

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: P299416

Luminaire Tested: **GLNA-AF-04-LED-E1-5NQ-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299416  
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-800  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(4) 70 CRI, 4000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II  
w/Spill Control OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 19940.9 lumens  
Efficiency: N/A  
Efficacy: 116.6 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

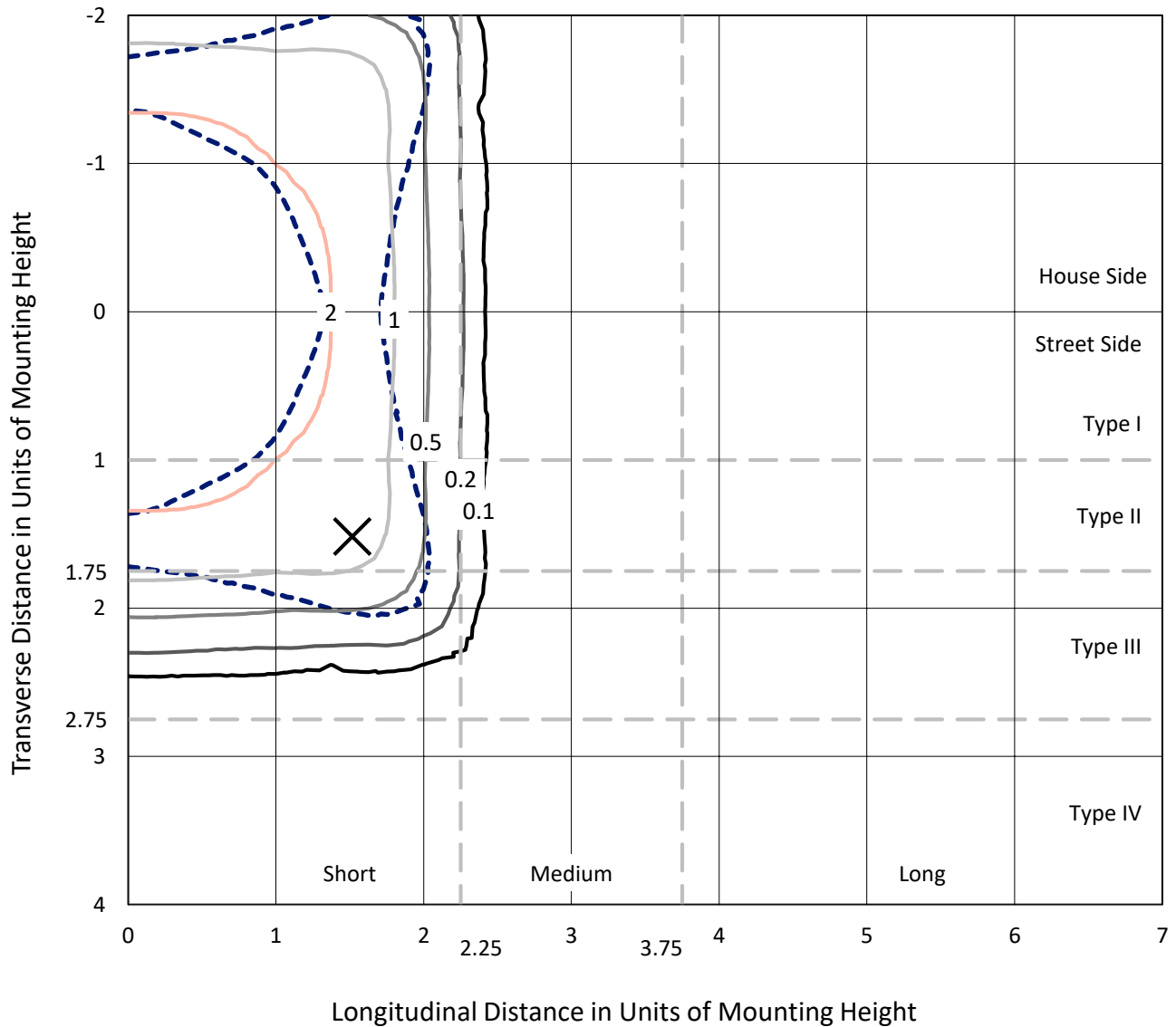
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

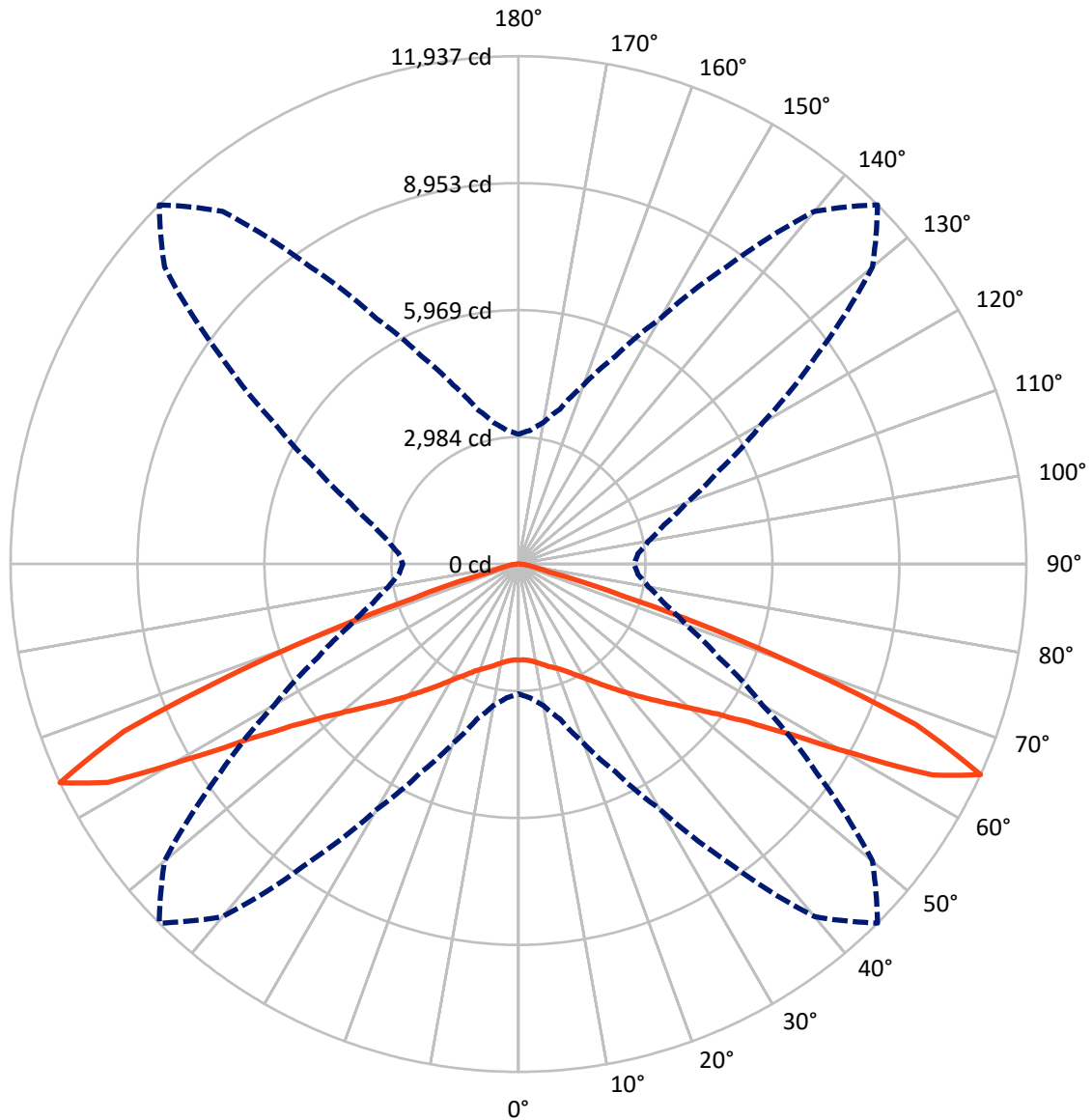
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.6 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	9970.4	0.0	9970.4
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	9970.4	0.0	9970.4
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	19940.9	0.0	19940.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	219.9	1.1
10°-20°	705.3	3.5
20°-30°	1318.8	6.6
30°-40°	2230.5	11.2
40°-50°	3647.1	18.3
50°-60°	5799.4	29.1
60°-70°	5242.3	26.3
70°-80°	663.4	3.3
80°-90°	114.1	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°	19940.9	100.0
0°-180°	19940.9	100.0



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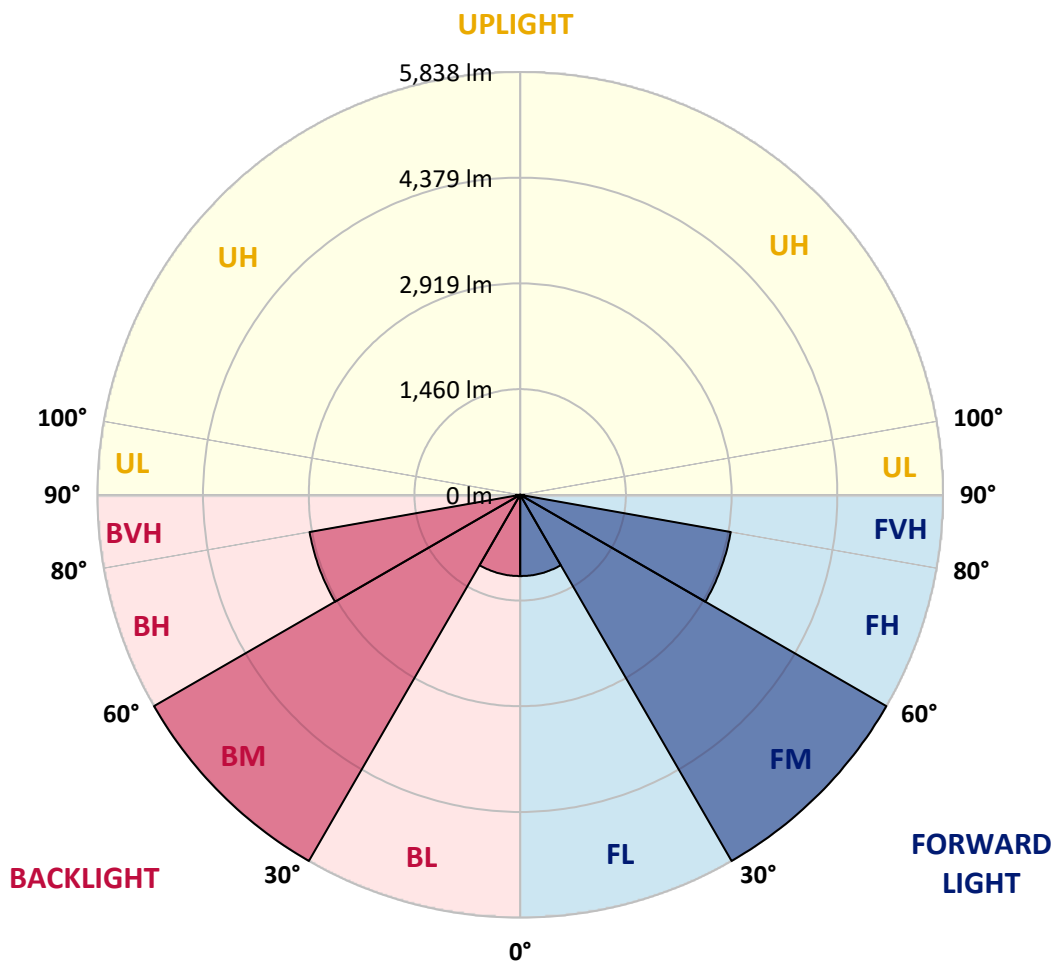
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1122.0	5.6			
FM	(30°-60°)	5838.5	29.3			
FH	(60°-80°)	2952.9	14.8			G2/5000
FVH	(80°-90°)	57.1	0.3			G1/100
BL	(0°-30°)	1122.0	5.6	B3/2500		
BM	(30°-60°)	5838.5	29.3	B4/8500		
BH	(60°-80°)	2952.9	14.8	B4/5000		G2/5000
BVH	(80°-90°)	57.1	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°	2256.3	2256.3	2256.3	2256.3	2256.3	2256.3	2256.3	2256.3	2256.3	2256.3	2256.3
2.5°	2258.2	2260.1	2261.9	2260.1	2261.9	2259.1	2257.3	2260.1	2257.3	2254.5	2256.3
5°	2277.8	2278.7	2278.7	2275.9	2278.7	2276.9	2274.1	2277.8	2275.0	2272.2	2274.1
7.5°	2310.5	2314.2	2311.4	2308.6	2310.5	2308.6	2306.8	2307.7	2306.8	2304.0	2304.9
10°	2354.4	2357.2	2355.3	2354.4	2356.3	2355.3	2353.4	2352.5	2353.4	2350.6	2350.6
12.5°	2407.6	2406.7	2405.7	2406.7	2409.5	2409.5	2408.5	2409.5	2411.4	2412.3	2410.4
15°	2459.9	2461.8	2461.8	2461.8	2467.4	2472.1	2474.9	2476.7	2480.5	2481.4	2477.7
17.5°	2525.3	2525.3	2524.4	2525.3	2530.9	2538.4	2541.2	2544.9	2548.6	2551.4	2546.8
20°	2598.1	2600.0	2600.0	2601.9	2609.3	2617.7	2617.7	2619.6	2617.7	2619.6	2616.8
22.5°	2686.9	2692.5	2692.5	2693.4	2700.9	2711.1	2708.3	2711.1	2706.5	2710.2	2706.5
25°	2802.7	2811.1	2809.2	2809.2	2814.8	2821.3	2822.3	2827.9	2826.9	2831.6	2828.8
27.5°	2933.4	2946.5	2950.2	2949.3	2953.0	2959.6	2961.4	2968.0	2964.2	2968.0	2966.1
30°	3090.3	3095.9	3103.4	3106.2	3110.8	3117.4	3117.4	3118.3	3113.6	3119.3	3122.1
32.5°	3252.8	3263.1	3270.5	3287.4	3295.8	3300.4	3299.5	3301.4	3296.7	3304.2	3309.8
35°	3467.6	3475.1	3487.2	3500.3	3511.5	3510.6	3507.8	3508.7	3508.7	3515.2	3520.8
37.5°	3726.3	3728.2	3744.0	3762.7	3768.3	3762.7	3745.9	3742.2	3733.8	3742.2	3751.5
40°	3999.9	4006.5	4038.2	4050.4	4053.2	4042.9	4018.6	4004.6	3985.9	3996.2	4009.3
42.5°	4286.6	4299.7	4328.7	4350.1	4359.5	4352.9	4319.3	4297.8	4273.6	4279.2	4292.2
45°	4604.2	4620.0	4661.1	4681.7	4699.4	4689.2	4656.5	4623.8	4585.5	4588.3	4608.8
47.5°	4959.1	4974.9	5028.2	5062.7	5072.1	5070.2	5033.8	4988.9	4936.6	4934.8	4952.5
50°	5356.9	5372.8	5439.1	5492.3	5519.4	5516.6	5473.6	5410.1	5346.6	5347.6	5370.0
52.5°	5745.4	5765.0	5834.1	5925.6	5978.9	6017.2	5991.0	5931.3	5853.7	5855.6	5876.1
55°	6109.6	6142.3	6221.7	6345.9	6444.9	6552.3	6583.1	6581.3	6534.6	6547.6	6568.2
57.5°	6286.1	6334.7	6457.0	6653.2	6854.9	7073.4	7258.3	7396.6	7455.4	7544.1	7523.6
60°	5951.8	6029.3	6209.6	6498.1	6896.9	7352.7	7841.1	8318.3	8725.5	9032.8	8856.3
62.5°	4873.1	4974.0	5192.5	5562.4	6165.7	6895.0	7829.9	8958.0	10187.1	10928.6	10399.1
65°	3049.2	3153.8	3376.1	3772.1	4478.1	5384.9	6653.2	8522.8	10819.3	11937.2	10859.5
67.5°	1188.9	1245.8	1366.3	1619.4	2149.9	2956.8	4229.7	6351.5	9098.1	10077.8	8929.1
70°	595.8	601.4	623.9	670.5	784.5	1018.9	1550.3	2944.6	5217.7	6302.0	5030.0
72.5°	430.5	431.5	442.7	463.2	499.6	551.9	652.8	901.2	1696.9	2593.5	1590.4
75°	329.7	333.4	339.9	351.1	370.8	396.9	433.3	519.3	643.5	746.2	627.6
77.5°	254.0	261.5	266.2	276.4	288.6	306.3	316.6	349.3	406.3	427.7	421.2
80°	193.3	199.9	210.1	218.5	226.9	235.3	231.6	246.6	276.4	294.2	284.8
82.5°	123.3	130.7	160.6	168.1	171.8	177.4	170.9	171.8	184.9	196.1	184.9
85°	79.4	84.1	101.8	111.1	112.1	115.8	113.0	106.5	106.5	97.1	109.3
87.5°	36.4	37.4	45.8	54.2	56.0	50.4	49.5	47.6	38.3	36.4	39.2
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°	2256.3	2256.3	2256.3	2256.3	2256.3	2256.3	2256.3	2256.3
2.5°	2255.4	2257.3	2258.2	2261.0	2261.9	2261.9	2262.9	2264.7
5°	2273.1	2275.9	2276.9	2280.6	2281.5	2280.6	2282.5	2283.4
7.5°	2304.9	2309.6	2311.4	2315.2	2312.4	2316.1	2317.0	2317.0
10°	2351.6	2356.3	2357.2	2360.9	2359.1	2360.9	2360.9	2359.1
12.5°	2413.2	2414.2	2411.4	2414.2	2410.4	2412.3	2409.5	2407.6
15°	2481.4	2478.6	2472.1	2472.1	2466.5	2467.4	2466.5	2465.5
17.5°	2547.7	2542.1	2537.4	2535.6	2530.9	2530.0	2527.2	2527.2
20°	2620.5	2617.7	2614.9	2611.2	2606.5	2601.9	2600.9	2602.8
22.5°	2708.3	2707.4	2707.4	2705.5	2699.0	2694.3	2691.5	2691.5
25°	2826.0	2817.6	2817.6	2816.7	2813.9	2811.1	2805.5	2808.3
27.5°	2958.6	2954.0	2957.7	2956.8	2954.0	2954.0	2950.2	2950.2
30°	3122.1	3120.2	3125.8	3121.1	3111.8	3110.8	3107.1	3102.4
32.5°	3310.7	3308.8	3317.2	3311.6	3296.7	3288.3	3280.8	3277.1
35°	3520.8	3521.8	3532.0	3528.3	3511.5	3505.9	3492.8	3490.9
37.5°	3750.6	3765.5	3783.3	3787.0	3773.0	3769.3	3755.2	3747.8
40°	4020.5	4040.1	4067.2	4073.7	4058.8	4056.0	4036.4	4026.1
42.5°	4308.1	4341.7	4375.4	4381.0	4366.0	4351.1	4332.4	4324.9
45°	4629.4	4669.5	4713.4	4724.6	4702.2	4684.5	4660.2	4660.2
47.5°	4989.9	5040.3	5089.8	5120.6	5100.1	5081.4	5052.4	5033.8
50°	5415.7	5484.8	5549.3	5581.0	5548.3	5512.9	5462.4	5445.6
52.5°	5949.9	6024.6	6080.7	6063.9	6013.4	5963.9	5908.8	5886.4
55°	6631.7	6656.9	6656.9	6593.4	6492.5	6409.4	6322.6	6293.6
57.5°	7484.3	7387.2	7237.8	7048.2	6810.1	6602.7	6462.6	6396.3
60°	8486.4	8019.5	7491.8	6973.5	6547.6	6196.5	5988.2	5893.0
62.5°	9154.2	7932.6	6875.4	6043.3	5430.7	5007.6	4720.0	4607.9
65°	8555.5	6615.8	5200.0	4204.5	3536.7	3106.2	2821.3	2716.7
67.5°	6266.5	4145.6	2769.0	1984.6	1454.1	1159.9	1043.2	994.6
70°	2812.9	1459.7	894.7	698.6	602.4	552.9	531.4	523.9
72.5°	848.0	613.6	517.4	467.0	428.7	404.4	386.6	384.8
75°	511.8	425.9	378.2	348.3	324.1	304.5	295.1	292.3
77.5°	357.7	312.9	290.4	269.0	250.3	235.3	226.9	220.4
80°	251.2	229.7	219.5	207.3	195.2	181.2	169.0	163.4
82.5°	168.1	163.4	163.4	156.0	145.7	132.6	108.3	102.7
85°	108.3	107.4	109.3	106.5	99.0	85.0	70.0	66.3
87.5°	50.4	51.4	57.0	56.0	54.2	44.8	35.5	33.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)