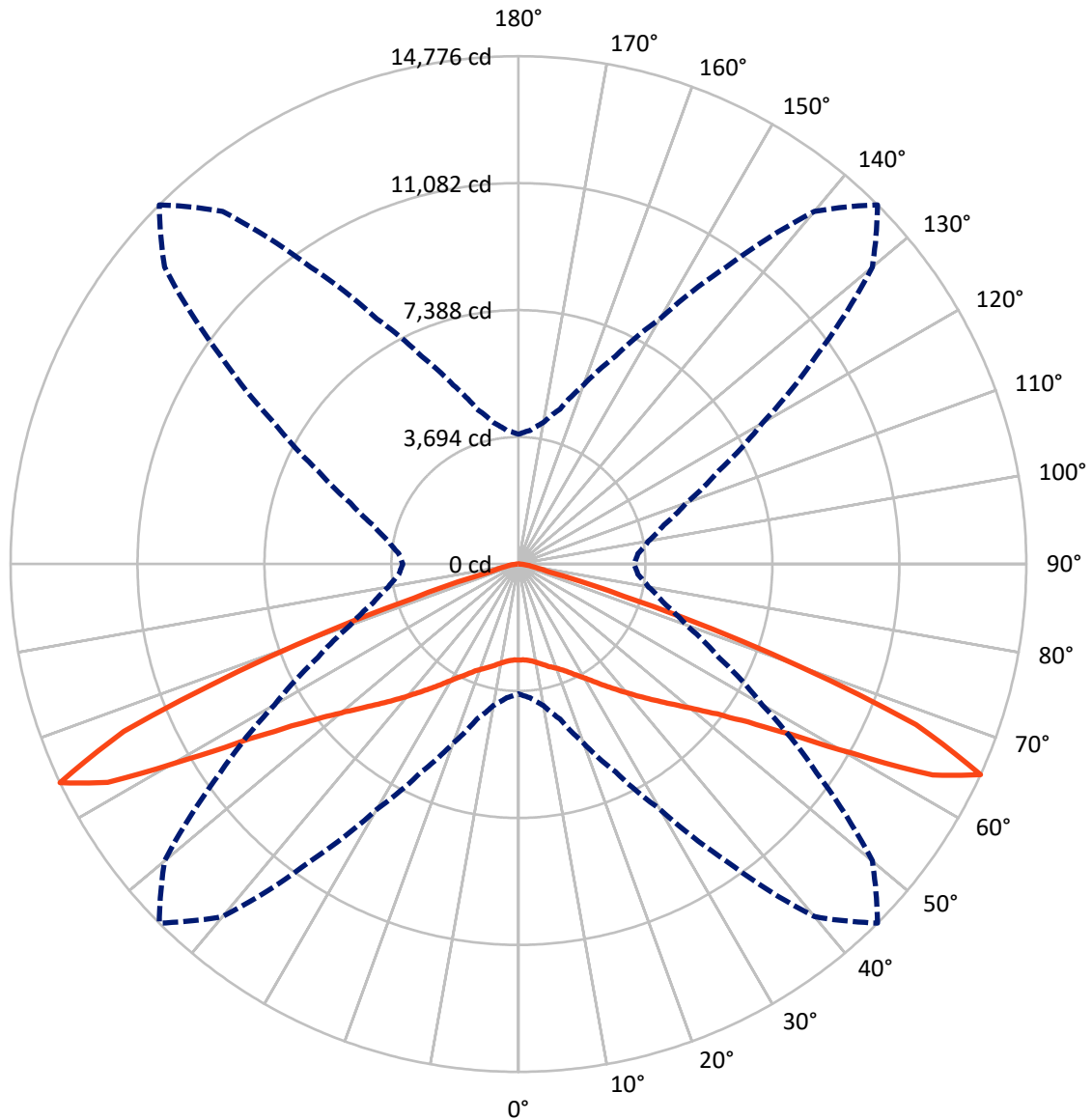


Based on 25 foot mounting height. Maximum calculated value = 4.5 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	12341.5	0.0	12341.5
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	12341.5	0.0	12341.5
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	24682.9	0.0	24682.9
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	272.2	1.1
10°-20°	873.0	3.5
20°-30°	1632.4	6.6
30°-40°	2760.9	11.2
40°-50°	4514.4	18.3
50°-60°	7178.6	29.1
60°-70°	6488.9	26.3
70°-80°	821.2	3.3
80°-90°	141.3	0.6
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°	24682.9	100.0
0°-180°	24682.9	100.0

**Coefficient of Utilization**



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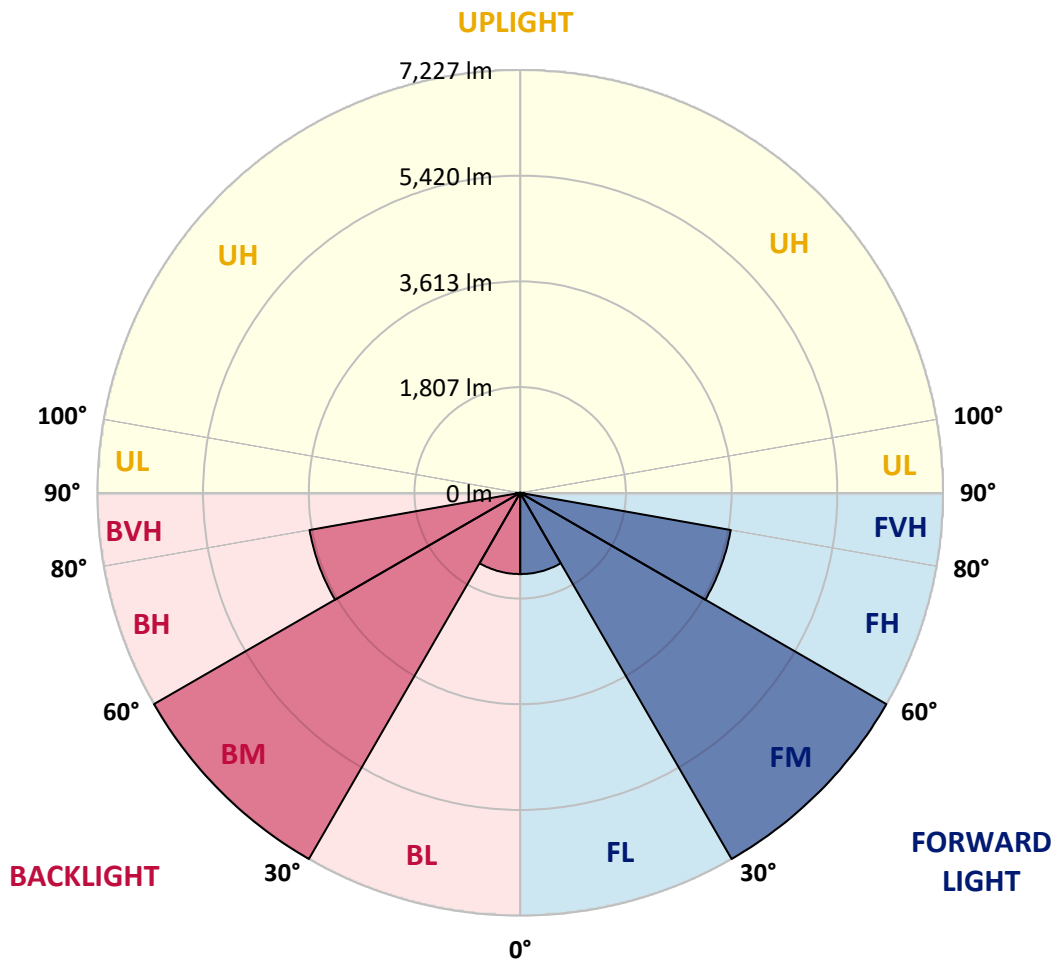
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1388.9	5.6			
FM	(30°-60°)	7226.9	29.3			
FH	(60°-80°)	3655.1	14.8			G2/5000
FVH	(80°-90°)	70.6	0.3			G1/100
BL	(0°-30°)	1388.9	5.6	B3/2500		
BM	(30°-60°)	7226.9	29.3	B4/8500		
BH	(60°-80°)	3655.1	14.8	B4/5000		G2/5000
BVH	(80°-90°)	70.6	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G2**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2792.9	2792.9	2792.9	2792.9	2792.9	2792.9	2792.9	2792.9	2792.9	2792.9	2792.9
2.5°	2795.2	2797.5	2799.8	2797.5	2799.8	2796.4	2794.0	2797.5	2794.0	2790.6	2792.9
5°	2819.5	2820.6	2820.6	2817.2	2820.6	2818.3	2814.9	2819.5	2816.0	2812.5	2814.9
7.5°	2859.9	2864.6	2861.1	2857.6	2859.9	2857.6	2855.3	2856.5	2855.3	2851.8	2853.0
10°	2914.3	2917.7	2915.4	2914.3	2916.6	2915.4	2913.1	2912.0	2913.1	2909.6	2909.6
12.5°	2980.2	2979.0	2977.8	2979.0	2982.5	2982.5	2981.3	2982.5	2984.8	2985.9	2983.6
15°	3044.9	3047.2	3047.2	3047.2	3054.1	3059.9	3063.4	3065.7	3070.3	3071.5	3066.9
17.5°	3125.8	3125.8	3124.7	3125.8	3132.8	3142.0	3145.5	3150.1	3154.7	3158.2	3152.4
20°	3216.0	3218.3	3218.3	3220.6	3229.9	3240.3	3240.3	3242.6	3240.3	3242.6	3239.1
22.5°	3325.8	3332.7	3332.7	3333.9	3343.1	3355.9	3352.4	3355.9	3350.1	3354.7	3350.1
25°	3469.1	3479.6	3477.2	3477.2	3484.2	3492.3	3493.4	3500.4	3499.2	3505.0	3501.5
27.5°	3631.0	3647.2	3651.8	3650.6	3655.3	3663.4	3665.7	3673.8	3669.1	3673.8	3671.4
30°	3825.2	3832.1	3841.4	3844.8	3850.6	3858.7	3858.7	3859.9	3854.1	3861.0	3864.5
32.5°	4026.3	4039.1	4048.3	4069.1	4079.5	4085.3	4084.1	4086.4	4080.7	4089.9	4096.9
35°	4292.2	4301.5	4316.5	4332.7	4346.5	4345.4	4341.9	4343.1	4343.1	4351.2	4358.1
37.5°	4612.4	4614.7	4634.4	4657.5	4664.4	4657.5	4636.7	4632.1	4621.7	4632.1	4643.6
40°	4951.1	4959.2	4998.5	5013.6	5017.0	5004.3	4974.3	4956.9	4933.8	4946.5	4962.7
42.5°	5306.0	5322.2	5358.0	5384.6	5396.2	5388.1	5346.5	5319.9	5289.8	5296.8	5313.0
45°	5699.1	5718.7	5769.6	5795.0	5817.0	5804.3	5763.8	5723.3	5675.9	5679.4	5704.8
47.5°	6138.3	6158.0	6223.9	6266.7	6278.2	6275.9	6230.8	6175.3	6110.6	6108.3	6130.3
50°	6630.8	6650.5	6732.5	6798.4	6831.9	6828.5	6775.3	6696.7	6618.1	6619.2	6647.0
52.5°	7111.7	7136.0	7221.5	7334.8	7400.7	7448.1	7415.7	7341.7	7245.8	7248.1	7273.5
55°	7562.5	7603.0	7701.3	7855.0	7977.5	8110.5	8148.6	8146.3	8088.5	8104.7	8130.1
57.5°	7781.0	7841.1	7992.6	8235.3	8485.0	8755.5	8984.4	9155.5	9228.3	9338.1	9312.7
60°	7367.2	7463.1	7686.2	8043.4	8537.0	9101.2	9705.8	10296.5	10800.5	11180.8	10962.3
62.5°	6032.0	6156.8	6427.3	6885.1	7631.9	8534.7	9691.9	11088.3	12609.6	13527.5	12872.0
65°	3774.3	3903.8	4178.9	4669.1	5543.0	6665.5	8235.3	10549.6	13392.2	14776.0	13441.9
67.5°	1471.6	1542.1	1691.2	2004.5	2661.1	3659.9	5235.5	7861.9	11261.7	12474.4	11052.5
70°	737.5	744.5	772.2	830.0	971.0	1261.2	1919.0	3644.9	6458.6	7800.7	6226.2
72.5°	532.9	534.1	547.9	573.4	618.5	683.2	808.0	1115.5	2100.4	3210.2	1968.7
75°	408.1	412.7	420.8	434.7	458.9	491.3	536.4	642.7	796.5	923.6	776.8
77.5°	314.4	323.7	329.5	342.2	357.2	379.2	391.9	432.3	502.9	529.4	521.4
80°	239.3	247.4	260.1	270.5	280.9	291.3	286.7	305.2	342.2	364.1	352.6
82.5°	152.6	161.8	198.8	208.1	212.7	219.6	211.5	212.7	228.9	242.8	228.9
85°	98.3	104.0	126.0	137.6	138.7	143.3	139.9	131.8	131.8	120.2	135.3
87.5°	45.1	46.2	56.6	67.0	69.4	62.4	61.3	59.0	47.4	45.1	48.6
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):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2792.9	2792.9	2792.9	2792.9	2792.9	2792.9	2792.9	2792.9
2.5°	2791.7	2794.0	2795.2	2798.7	2799.8	2799.8	2801.0	2803.3
5°	2813.7	2817.2	2818.3	2822.9	2824.1	2822.9	2825.3	2826.4
7.5°	2853.0	2858.8	2861.1	2865.7	2862.2	2866.9	2868.0	2868.0
10°	2910.8	2916.6	2917.7	2922.4	2920.0	2922.4	2922.4	2920.0
12.5°	2987.1	2988.3	2984.8	2988.3	2983.6	2985.9	2982.5	2980.2
15°	3071.5	3068.0	3059.9	3059.9	3053.0	3054.1	3053.0	3051.8
17.5°	3153.6	3146.6	3140.8	3138.5	3132.8	3131.6	3128.1	3128.1
20°	3243.7	3240.3	3236.8	3232.2	3226.4	3220.6	3219.5	3221.8
22.5°	3352.4	3351.2	3351.2	3348.9	3340.8	3335.1	3331.6	3331.6
25°	3498.0	3487.6	3487.6	3486.5	3483.0	3479.6	3472.6	3476.1
27.5°	3662.2	3656.4	3661.0	3659.9	3656.4	3656.4	3651.8	3651.8
30°	3864.5	3862.2	3869.1	3863.3	3851.8	3850.6	3846.0	3840.2
32.5°	4098.0	4095.7	4106.1	4099.2	4080.7	4070.3	4061.0	4056.4
35°	4358.1	4359.3	4372.0	4367.4	4346.5	4339.6	4323.4	4321.1
37.5°	4642.5	4661.0	4682.9	4687.6	4670.2	4665.6	4648.3	4639.0
40°	4976.6	5000.8	5034.4	5042.5	5024.0	5020.5	4996.2	4983.5
42.5°	5332.6	5374.2	5415.8	5422.8	5404.3	5385.8	5362.7	5353.4
45°	5730.3	5780.0	5834.3	5848.2	5820.4	5798.5	5768.4	5768.4
47.5°	6176.5	6238.9	6300.2	6338.3	6312.9	6289.8	6253.9	6230.8
50°	6703.6	6789.2	6868.9	6908.2	6867.8	6823.9	6761.4	6740.6
52.5°	7364.9	7457.3	7526.7	7505.9	7443.5	7382.2	7314.0	7286.2
55°	8208.7	8239.9	8239.9	8161.3	8036.5	7933.6	7826.1	7790.3
57.5°	9264.2	9143.9	8959.0	8724.3	8429.5	8172.9	7999.5	7917.4
60°	10504.5	9926.5	9273.4	8631.8	8104.7	7670.0	7412.3	7294.3
62.5°	11331.1	9819.0	8510.5	7480.5	6722.1	6198.5	5842.4	5703.7
65°	10590.1	8189.1	6436.6	5204.3	4377.8	3844.8	3492.3	3362.8
67.5°	7756.7	5131.5	3427.5	2456.5	1799.9	1435.7	1291.2	1231.1
70°	3481.9	1806.8	1107.4	864.7	745.6	684.4	657.8	648.5
72.5°	1049.6	759.5	640.4	578.0	530.6	500.5	478.6	476.3
75°	633.5	527.1	468.2	431.2	401.1	376.9	365.3	361.8
77.5°	442.7	387.3	359.5	332.9	309.8	291.3	280.9	272.8
80°	311.0	284.4	271.7	256.6	241.6	224.3	209.2	202.3
82.5°	208.1	202.3	202.3	193.1	180.3	164.2	134.1	127.2
85°	134.1	132.9	135.3	131.8	122.5	105.2	86.7	82.1
87.5°	62.4	63.6	70.5	69.4	67.0	55.5	43.9	41.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)