

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: P300310

Luminaire Tested: **GLNA-AF-03-LED-E1-AFL**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P300310  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24165)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GLNA-AF-03-LED-E1-AFL  
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE  
(3) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Automotive Frontline OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18579.6 lumens  
Efficiency: N/A  
Efficacy: 111.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B2 - U0 - G2

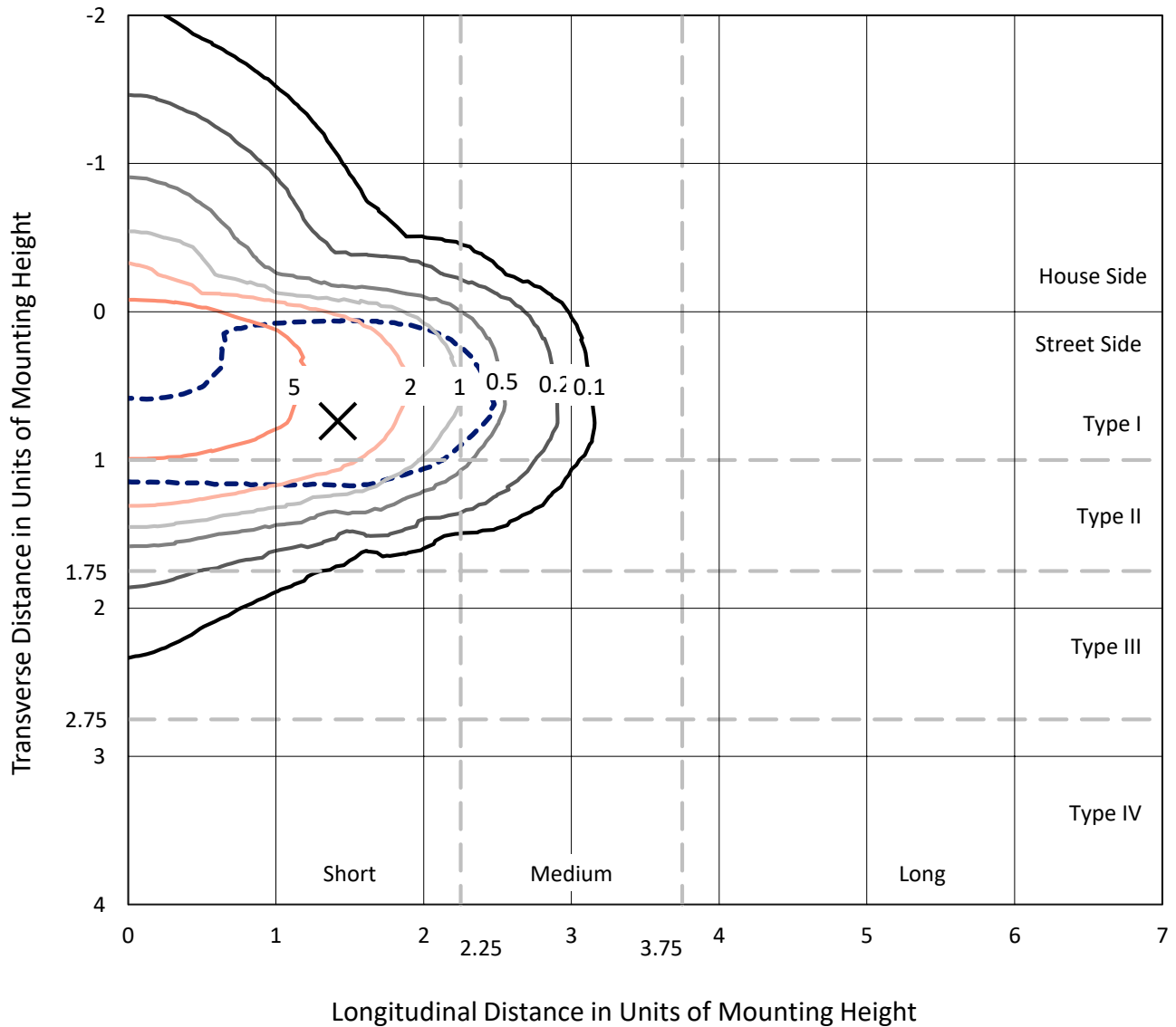
Input Watts (W): 166  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

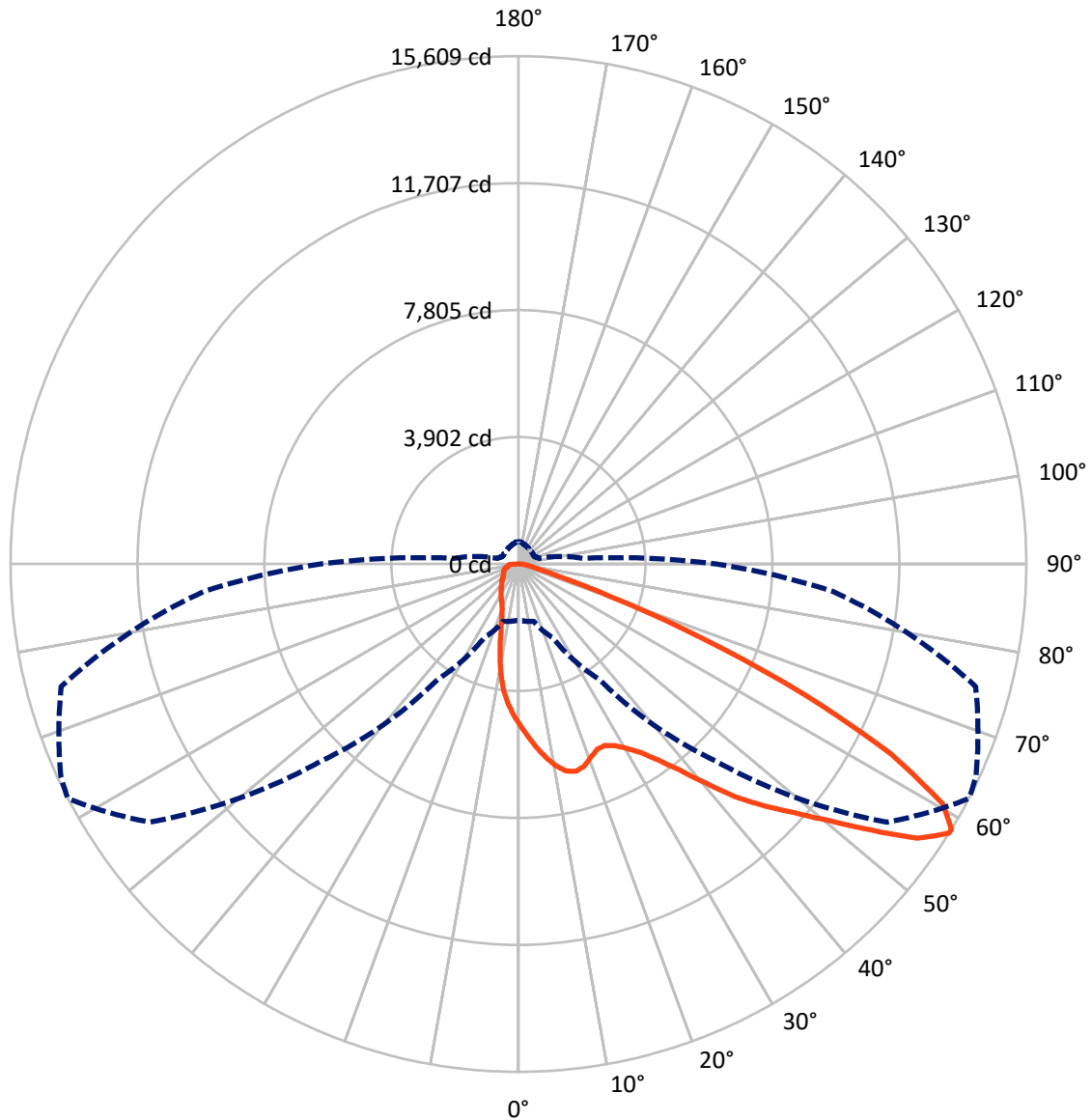
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.6 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral    - - - Horizontal Cone Through 58-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2833.5	0.0	2833.5
	% Fixture	15.3	0.0	15.3
<b>Street Side</b>	Lumens	15746.2	0.0	15746.2
	% Fixture	84.7	0.0	84.7
<b>Total</b>	Lumens	18579.6	0.0	18579.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	441.4	2.4
10°-20°	1128.3	6.1
20°-30°	1823.9	9.8
30°-40°	2895.4	15.6
40°-50°	4236.5	22.8
50°-60°	4431.1	23.8
60°-70°	2617.9	14.1
70°-80°	737.5	4.0
80°-90°	267.7	1.4
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°	18579.6	100.0
0°-180°	18579.6	100.0



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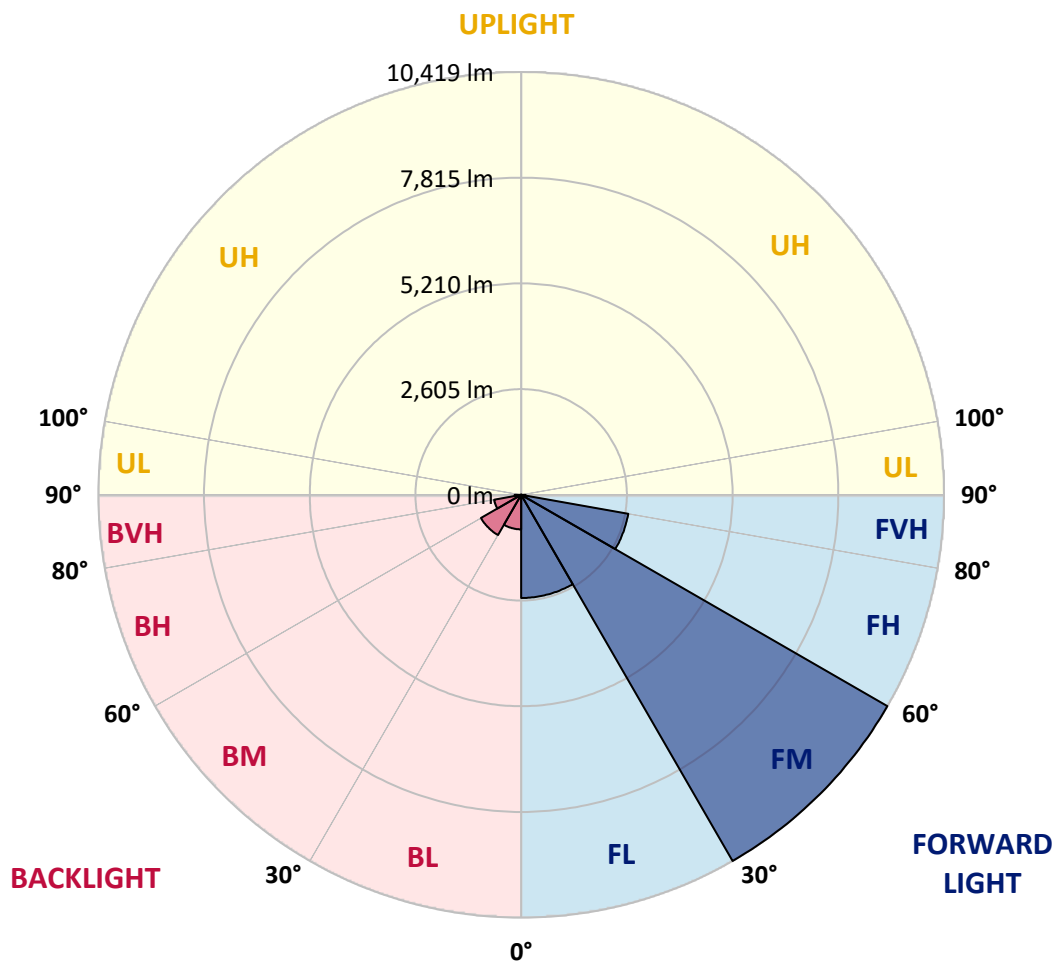
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2541.9	13.7			
FM (30°-60°)	10419.3	56.1			
FH (60°-80°)	2679.3	14.4			G2/5000
FVH (80°-90°)	105.6	0.6			G2/225
BL (0°-30°)	851.6	4.6	B2/1000		
BM (30°-60°)	1143.7	6.2	B2/2500		
BH (60°-80°)	676.1	3.6	B2/1000		G2/1000
BVH (80°-90°)	162.1	0.9			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	4935.3	4935.3	4935.3	4935.3	4935.3	4935.3	4935.3	4935.3	4935.3	4935.3	4935.3
2.5°	5639.6	5594.1	5565.2	5539.8	5506.6	5435.7	5340.4	5280.0	5249.4	5145.3	5021.9
5°	6192.5	6152.3	6122.5	6088.4	6028.9	5917.8	5763.8	5641.3	5581.0	5372.7	5126.0
7.5°	6063.0	6079.7	6131.3	6221.4	6298.4	6283.5	6146.2	5990.4	5910.8	5621.2	5246.8
10°	5282.6	5311.5	5400.7	5611.6	5952.8	6302.8	6409.5	6301.9	6221.4	5867.1	5371.0
12.5°	5126.0	5125.1	5132.1	5188.1	5391.1	5883.7	6418.2	6526.7	6478.6	6101.5	5497.9
15°	5189.9	5191.6	5186.4	5210.0	5273.0	5468.1	6150.5	6613.3	6647.5	6337.8	5629.1
17.5°	5357.9	5353.5	5333.4	5333.4	5356.1	5432.2	5835.6	6532.9	6690.3	6546.9	5744.6
20°	5639.6	5619.5	5566.1	5517.1	5492.6	5533.7	5706.1	6347.4	6616.0	6729.7	5839.9
22.5°	5980.8	5965.0	5878.4	5773.4	5688.6	5687.7	5772.6	6185.5	6487.4	6902.1	5920.4
25°	6421.7	6396.4	6267.8	6099.8	5951.1	5894.2	5917.8	6177.6	6417.4	7089.3	5992.2
27.5°	6939.7	6893.3	6741.1	6498.7	6280.0	6165.4	6131.3	6320.3	6481.2	7321.1	6091.9
30°	7567.9	7514.5	7319.4	7003.6	6694.7	6506.6	6434.0	6573.1	6693.0	7603.7	6252.0
32.5°	8282.7	8205.7	7979.9	7631.7	7225.8	6938.8	6820.7	6907.3	7002.7	7944.1	6452.4
35°	9270.4	9178.5	8852.2	8371.9	7913.4	7518.9	7329.9	7392.9	7485.6	8451.5	6742.0
37.5°	9944.1	9903.0	9686.0	9234.5	8735.8	8281.8	7989.6	8026.3	8078.8	9085.8	7112.9
40°	9938.0	9954.6	9959.0	9963.3	9623.9	9189.0	8875.0	8836.5	8826.0	9782.2	7534.6
42.5°	9440.1	9508.4	9728.9	10175.9	10382.4	10182.9	9895.1	9784.0	9728.9	10602.9	7981.7
45°	8678.1	8714.9	9127.8	10001.0	10770.9	11167.2	10949.3	10599.4	10499.6	11357.0	8352.6
47.5°	8285.3	8325.5	8585.4	9537.3	10766.5	11962.5	12088.5	11421.8	11243.3	12013.2	8672.9
50°	7350.0	7434.0	7761.2	8730.6	10373.7	12328.2	13279.2	12401.7	12032.5	12651.9	8993.9
52.5°	5632.6	5762.1	6128.7	7404.3	9377.1	12147.1	14232.0	13589.8	13068.3	13313.3	9269.5
55°	3553.0	3649.2	3957.2	5229.3	7501.4	11204.8	14593.3	14875.0	14411.3	13939.7	9508.4
57.5°	1931.8	1974.6	2090.1	2887.2	4879.3	9121.7	14066.6	15606.4	15413.9	14471.7	9688.6
58°	1728.8	1757.7	1829.4	2502.2	4327.2	8552.1	13833.0	15609.0	15512.8	14549.5	9702.6
60°	1282.6	1267.7	1203.9	1427.8	2408.6	5908.2	12420.9	14984.4	15267.0	14644.9	9634.4
62.5°	1126.9	1091.0	960.6	945.8	1171.5	2721.8	9504.0	12835.6	13503.2	14100.7	9219.7
65°	1058.6	1020.1	852.1	797.9	845.2	1151.4	5598.5	9626.5	10463.8	12450.7	8159.3
67.5°	1007.9	958.0	783.0	708.7	712.2	761.2	2244.1	6063.0	7005.3	9453.3	6346.5
70°	958.9	904.6	724.4	638.7	618.6	601.9	892.4	3035.0	3889.8	5971.2	4046.4
72.5°	906.4	853.0	672.8	583.6	544.2	489.1	582.7	1241.5	1734.0	2825.0	1835.5
75°	830.3	782.2	621.2	534.6	478.6	405.1	440.1	648.3	777.8	1125.1	884.5
77.5°	736.7	697.3	563.4	494.3	424.3	329.0	338.6	449.7	498.7	643.9	525.8
80°	529.3	543.3	501.3	444.4	378.0	266.8	259.8	328.1	354.3	413.8	342.1
82.5°	371.8	379.7	414.7	363.1	312.3	210.0	191.6	231.0	246.7	272.1	184.6
85°	256.3	247.6	284.3	252.8	225.7	140.0	131.2	156.6	166.2	168.9	95.4
87.5°	154.0	154.0	164.5	135.6	121.6	72.6	70.9	89.2	95.4	91.0	52.5
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°	4935.3	4935.3	4935.3	4935.3	4935.3	4935.3	4935.3	4935.3	4935.3	4935.3	4935.3
2.5°	4948.4	4886.3	4754.2	4648.3	4514.5	4375.4	4297.5	4214.4	4157.5	4116.4	4182.0
5°	4986.0	4859.2	4586.2	4327.2	4041.2	3743.7	3518.0	3308.0	3161.9	3070.9	3156.6
7.5°	5045.5	4850.4	4415.6	3972.9	3459.3	2964.2	2521.5	2244.1	2082.3	2002.6	2052.5
10°	5113.8	4836.4	4215.3	3492.6	2757.7	2133.9	1803.2	1691.2	1654.4	1639.6	1646.6
12.5°	5170.6	4806.7	3969.4	2911.7	2070.9	1685.1	1589.7	1587.1	1594.9	1596.7	1599.3
15°	5210.9	4762.9	3604.6	2306.2	1656.2	1535.4	1530.2	1545.9	1560.8	1566.9	1570.4
17.5°	5238.0	4672.8	3192.5	1823.3	1483.8	1462.8	1475.1	1495.2	1510.9	1515.3	1518.8
20°	5235.4	4540.7	2701.7	1520.6	1390.2	1390.2	1411.2	1427.0	1427.8	1422.6	1425.2
22.5°	5208.3	4359.6	2225.7	1359.6	1307.1	1322.0	1343.0	1328.1	1266.9	1226.6	1229.2
25°	5162.8	4143.5	1818.0	1257.2	1230.1	1256.4	1250.2	1138.2	1050.8	1011.4	1011.4
27.5°	5122.5	3888.0	1504.8	1168.0	1153.1	1185.5	1077.0	975.5	938.8	920.4	914.3
30°	5093.7	3612.5	1295.7	1082.2	1080.5	1056.9	934.4	906.4	900.3	885.4	880.1
32.5°	5100.7	3333.4	1161.9	1007.0	1013.1	904.6	866.1	872.3	867.0	851.3	844.3
35°	5158.4	3068.3	1074.4	938.8	920.4	817.2	825.9	837.3	835.5	813.7	806.7
37.5°	5261.6	2817.2	1016.6	881.9	803.2	773.4	787.4	804.9	800.5	785.7	780.4
40°	5370.1	2580.9	969.4	837.3	734.0	743.7	755.9	765.5	769.9	774.3	770.8
42.5°	5476.0	2334.2	911.6	791.8	705.2	715.7	720.9	730.5	754.2	770.8	769.9
45°	5539.0	2102.4	852.1	727.0	682.4	688.5	685.0	704.3	733.2	760.3	761.2
47.5°	5609.0	1922.1	804.9	667.5	660.5	664.9	654.4	673.7	699.9	733.2	736.7
50°	5693.8	1814.5	767.3	620.3	630.8	630.8	628.2	645.7	682.4	720.9	727.9
52.5°	5790.1	1793.5	735.8	586.2	601.1	600.2	602.8	629.1	669.3	706.9	713.0
55°	5907.3	1850.4	701.7	560.8	572.2	575.7	584.4	614.2	648.3	691.2	693.8
57.5°	6043.8	1965.9	674.5	540.7	545.9	557.3	571.3	598.4	635.2	682.4	685.0
58°	6066.5	1990.4	670.2	538.9	540.7	553.8	569.6	595.8	632.6	684.2	686.8
60°	6067.4	2071.8	660.5	531.1	520.6	542.4	559.9	586.2	628.2	690.3	696.4
62.5°	5852.2	2070.9	653.5	519.7	499.6	526.7	546.8	577.4	623.8	705.2	717.4
65°	5153.1	1881.9	620.3	502.2	482.9	512.7	535.4	571.3	636.1	769.9	777.8
67.5°	4030.7	1542.4	558.2	477.7	461.1	498.7	528.4	570.4	649.2	784.8	790.0
70°	2664.9	1154.0	489.9	449.7	438.3	482.1	531.9	600.2	634.3	753.3	739.3
72.5°	1383.2	810.2	434.8	414.7	412.1	467.2	582.7	596.7	619.4	708.7	691.2
75°	726.2	562.6	386.7	376.2	380.6	463.7	687.7	580.9	600.2	678.0	711.3
77.5°	444.4	454.1	345.6	341.2	350.0	453.2	686.8	560.8	572.2	623.8	660.5
80°	297.5	368.3	314.1	315.0	321.1	414.7	616.8	529.3	538.1	589.7	627.3
82.5°	188.1	217.8	285.2	300.1	292.2	342.1	524.1	482.1	494.3	674.5	713.0
85°	95.4	136.5	247.6	288.7	263.3	239.7	425.2	422.6	428.7	486.4	508.3
87.5°	43.7	75.2	193.4	252.0	198.6	149.6	308.8	313.2	337.7	345.6	345.6
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)