

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: P298906

Luminaire Tested: **GLNA-AF-09-LED-E1-T2**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P298906
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24139)
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-T2
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 52041.5 lumens
Efficiency: N/A
Efficacy: 103.9 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B4 - U0 - G5

Input Watts (W): 501
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

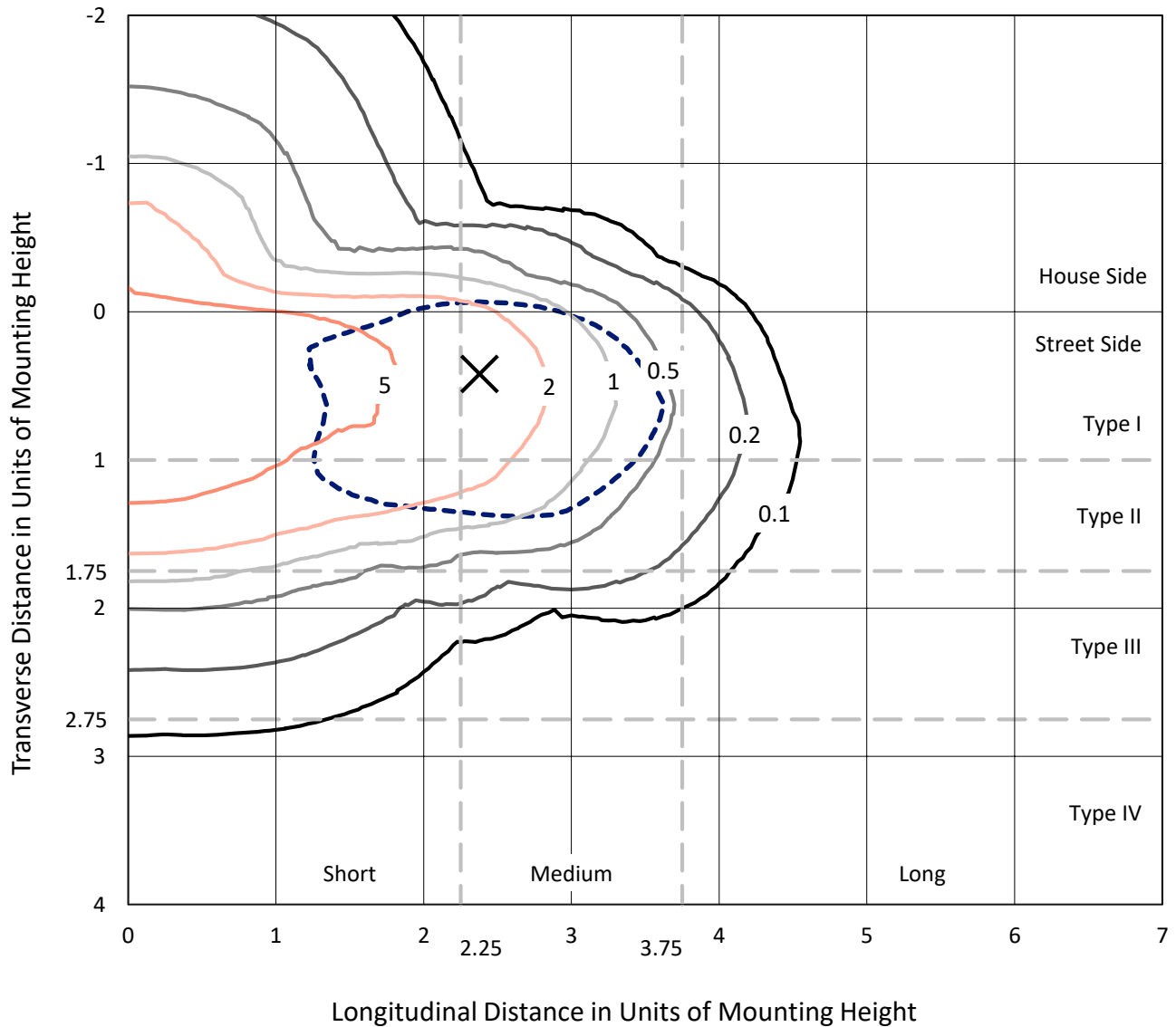


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

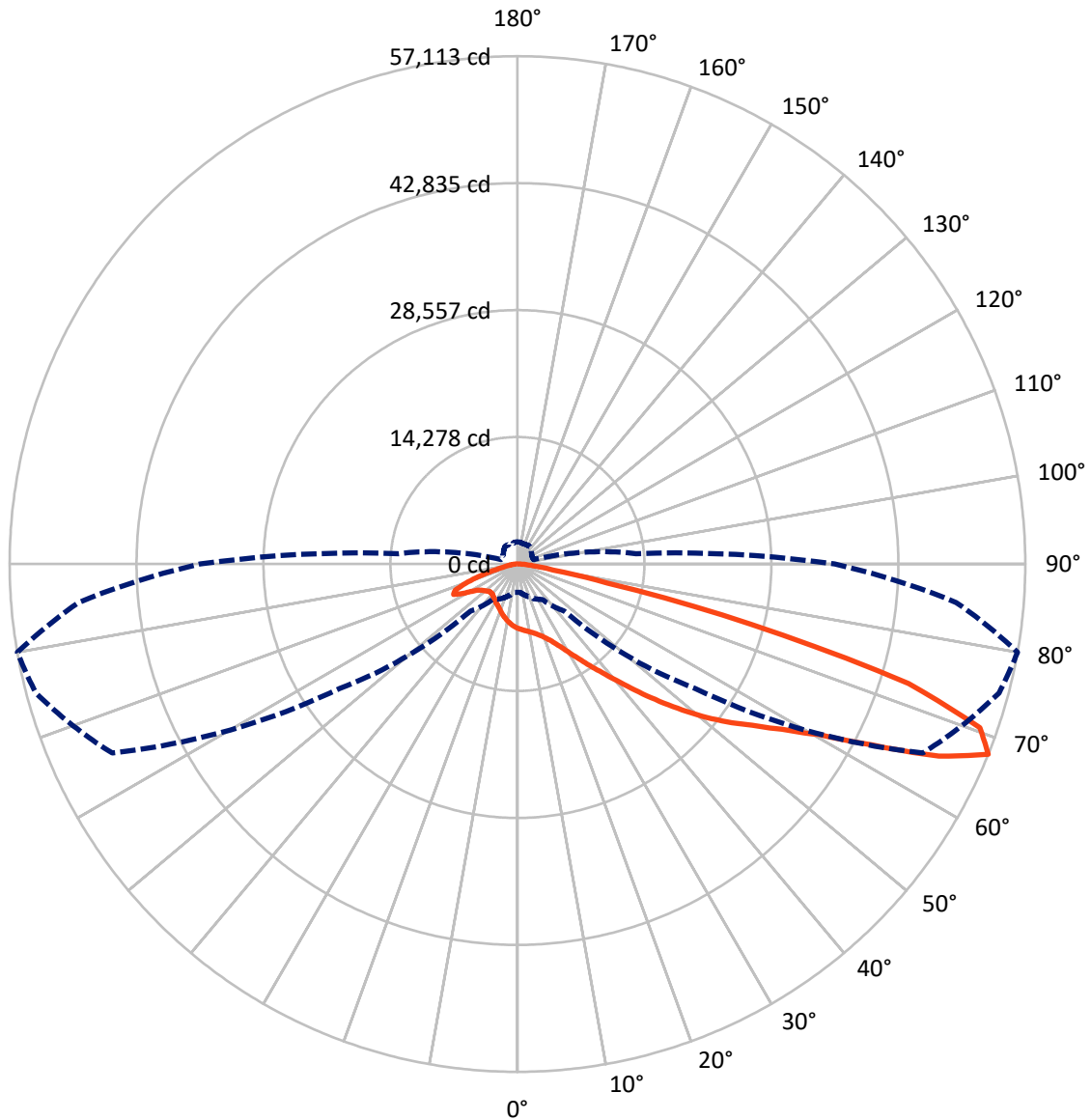


Based on 30 foot mounting height. Maximum calculated value = 9.8 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 80-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9584.1	0.0	9584.1
	% Fixture	18.4	0.0	18.4
Street Side	Lumens	42457.4	0.0	42457.4
	% Fixture	81.6	0.0	81.6
Total	Lumens	52041.5	0.0	52041.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	666.9	1.3
10°-20°	1921.3	3.7
20°-30°	3180.1	6.1
30°-40°	5201.8	10.0
40°-50°	8398.9	16.1
50°-60°	12125.6	23.3
60°-70°	13381.3	25.7
70°-80°	6167.9	11.9
80°-90°	997.6	1.9
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°	52041.5	100.0
0°-180°	52041.5	100.0



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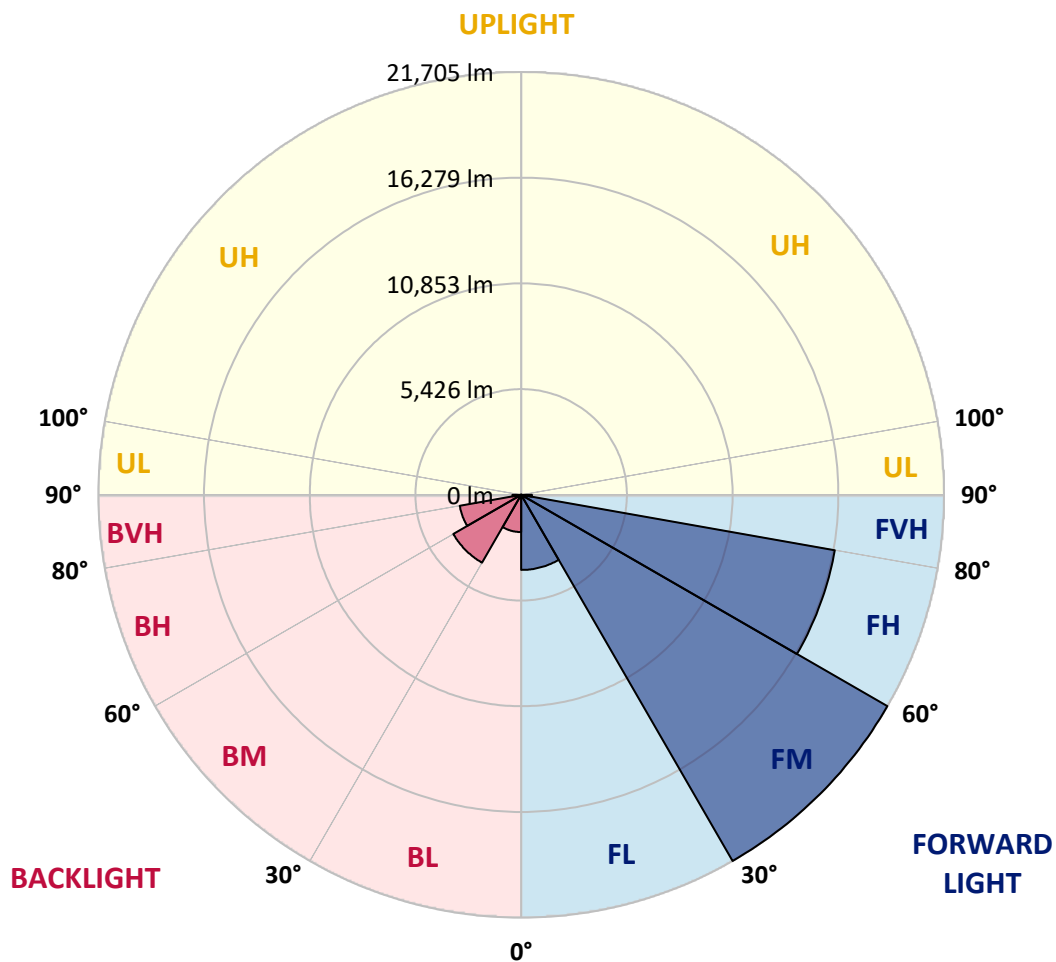
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3856.2	7.4			
FM (30°-60°)	21705.2	41.7			
FH (60°-80°)	16347.6	31.4			G5
FVH (80°-90°)	548.5	1.1			G4/750
BL (0°-30°)	1912.2	3.7	B3/2500		
BM (30°-60°)	4021.1	7.7	B3/5000		
BH (60°-80°)	3201.6	6.2	B4/5000		G4/5000
BVH (80°-90°)	449.1	0.9			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G5

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	80°	85°
0°	7230.1	7230.1	7230.1	7230.1	7230.1	7230.1	7230.1	7230.1	7230.1	7230.1	7230.1
2.5°	7909.0	7862.9	7870.6	7857.8	7819.3	7752.7	7681.0	7550.3	7414.5	7342.8	7286.4
5°	8570.0	8557.2	8539.3	8498.3	8400.9	8262.6	8090.9	7860.3	7611.8	7481.2	7355.6
7.5°	9064.5	9056.8	9033.7	9008.1	8913.3	8746.8	8488.0	8160.1	7798.8	7619.5	7424.8
10°	9105.5	9118.3	9136.2	9205.4	9218.2	9128.5	8864.7	8467.5	7993.6	7763.0	7514.5
12.5°	8757.0	8785.2	8854.4	9031.2	9218.2	9328.4	9192.6	8790.4	8221.6	7942.3	7627.2
15°	8295.9	8311.3	8395.8	8639.2	8974.8	9315.6	9443.7	9146.5	8516.2	8172.9	7796.3
17.5°	8098.6	8106.3	8165.2	8326.6	8639.2	9126.0	9584.6	9533.3	8877.5	8459.9	8003.8
20°	7998.7	8016.6	8101.2	8260.0	8457.3	8882.6	9605.1	9951.0	9307.9	8818.5	8265.1
22.5°	8283.1	8275.4	8306.1	8385.6	8552.1	8808.3	9589.7	10381.4	9856.2	9279.7	8605.9
25°	8946.6	8974.8	8921.0	8831.3	8885.2	9064.5	9671.7	10847.7	10542.8	9871.5	9051.7
27.5°	9892.0	9863.8	9784.4	9574.3	9464.2	9541.0	9943.3	11349.8	11395.9	10650.4	9641.0
30°	10834.9	10811.8	10734.9	10478.7	10253.3	10189.2	10471.1	11926.3	12413.1	11585.5	10363.4
32.5°	11813.6	11787.9	11716.2	11460.0	11188.4	11039.8	11221.7	12592.4	13612.1	12702.6	11214.0
35°	13020.3	12971.6	12820.4	12464.3	12197.9	12082.6	12167.1	13430.2	14995.6	14024.6	12246.5
37.5°	14155.3	14229.6	14075.8	13583.9	13238.1	13197.1	13291.9	14452.5	16486.7	15502.9	13432.8
40°	15295.4	15308.2	15169.8	14767.6	14411.5	14344.9	14583.1	15692.5	18246.8	17270.7	14875.2
42.5°	16473.9	16499.5	16266.4	15894.9	15633.6	15646.4	15917.9	17145.2	20265.7	19353.6	16535.4
45°	17870.2	17908.7	17652.4	17165.7	16927.4	17406.5	17293.8	18774.6	22479.3	21721.0	18441.6
47.5°	19330.6	19389.5	19194.8	18738.8	18441.6	19100.0	18669.6	20580.9	24862.0	24259.9	20534.7
50°	20127.4	20211.9	20401.5	20368.2	20304.2	20194.0	20204.2	22517.8	27319.0	26904.0	22686.9
52.5°	19699.5	19697.0	20388.7	21229.1	22125.8	22192.4	22074.5	24559.7	29614.6	29489.1	24713.4
55°	17742.1	17875.3	18923.2	20550.1	22999.4	24529.0	24877.4	26898.8	31869.2	32015.2	26770.7
57.5°	14483.2	14593.4	16007.6	18275.0	21820.9	25917.6	28863.9	30298.7	34390.2	35071.7	29509.6
60°	9822.9	9956.1	11454.9	14178.3	18649.1	25143.8	32658.3	36365.6	37408.3	38958.4	33352.6
62.5°	5772.3	5892.7	7114.8	8944.1	13130.4	21549.3	34323.6	44997.1	42201.9	44822.9	39214.6
65°	3973.7	4055.7	4650.1	5567.3	7545.2	14513.9	32258.6	50956.4	49578.0	52088.8	46011.7
67.5°	3197.4	3187.2	3658.6	4283.7	4857.6	7483.7	24393.2	50282.6	56065.1	57113.0	49539.6
70°	2633.8	2623.5	2943.8	3461.3	3881.5	4214.6	13286.7	42432.5	54743.1	55168.4	46290.9
72.5°	2203.4	2213.6	2418.6	2802.9	3184.6	3174.4	5838.9	29850.3	43065.3	46006.5	36901.0
75°	1860.0	1865.2	2001.0	2272.5	2585.1	2556.9	3166.7	16171.6	25033.7	27080.7	20455.3
77.5°	1583.3	1588.5	1675.6	1826.7	2049.6	2039.4	2311.0	6986.7	10442.9	10314.8	6996.9
80°	1411.7	1411.7	1452.7	1480.9	1603.8	1557.7	1714.0	3356.3	4414.4	4076.2	2792.6
82.5°	1106.8	1111.9	1363.0	1352.8	1263.1	1204.2	1204.2	1977.9	2339.1	2162.4	1634.6
85°	622.6	620.0	878.8	1060.7	1111.9	848.0	840.3	1106.8	1273.3	1122.2	791.7
87.5°	266.5	271.6	407.4	471.4	630.3	527.8	520.1	571.3	648.2	561.1	366.4
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°	7230.1	7230.1	7230.1	7230.1	7230.1	7230.1	7230.1	7230.1	7230.1	7230.1	7230.1
2.5°	7232.6	7166.0	7020.0	6838.1	6674.1	6566.5	6469.1	6328.2	6335.9	6238.6	6166.8
5°	7227.5	7089.2	6751.0	6348.7	5961.9	5682.6	5472.5	5282.9	5236.8	5147.1	5093.3
7.5°	7232.6	7007.2	6438.4	5795.3	5316.2	4962.7	4783.3	4683.4	4660.3	4629.6	4632.2
10°	7250.6	6932.9	6095.1	5277.8	4775.6	4542.5	4498.9	4529.7	4565.6	4575.8	4578.4
12.5°	7291.6	6866.3	5718.5	4816.6	4437.5	4365.7	4440.0	4545.1	4614.2	4647.5	4645.0
15°	7383.8	6815.0	5357.2	4455.4	4250.4	4288.9	4427.2	4575.8	4675.7	4721.8	4724.4
17.5°	7483.7	6740.7	4985.7	4178.7	4112.1	4209.4	4381.1	4555.3	4678.3	4729.5	4739.8
20°	7614.4	6648.5	4596.3	3971.2	3981.4	4091.6	4253.0	4427.2	4563.0	4606.5	4627.0
22.5°	7786.0	6548.6	4255.5	3802.1	3832.8	3917.4	4042.9	4194.1	4311.9	4332.4	4350.3
25°	8016.6	6441.0	3984.0	3648.3	3661.2	3709.8	3794.4	3884.1	3966.0	3943.0	3960.9
27.5°	8326.6	6348.7	3781.6	3507.4	3484.4	3494.6	3538.2	3566.4	3609.9	3545.9	3553.5
30°	8690.4	6248.8	3625.3	3384.5	3320.4	3302.5	3312.7	3328.1	3361.4	3274.3	3261.5
32.5°	9113.2	6128.4	3479.2	3276.8	3187.2	3151.3	3156.4	3197.4	3325.5	3271.7	3243.5
35°	9605.1	5992.6	3325.5	3159.0	3097.5	3046.3	3041.1	3169.2	3551.0	3517.7	3492.1
37.5°	10181.5	5856.8	3171.8	3025.8	3030.9	2974.5	2956.6	3102.6	3594.5	3463.9	3445.9
40°	10914.3	5785.1	3041.1	2884.9	2948.9	2941.2	2905.4	2979.7	3307.6	3069.3	3038.6
42.5°	11821.2	5795.3	2943.8	2733.7	2851.5	2933.5	2877.2	2879.7	2997.6	2818.2	2790.1
45°	12940.9	5915.7	2874.6	2613.3	2741.4	2925.8	2866.9	2825.9	2836.2	2741.4	2726.0
47.5°	14247.5	6164.3	2825.9	2513.4	2636.3	2897.7	2864.4	2810.6	2787.5	2736.3	2723.4
50°	15700.2	6525.5	2790.1	2418.6	2541.5	2851.5	2866.9	2795.2	2769.6	2749.1	2741.4
52.5°	17127.2	6938.0	2736.3	2336.6	2467.2	2795.2	2874.6	2779.8	2751.6	2736.3	2728.6
55°	18718.3	7453.0	2654.3	2267.4	2405.8	2723.4	2874.6	2756.8	2726.0	2728.6	2726.0
57.5°	20867.8	8285.6	2556.9	2208.5	2331.5	2636.3	2825.9	2731.1	2692.7	2695.3	2697.8
60°	24226.6	9753.7	2439.1	2149.6	2239.2	2533.9	2759.3	2674.8	2636.3	2646.6	2649.1
62.5°	29166.2	11908.4	2285.3	2062.4	2141.9	2423.7	2667.1	2603.0	2564.6	2590.2	2590.2
65°	34300.6	13809.4	2095.7	1952.3	2039.4	2303.3	2551.8	2513.4	2474.9	2533.9	2531.3
67.5°	35681.5	13384.1	1906.2	1831.9	1936.9	2170.0	2413.4	2392.9	2372.4	2474.9	2469.8
70°	31697.5	10745.2	1731.9	1708.9	1824.2	2026.6	2264.8	2264.8	2252.0	2328.9	2311.0
72.5°	24149.8	7619.5	1565.4	1578.2	1696.1	1870.3	2103.4	2121.4	2100.9	2139.3	2123.9
75°	12928.0	4360.6	1398.9	1434.7	1537.2	1711.4	1924.1	1942.0	1929.2	1926.7	1934.3
77.5°	4296.5	2131.6	1224.7	1281.0	1370.7	1547.5	1737.1	1765.2	1734.5	1729.4	1726.8
80°	1913.8	1339.9	1032.5	1106.8	1186.2	1360.4	1539.8	1562.8	1529.5	1575.7	1516.7
82.5°	1229.8	881.3	827.5	909.5	986.4	1173.4	1342.5	1347.6	1316.9	1529.5	1304.1
85°	597.0	545.7	622.6	696.9	763.5	922.3	1111.9	1114.5	1037.6	945.4	912.1
87.5°	297.2	317.7	415.1	481.7	515.0	632.8	809.6	794.2	760.9	691.8	637.9
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)