

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: P299986

Luminaire Tested: **GLNA-AF-09-LED-E1-5WQ-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299986
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24143)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-09-LED-E1-5WQ-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 36795.7 lumens
Efficiency: N/A
Efficacy: 126.9 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G4

Input Watts (W): 290
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

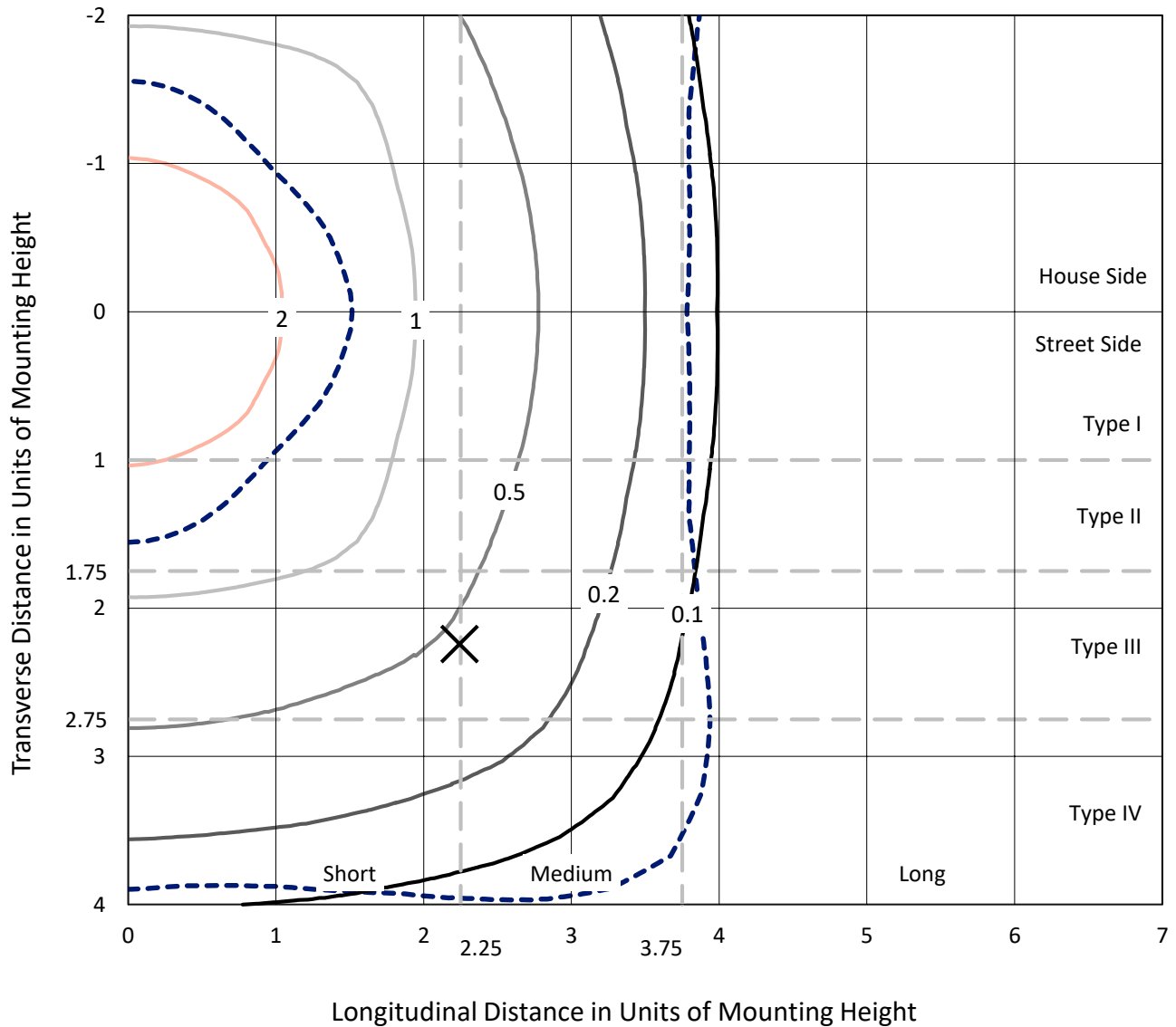


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

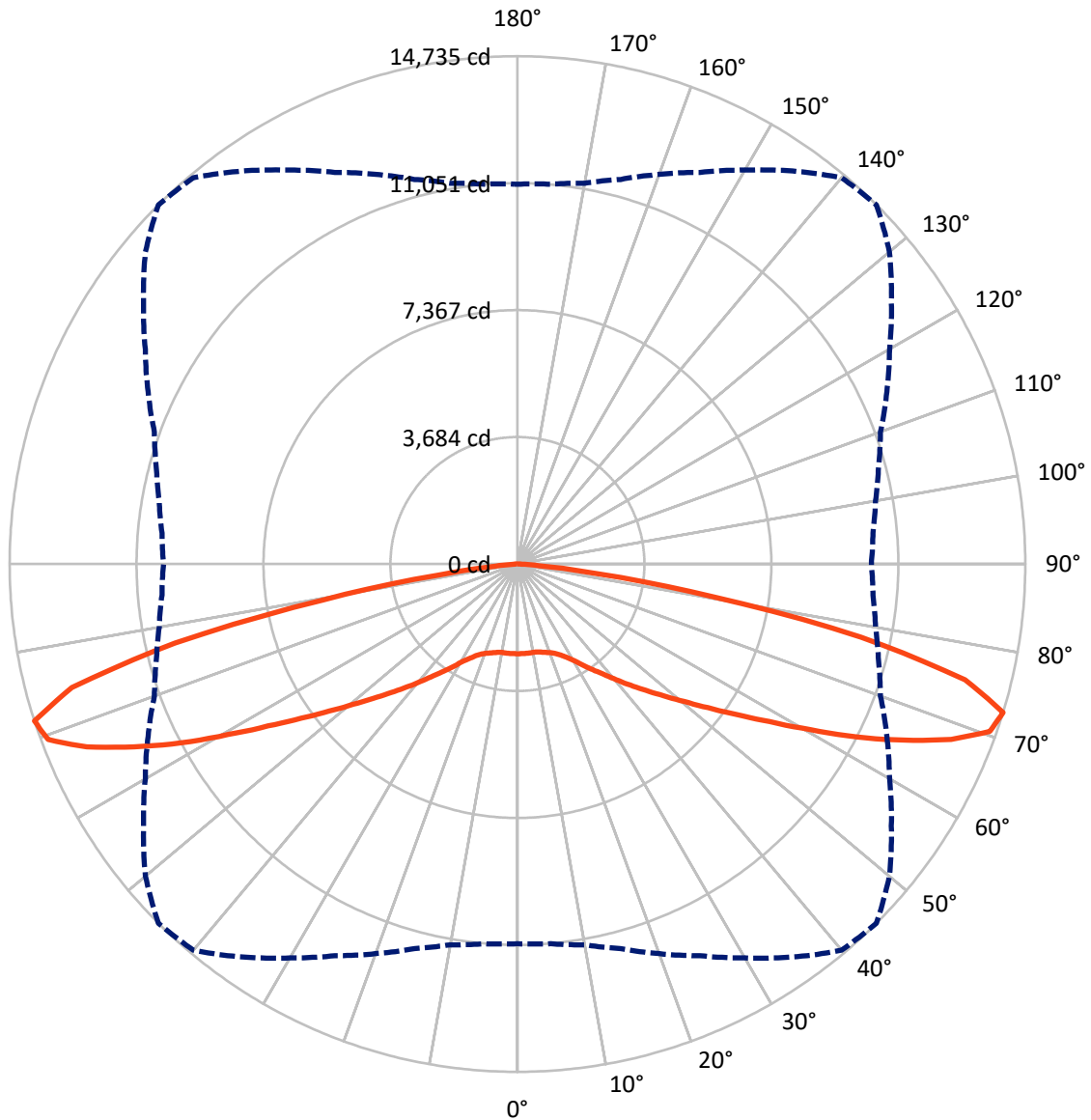


Based on 30 foot mounting height. Maximum calculated value = 2.9 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	18397.8	0.0	18397.8
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	18397.8	0.0	18397.8
	% Fixture	50.0	0.0	50.0
Total	Lumens	36795.7	0.0	36795.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	248.8	0.7
10°-20°	755.7	2.1
20°-30°	1380.9	3.8
30°-40°	2381.0	6.5
40°-50°	4070.2	11.1
50°-60°	6597.3	17.9
60°-70°	10944.7	29.7
70°-80°	9639.7	26.2
80°-90°	777.2	2.1
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°	36795.7	100.0
0°-180°	36795.7	100.0



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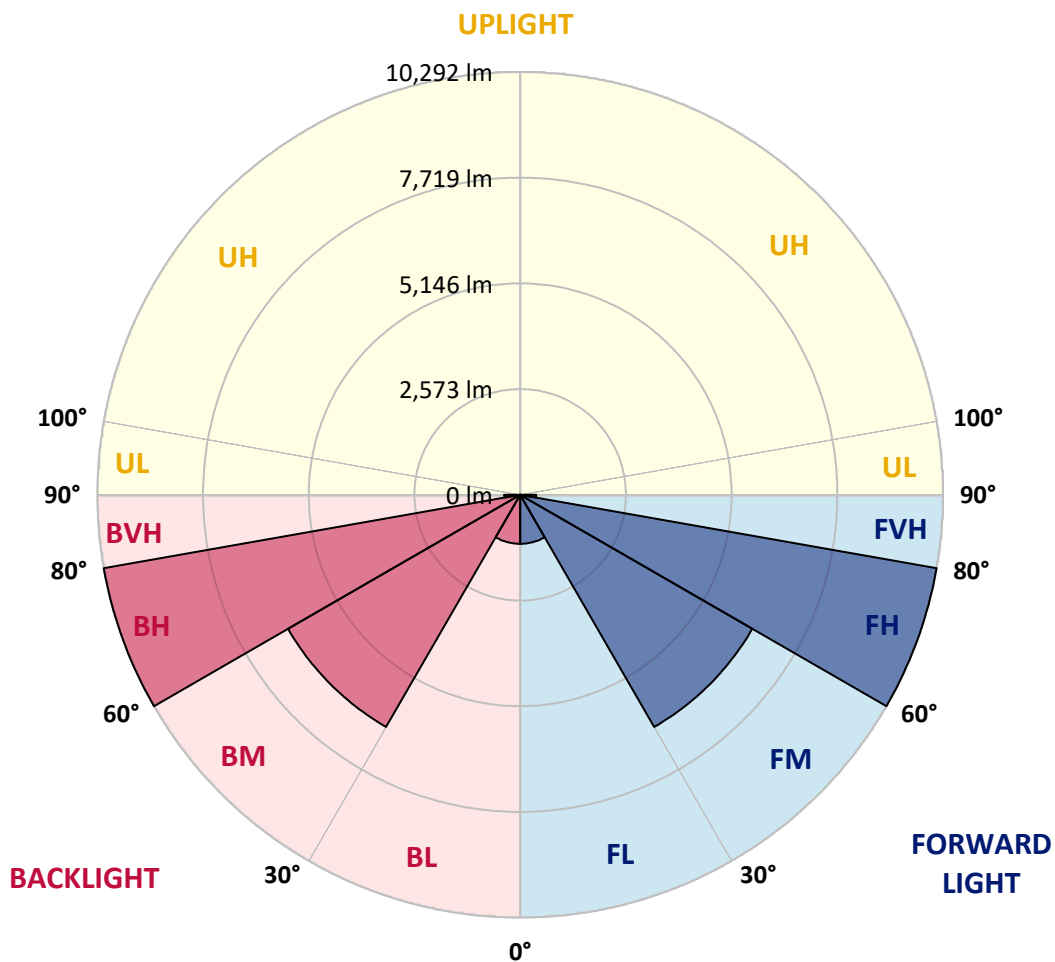
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1192.7	3.2			
FM	(30°-60°)	6524.3	17.7			
FH	(60°-80°)	10292.2	28.0			G4/12000
FVH	(80°-90°)	388.6	1.1			G3/500
BL	(0°-30°)	1192.7	3.2	B3/2500		
BM	(30°-60°)	6524.3	17.7	B4/8500		
BH	(60°-80°)	10292.2	28.0	B5		G4/12000
BVH	(80°-90°)	388.6	1.1			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G4

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2605.7	2605.7	2605.7	2605.7	2605.7	2605.7	2605.7	2605.7	2605.7	2605.7	2605.7
2.5°	2605.7	2607.4	2609.1	2607.4	2607.4	2605.7	2604.0	2605.7	2604.0	2600.6	2602.3
5°	2614.1	2617.5	2617.5	2614.1	2615.8	2614.1	2610.8	2612.5	2609.1	2604.0	2604.0
7.5°	2624.3	2626.0	2626.0	2622.6	2624.3	2620.9	2617.5	2615.8	2612.5	2605.7	2600.6
10°	2639.5	2641.1	2639.5	2636.1	2636.1	2631.0	2622.6	2619.2	2612.5	2602.3	2597.3
12.5°	2656.3	2658.0	2656.3	2653.0	2651.3	2642.8	2636.1	2631.0	2626.0	2617.5	2609.1
15°	2680.0	2683.3	2680.0	2673.2	2668.1	2661.4	2658.0	2659.7	2661.4	2654.6	2646.2
17.5°	2723.8	2725.5	2720.5	2705.3	2698.5	2691.8	2691.8	2695.2	2700.2	2696.8	2688.4
20°	2804.8	2799.8	2788.0	2769.4	2761.0	2749.2	2747.5	2749.2	2749.2	2747.5	2740.7
22.5°	2906.1	2902.7	2887.5	2863.9	2852.1	2845.4	2835.2	2826.8	2825.1	2820.0	2813.3
25°	3027.6	3025.9	3007.4	2987.1	2978.7	2970.2	2961.8	2950.0	2939.9	2928.0	2921.3
27.5°	3182.9	3176.1	3149.1	3139.0	3127.2	3122.1	3110.3	3096.8	3088.4	3073.2	3064.7
30°	3353.3	3353.3	3331.4	3328.0	3328.0	3316.2	3302.7	3279.1	3263.9	3248.7	3243.6
32.5°	3523.8	3525.5	3503.5	3510.3	3515.3	3523.8	3527.2	3518.7	3508.6	3506.9	3496.8
35°	3770.2	3763.4	3741.5	3746.5	3744.9	3743.2	3743.2	3761.7	3765.1	3768.5	3748.2
37.5°	4075.6	4075.6	4053.7	4053.7	4043.6	4033.4	4019.9	4031.8	4050.3	4055.4	4041.9
40°	4425.0	4436.8	4409.8	4408.1	4411.5	4379.4	4364.2	4382.8	4394.6	4414.9	4399.7
42.5°	4836.8	4828.3	4801.3	4797.9	4779.4	4769.3	4755.8	4770.9	4789.5	4803.0	4808.1
45°	5231.7	5224.9	5194.5	5194.5	5176.0	5167.5	5174.3	5199.6	5208.0	5226.6	5245.2
47.5°	5621.5	5613.1	5592.8	5601.3	5602.9	5618.1	5640.1	5663.7	5687.3	5712.6	5721.1
50°	6019.8	6021.5	5999.5	6019.8	6045.1	6087.3	6146.4	6185.2	6234.1	6266.2	6276.3
52.5°	6382.6	6389.4	6413.0	6460.3	6510.9	6593.6	6694.8	6789.4	6870.4	6924.4	6921.0
55°	6818.0	6828.2	6885.5	6966.6	7049.2	7174.1	7324.3	7491.4	7626.4	7704.0	7655.1
57.5°	7375.0	7396.9	7461.0	7570.7	7693.9	7855.9	8061.8	8313.3	8522.6	8627.2	8547.9
60°	8139.5	8153.0	8230.6	8352.1	8500.6	8701.4	8976.5	9314.1	9609.4	9747.8	9656.6
62.5°	9147.0	9172.3	9234.7	9357.9	9509.8	9737.6	10073.5	10495.4	10863.3	11055.7	10849.8
65°	10350.3	10431.3	10483.6	10608.5	10750.2	10991.6	11342.6	11794.9	12189.8	12316.4	12078.4
67.5°	11541.7	11612.6	11703.7	11847.2	11990.6	12262.3	12588.1	13026.8	13460.6	13575.3	13205.7
70°	12063.2	12103.7	12245.5	12441.2	12716.3	13037.0	13413.3	13906.1	14442.8	14537.3	14068.1
72.5°	11018.6	11059.1	11217.7	11550.2	12029.5	12539.1	13195.6	13919.6	14628.4	14734.7	14088.4
75°	8333.5	8267.7	8502.3	8942.8	9589.1	10299.6	11217.7	12255.6	13280.0	13413.3	12642.1
77.5°	4306.8	4298.4	4475.6	5022.4	5793.6	6602.0	7612.9	8785.8	9788.3	10193.3	9565.5
80°	1213.4	1226.9	1311.3	1583.0	2033.6	2617.5	3407.3	4506.0	5326.2	5744.7	5393.7
82.5°	475.9	513.0	545.1	595.7	654.8	740.9	989.0	1471.6	1974.5	2359.3	1932.3
85°	170.5	182.3	258.2	305.5	310.5	327.4	373.0	435.4	524.9	626.1	514.7
87.5°	64.1	70.9	82.7	136.7	135.0	123.2	150.2	156.9	118.1	108.0	133.3
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°	2605.7	2605.7	2605.7	2605.7	2605.7	2605.7	2605.7	2605.7
2.5°	2599.0	2600.6	2600.6	2602.3	2604.0	2604.0	2607.4	2607.4
5°	2600.6	2600.6	2597.3	2599.0	2597.3	2597.3	2599.0	2599.0
7.5°	2597.3	2595.6	2592.2	2590.5	2587.1	2587.1	2587.1	2587.1
10°	2592.2	2590.5	2587.1	2585.5	2583.8	2583.8	2583.8	2583.8
12.5°	2605.7	2600.6	2597.3	2595.6	2595.6	2595.6	2595.6	2595.6
15°	2641.1	2629.3	2620.9	2620.9	2622.6	2626.0	2626.0	2629.3
17.5°	2685.0	2671.5	2663.1	2656.3	2659.7	2664.8	2668.1	2671.5
20°	2737.3	2730.6	2718.8	2712.0	2712.0	2718.8	2722.2	2723.8
22.5°	2809.9	2804.8	2799.8	2791.3	2791.3	2794.7	2801.5	2801.5
25°	2917.9	2914.5	2911.2	2904.4	2902.7	2902.7	2906.1	2909.5
27.5°	3052.9	3054.6	3051.2	3049.6	3044.5	3042.8	3047.9	3046.2
30°	3233.5	3241.9	3250.4	3243.6	3235.2	3230.1	3225.1	3218.3
32.5°	3478.2	3468.1	3461.3	3449.5	3434.3	3420.8	3410.7	3398.9
35°	3709.4	3692.5	3685.8	3695.9	3694.2	3685.8	3674.0	3663.9
37.5°	3992.9	3989.6	3992.9	4011.5	4008.1	4016.6	3992.9	3991.3
40°	4350.7	4354.1	4377.7	4399.7	4411.5	4423.3	4409.8	4396.3
42.5°	4765.9	4764.2	4772.6	4803.0	4823.3	4836.8	4808.1	4804.7
45°	5204.7	5192.8	5199.6	5224.9	5245.2	5260.4	5228.3	5228.3
47.5°	5687.3	5667.1	5645.1	5673.8	5685.6	5695.8	5670.5	5662.0
50°	6225.7	6183.5	6136.2	6148.1	6148.1	6144.7	6112.6	6110.9
52.5°	6843.4	6765.7	6679.7	6647.6	6629.0	6608.8	6553.1	6526.1
55°	7553.8	7437.4	7302.4	7219.7	7175.8	7120.1	7027.3	7002.0
57.5°	8384.2	8201.9	7969.0	7867.7	7769.9	7678.7	7575.8	7547.1
60°	9368.1	9099.7	8790.9	8603.6	8497.2	8409.5	8303.2	8298.1
62.5°	10465.0	10041.4	9692.1	9523.3	9445.7	9368.1	9266.8	9280.3
65°	11580.5	11138.4	10811.0	10674.3	10601.7	10537.6	10436.3	10451.5
67.5°	12680.9	12274.2	11914.7	11774.6	11693.6	11612.6	11521.5	11536.7
70°	13470.7	12966.1	12561.1	12250.5	12056.5	11837.1	11695.3	11659.9
72.5°	13244.6	12466.6	11823.6	11207.6	10846.4	10552.8	10353.6	10267.6
75°	11462.4	10399.2	9572.3	8816.2	8390.9	8045.0	7793.5	7636.5
77.5°	8512.4	7317.6	6340.4	5469.6	4781.1	4318.7	3992.9	3782.0
80°	4659.6	3544.0	2590.5	1821.0	1338.3	1112.2	982.2	919.8
82.5°	1451.4	936.6	690.2	595.7	553.5	529.9	491.1	428.7
85°	462.4	405.0	376.3	359.5	342.6	298.7	205.9	187.3
87.5°	178.9	184.0	182.3	172.1	175.5	126.6	101.3	89.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)