

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: P299983

Luminaire Tested: **GLNA-AF-09-LED-E1-5WQ-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299983
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-7027-600
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 2700K 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: 31969.5 lumens
Efficiency: N/A
Efficacy: 110.2 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

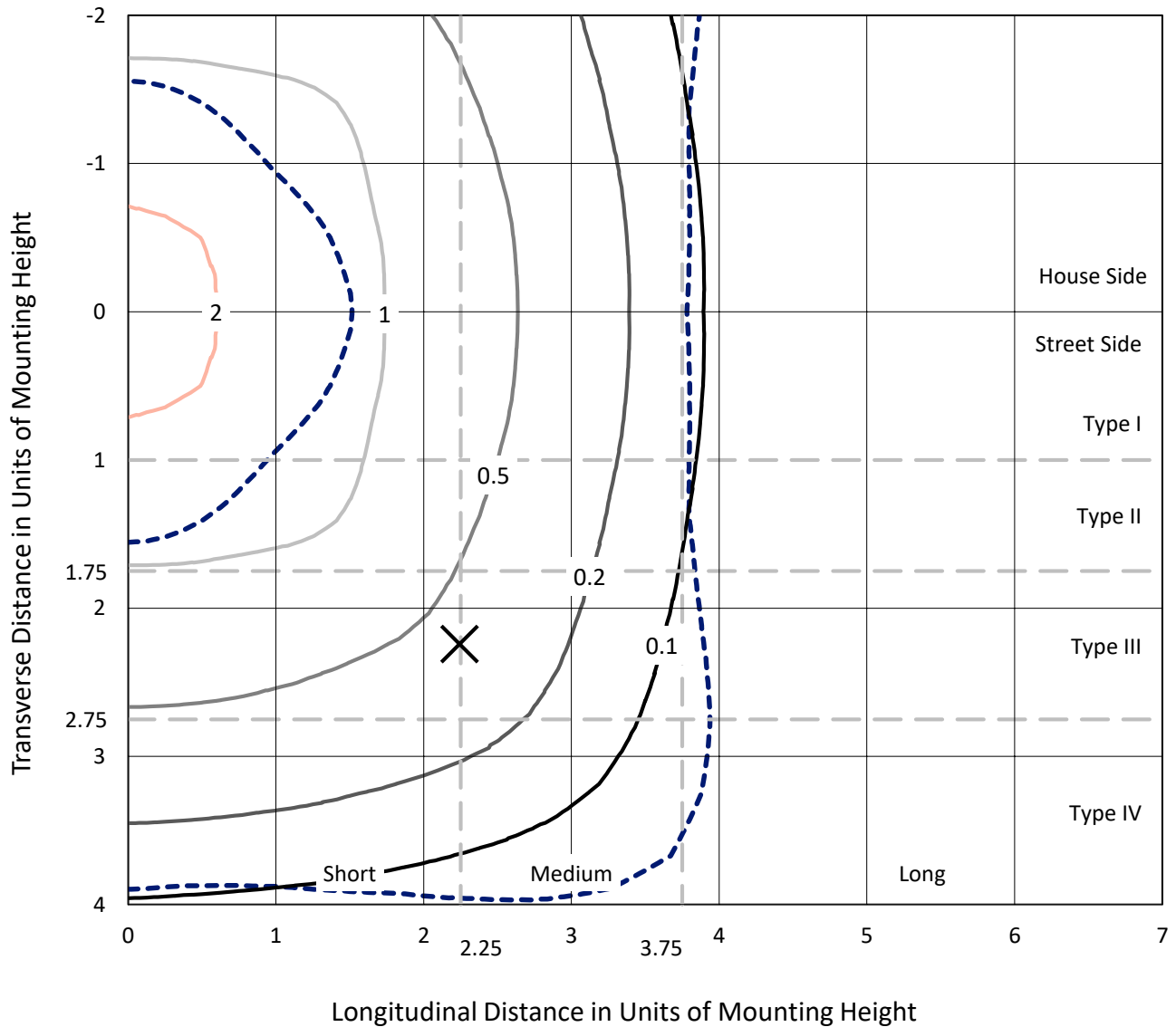


REPORT NUMBER: P299983

CATALOG NUMBER: GLNA-AF-09-LED-E1-5WQ-7027-600

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

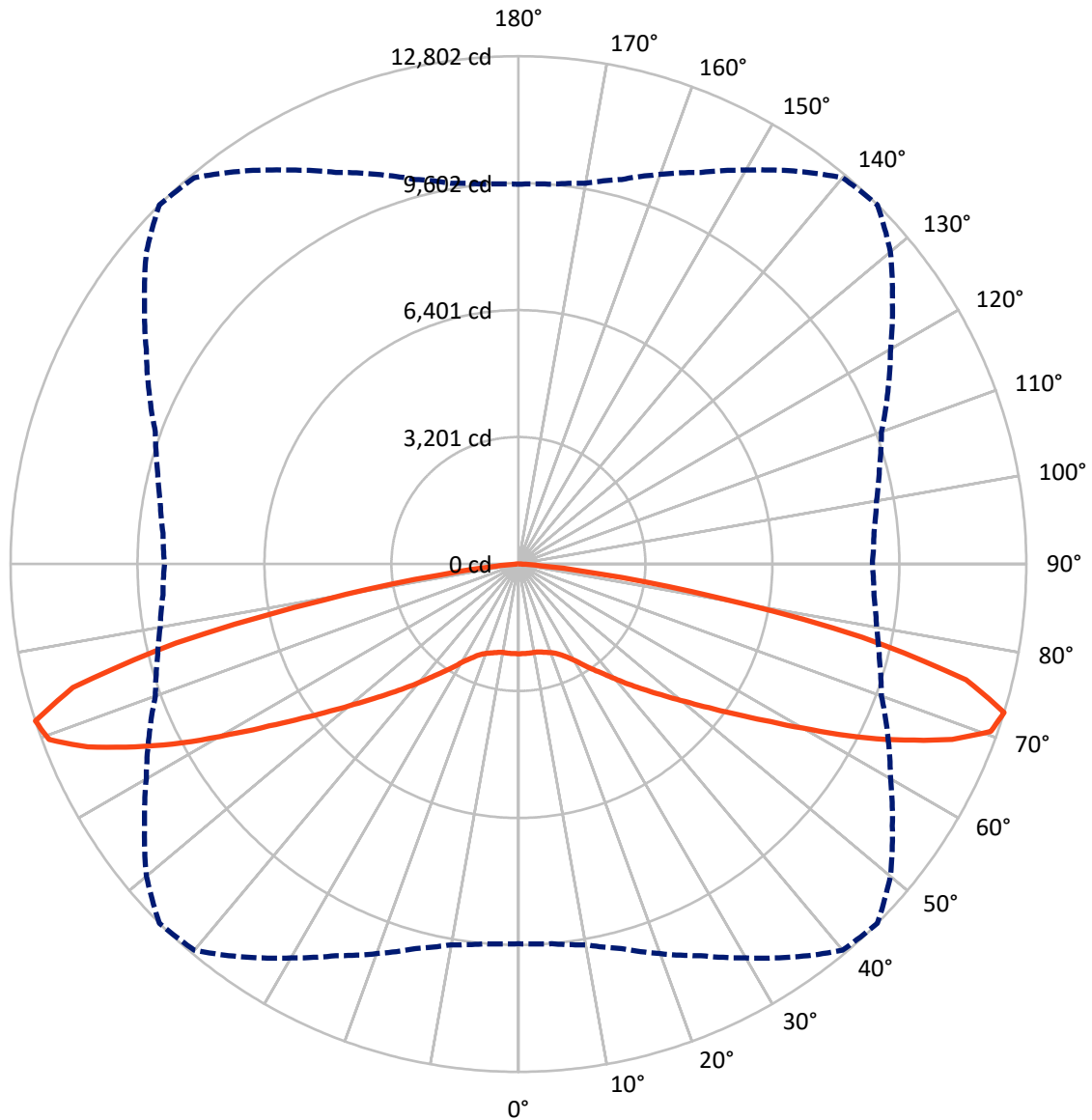


Based on 30 foot mounting height. Maximum calculated value = 2.5 fc
 Type V - Short - Semi-Cutoff

REPORT NUMBER: P299983

CATALOG NUMBER: GLNA-AF-09-LED-E1-5WQ-7027-600

Luminous Intensity Polar Plot



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

REPORT NUMBER: P299983

CATALOG NUMBER: GLNA-AF-09-LED-E1-5WQ-7027-600

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	15984.8	0.0	15984.8
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	15984.8	0.0	15984.8
	% Fixture	50.0	0.0	50.0
Total	Lumens	31969.5	0.0	31969.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.2	0.7
10°-20°	656.6	2.1
20°-30°	1199.8	3.8
30°-40°	2068.7	6.5
40°-50°	3536.4	11.1
50°-60°	5732.0	17.9
60°-70°	9509.2	29.7
70°-80°	8375.4	26.2
80°-90°	675.3	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°	31969.5	100.0
0°-180°	31969.5	100.0



REPORT NUMBER: P299983

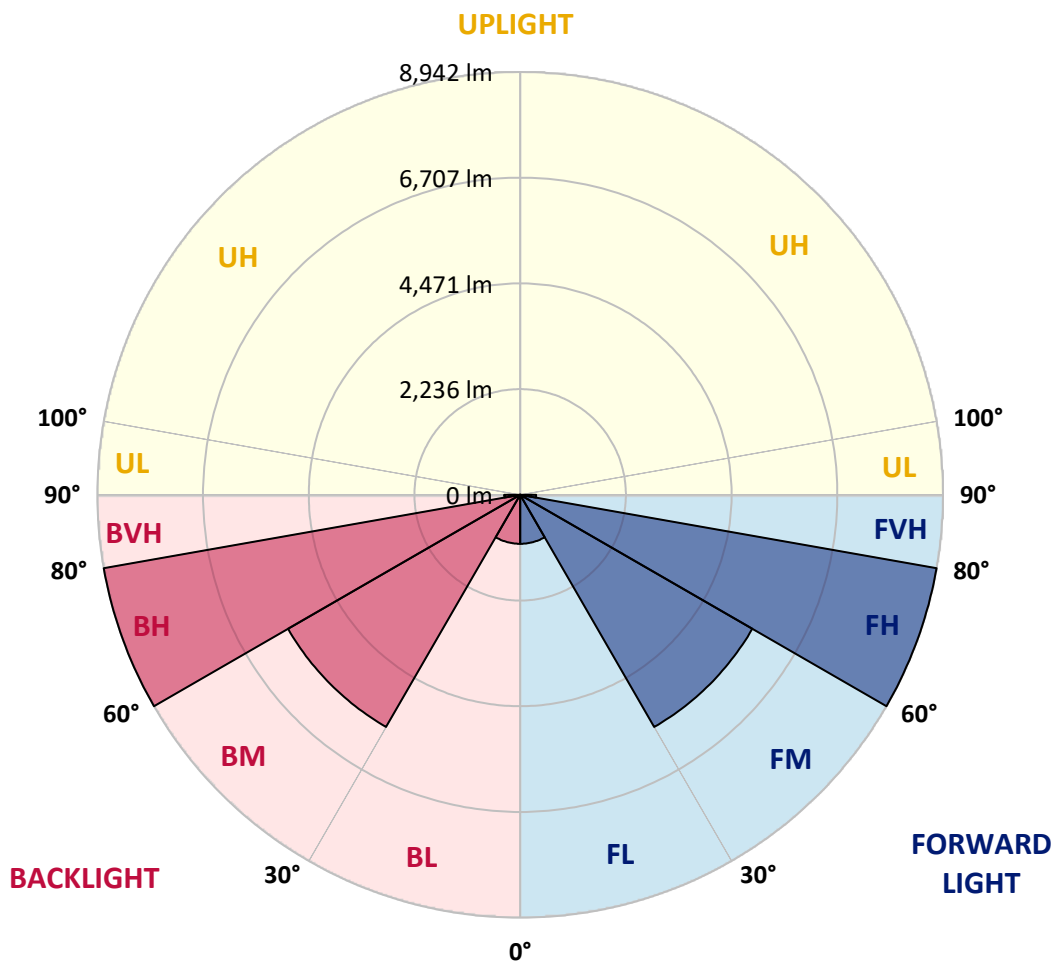
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1036.3	3.2			
FM	(30°-60°)	5668.5	17.7			
FH	(60°-80°)	8942.3	28.0			G4/12000
FVH	(80°-90°)	337.6	1.1			G3/500
BL	(0°-30°)	1036.3	3.2	B3/2500		
BM	(30°-60°)	5668.5	17.7	B4/8500		
BH	(60°-80°)	8942.3	28.0	B5		G4/12000
BVH	(80°-90°)	337.6	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





REPORT NUMBER: P299983

CATALOG NUMBER: GLNA-AF-09-LED-E1-5WQ-7027-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2263.9	2263.9	2263.9	2263.9	2263.9	2263.9	2263.9	2263.9	2263.9	2263.9	2263.9
2.5°	2263.9	2265.4	2266.9	2265.4	2265.4	2263.9	2262.5	2263.9	2262.5	2259.5	2261.0
5°	2271.3	2274.2	2274.2	2271.3	2272.7	2271.3	2268.3	2269.8	2266.9	2262.5	2262.5
7.5°	2280.1	2281.5	2281.5	2278.6	2280.1	2277.1	2274.2	2272.7	2269.8	2263.9	2259.5
10°	2293.3	2294.7	2293.3	2290.3	2290.3	2285.9	2278.6	2275.7	2269.8	2261.0	2256.6
12.5°	2307.9	2309.4	2307.9	2305.0	2303.5	2296.2	2290.3	2285.9	2281.5	2274.2	2266.9
15°	2328.5	2331.4	2328.5	2322.6	2318.2	2312.3	2309.4	2310.9	2312.3	2306.5	2299.1
17.5°	2366.6	2368.0	2363.6	2350.4	2344.6	2338.7	2338.7	2341.7	2346.1	2343.1	2335.8
20°	2437.0	2432.6	2422.3	2406.2	2398.8	2388.6	2387.1	2388.6	2388.6	2387.1	2381.2
22.5°	2524.9	2522.0	2508.8	2488.3	2478.0	2472.2	2463.4	2456.0	2454.6	2450.2	2444.3
25°	2630.5	2629.0	2612.9	2595.3	2588.0	2580.7	2573.3	2563.1	2554.3	2544.0	2538.1
27.5°	2765.4	2759.5	2736.1	2727.3	2717.0	2712.6	2702.4	2690.6	2683.3	2670.1	2662.8
30°	2913.5	2913.5	2894.4	2891.5	2891.5	2881.2	2869.5	2849.0	2835.8	2822.6	2818.2
32.5°	3061.6	3063.1	3044.0	3049.9	3054.3	3061.6	3064.5	3057.2	3048.4	3046.9	3038.1
35°	3275.7	3269.8	3250.7	3255.1	3253.7	3252.2	3252.2	3268.3	3271.3	3274.2	3256.6
37.5°	3541.1	3541.1	3522.0	3522.0	3513.2	3504.4	3492.7	3502.9	3519.1	3523.5	3511.7
40°	3844.6	3854.9	3831.4	3829.9	3832.9	3805.0	3791.8	3807.9	3818.2	3835.8	3822.6
42.5°	4202.4	4195.0	4171.6	4168.6	4152.5	4143.7	4132.0	4145.2	4161.3	4173.0	4177.4
45°	4545.5	4539.6	4513.2	4513.2	4497.1	4489.8	4495.6	4517.6	4524.9	4541.1	4557.2
47.5°	4884.2	4876.9	4859.3	4866.6	4868.1	4881.3	4900.3	4920.8	4941.4	4963.4	4970.7
50°	5230.2	5231.7	5212.6	5230.2	5252.2	5288.9	5340.2	5373.9	5416.4	5444.3	5453.1
52.5°	5545.5	5551.3	5571.9	5612.9	5656.9	5728.8	5816.7	5898.9	5969.2	6016.2	6013.2
55°	5923.8	5932.6	5982.4	6052.8	6124.7	6233.2	6363.7	6508.8	6626.1	6693.6	6651.1
57.5°	6407.7	6426.7	6482.4	6577.7	6684.8	6825.5	7004.4	7222.9	7404.7	7495.6	7426.7
60°	7071.9	7083.6	7151.1	7256.6	7385.7	7560.1	7799.2	8092.4	8349.0	8469.2	8390.1
62.5°	7947.2	7969.2	8023.5	8130.5	8262.5	8460.4	8752.2	9118.8	9438.5	9605.6	9426.7
65°	8992.7	9063.1	9108.5	9217.0	9340.2	9549.9	9854.9	10247.8	10591.0	10700.9	10494.2
67.5°	10027.9	10089.5	10168.7	10293.3	10417.9	10654.0	10937.0	11318.2	11695.1	11794.8	11473.7
70°	10481.0	10516.2	10639.3	10809.4	11048.4	11327.0	11654.0	12082.2	12548.4	12630.6	12222.9
72.5°	9573.4	9608.5	9746.4	10035.2	10451.7	10894.5	11464.9	12093.9	12709.7	12802.1	12240.5
75°	7240.5	7183.3	7387.1	7769.8	8331.4	8948.7	9746.4	10648.1	11538.2	11654.0	10983.9
77.5°	3742.0	3734.6	3888.6	4363.7	5033.7	5736.1	6614.4	7633.5	8504.4	8856.3	8310.9
80°	1054.3	1066.0	1139.3	1375.4	1766.9	2274.2	2960.4	3915.0	4627.6	4991.2	4686.2
82.5°	413.5	445.7	473.6	517.6	568.9	643.7	859.2	1278.6	1715.5	2049.9	1678.9
85°	148.1	158.4	224.3	265.4	269.8	284.5	324.0	378.3	456.0	544.0	447.2
87.5°	55.7	61.6	71.8	118.8	117.3	107.0	130.5	136.4	102.6	93.8	115.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P299983

CATALOG NUMBER: GLNA-AF-09-LED-E1-5WQ-7027-600

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2263.9	2263.9	2263.9	2263.9	2263.9	2263.9	2263.9	2263.9
2.5°	2258.1	2259.5	2259.5	2261.0	2262.5	2262.5	2265.4	2265.4
5°	2259.5	2259.5	2256.6	2258.1	2256.6	2256.6	2258.1	2258.1
7.5°	2256.6	2255.1	2252.2	2250.7	2247.8	2247.8	2247.8	2247.8
10°	2252.2	2250.7	2247.8	2246.3	2244.9	2244.9	2244.9	2244.9
12.5°	2263.9	2259.5	2256.6	2255.1	2255.1	2255.1	2255.1	2255.1
15°	2294.7	2284.5	2277.1	2277.1	2278.6	2281.5	2281.5	2284.5
17.5°	2332.9	2321.1	2313.8	2307.9	2310.9	2315.3	2318.2	2321.1
20°	2378.3	2372.4	2362.2	2356.3	2356.3	2362.2	2365.1	2366.6
22.5°	2441.4	2437.0	2432.6	2425.2	2425.2	2428.2	2434.0	2434.0
25°	2535.2	2532.3	2529.3	2523.5	2522.0	2522.0	2524.9	2527.9
27.5°	2652.5	2654.0	2651.0	2649.6	2645.2	2643.7	2648.1	2646.6
30°	2809.4	2816.7	2824.1	2818.2	2810.9	2806.5	2802.1	2796.2
32.5°	3022.0	3013.2	3007.3	2997.1	2983.9	2972.2	2963.4	2953.1
35°	3222.9	3208.2	3202.4	3211.2	3209.7	3202.4	3192.1	3183.3
37.5°	3469.2	3466.3	3469.2	3485.4	3482.4	3489.8	3469.2	3467.8
40°	3780.1	3783.0	3803.5	3822.6	3832.9	3843.1	3831.4	3819.7
42.5°	4140.8	4139.3	4146.6	4173.0	4190.6	4202.4	4177.4	4174.5
45°	4522.0	4511.7	4517.6	4539.6	4557.2	4570.4	4542.5	4542.5
47.5°	4941.4	4923.8	4904.7	4929.6	4939.9	4948.7	4926.7	4919.4
50°	5409.1	5372.5	5331.4	5341.7	5341.7	5338.7	5310.9	5309.4
52.5°	5945.8	5878.3	5803.5	5775.7	5759.6	5742.0	5693.6	5670.1
55°	6563.1	6461.9	6344.6	6272.8	6234.6	6186.2	6105.6	6083.6
57.5°	7284.5	7126.1	6923.8	6835.8	6750.8	6671.6	6582.1	6557.2
60°	8139.3	7906.2	7637.9	7475.1	7382.7	7306.5	7214.1	7209.7
62.5°	9092.4	8724.4	8420.9	8274.2	8206.8	8139.3	8051.4	8063.1
65°	10061.6	9677.5	9393.0	9274.2	9211.2	9155.5	9067.5	9080.7
67.5°	11017.6	10664.3	10351.9	10230.2	10159.9	10089.5	10010.3	10023.5
70°	11703.9	11265.4	10913.5	10643.7	10475.1	10284.5	10161.3	10130.5
72.5°	11507.4	10831.4	10272.8	9737.6	9423.8	9168.7	8995.6	8920.9
75°	9959.0	9035.2	8316.8	7659.9	7290.4	6989.8	6771.3	6634.9
77.5°	7395.9	6357.8	5508.8	4752.2	4154.0	3752.2	3469.2	3285.9
80°	4048.4	3079.2	2250.7	1582.1	1162.8	966.3	853.4	799.1
82.5°	1261.0	813.8	599.7	517.6	480.9	460.4	426.7	372.4
85°	401.8	351.9	327.0	312.3	297.7	259.5	178.9	162.8
87.5°	155.4	159.8	158.4	149.6	152.5	110.0	88.0	77.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)