

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: P301222

Luminaire Tested: **GLNA-AF-04-LED-E1-T3R-7050-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P301222  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194839)  
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-T3R-7050-600  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(4) 70 CRI, 5000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III  
Roadway OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16116 lumens  
Efficiency: N/A  
Efficacy: 124.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short - Full Cutoff  
BUG Rating: B2 - U0 - G3

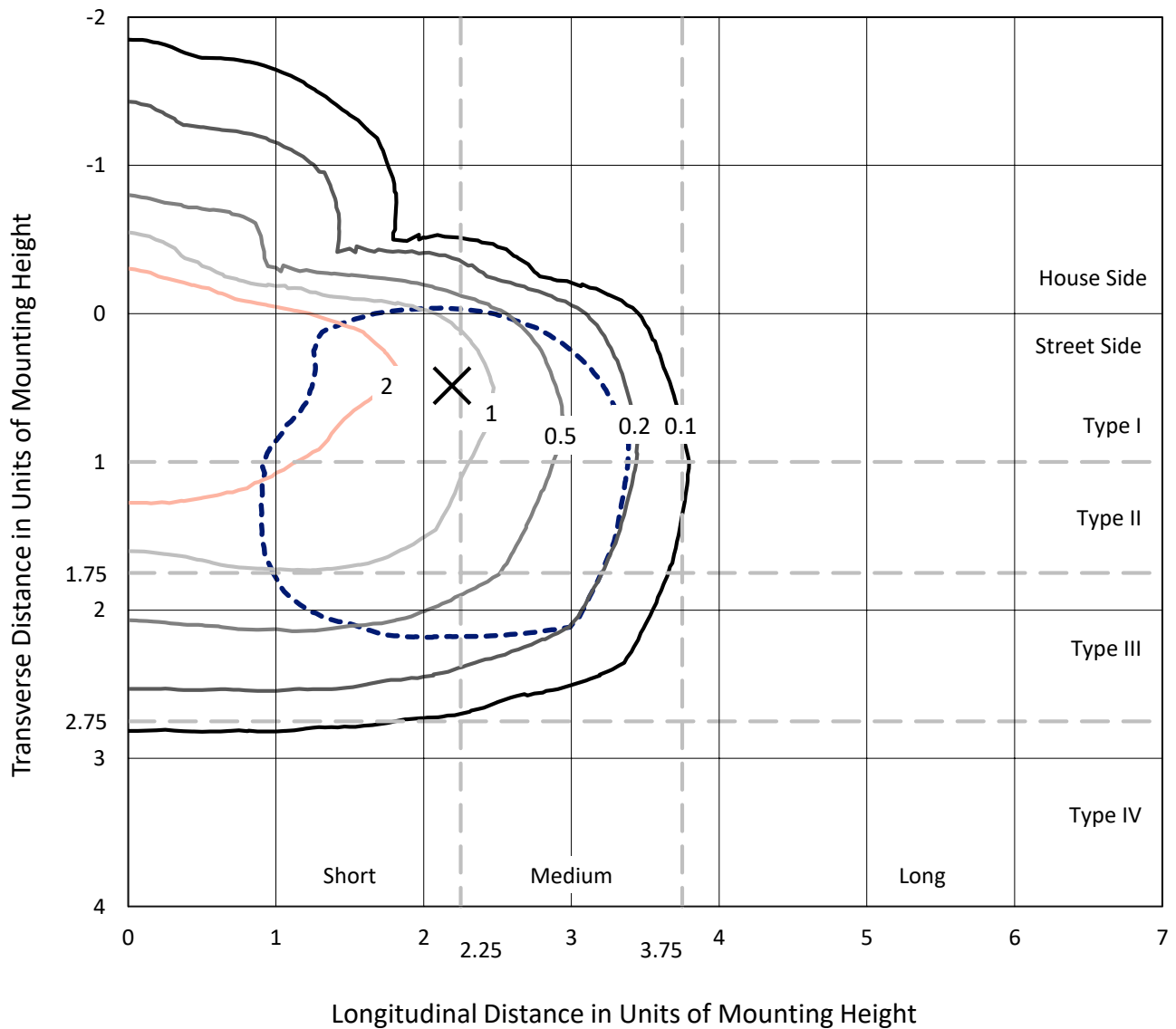
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

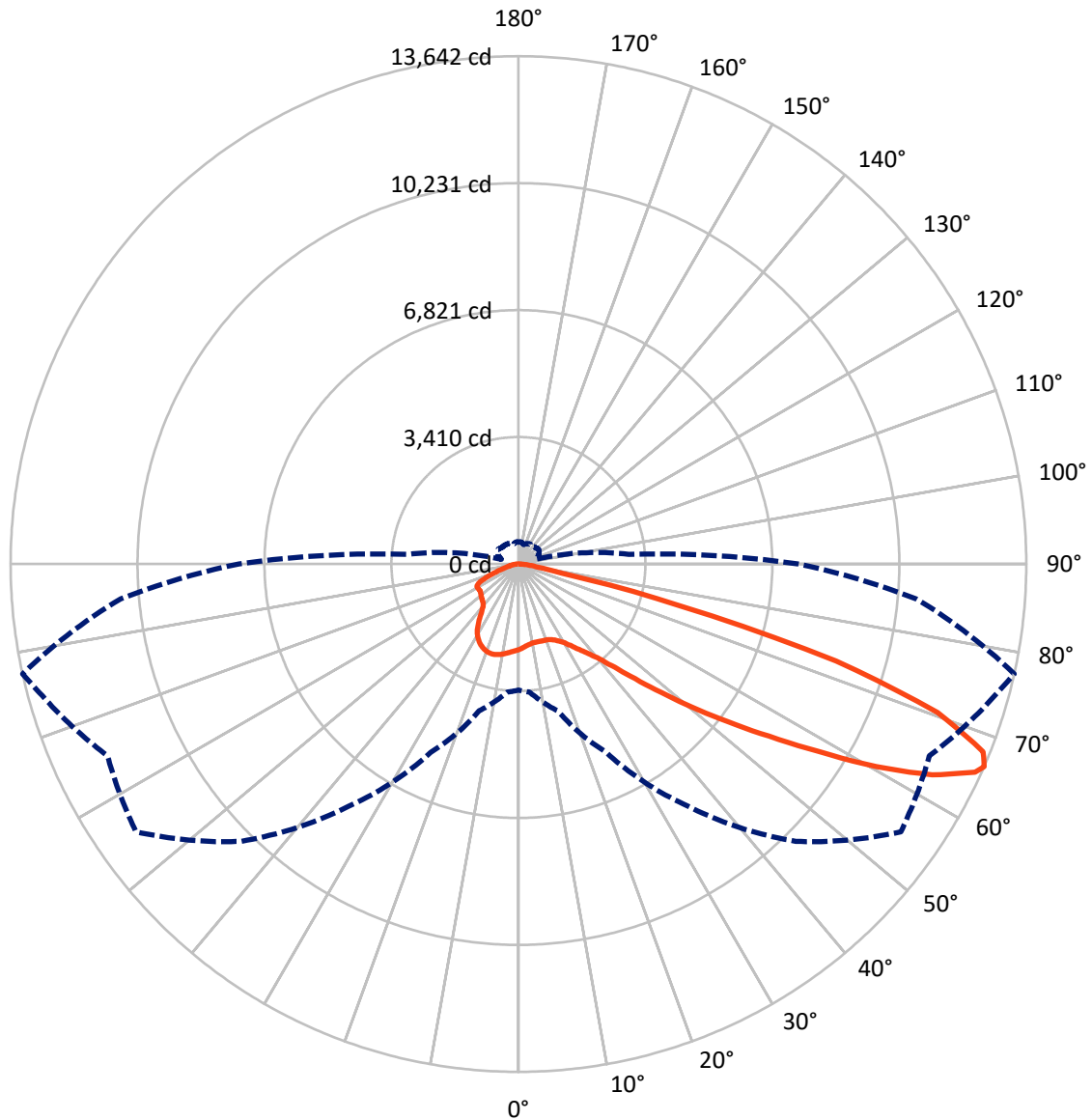
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.5 fc  
 Type III - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral    - - - Horizontal Cone Through 66-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2753.3	0.0	2753.3
	% Fixture	17.1	0.0	17.1
<b>Street Side</b>	Lumens	13362.7	0.0	13362.7
	% Fixture	82.9	0.0	82.9
<b>Total</b>	Lumens	16116.0	0.0	16116.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	205.2	1.3
10°-20°	578.9	3.6
20°-30°	987.9	6.1
30°-40°	1581.4	9.8
40°-50°	2443.2	15.2
50°-60°	3465.3	21.5
60°-70°	4635.6	28.8
70°-80°	2013.2	12.5
80°-90°	205.3	1.3
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°	16116.0	100.0
0°-180°	16116.0	100.0



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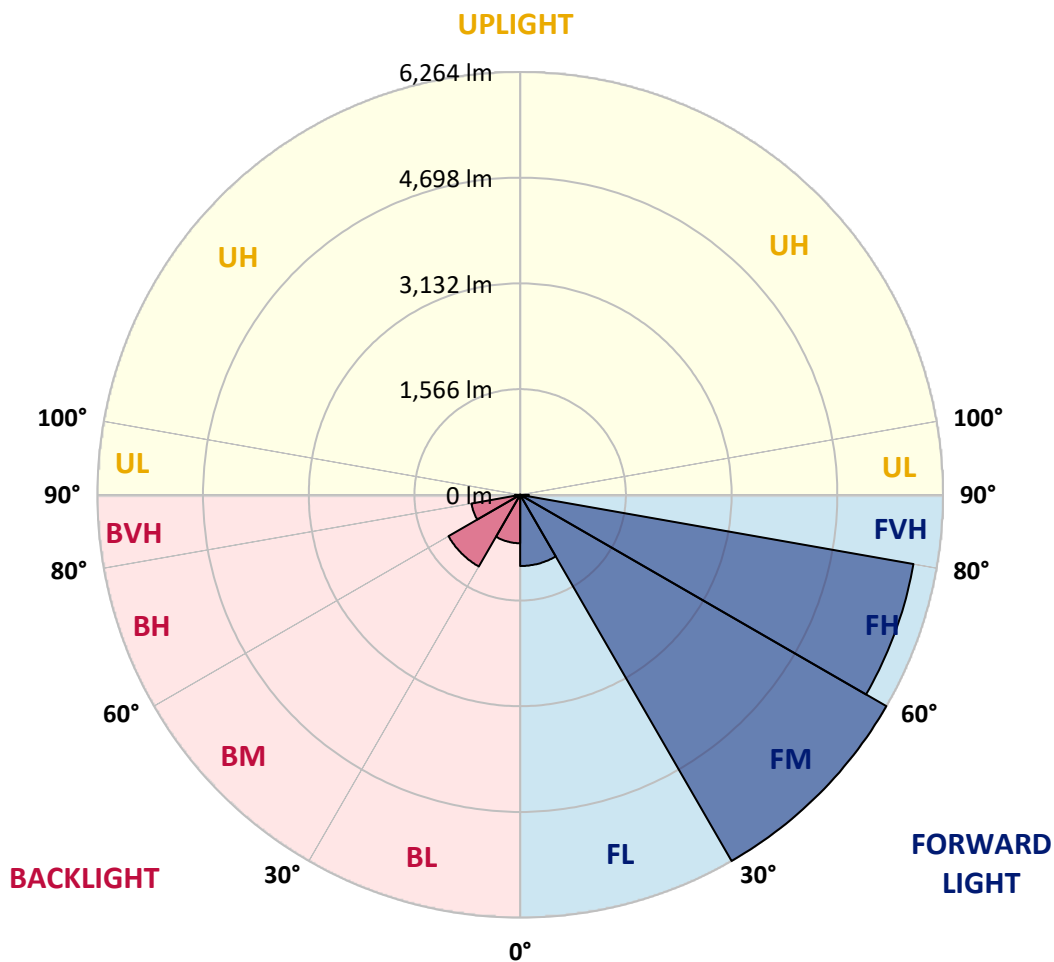
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1054.9	6.5			
FM	(30°-60°)	6263.5	38.9			
FH	(60°-80°)	5915.6	36.7			G3/7500
FVH	(80°-90°)	128.8	0.8			G2/225
BL	(0°-30°)	717.1	4.4	B2/1000		
BM	(30°-60°)	1226.4	7.6	B2/2500		
BH	(60°-80°)	733.3	4.5	B2/1000		G2/1000
BVH	(80°-90°)	76.5	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G3**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	2296.6	2296.6	2296.6	2296.6	2296.6	2296.6	2296.6	2296.6	2296.6	2296.6	2296.6
2.5°	2031.7	2045.3	2056.8	2067.4	2088.6	2123.7	2164.0	2196.7	2244.0	2253.2	2278.4
5°	1845.1	1845.1	1854.1	1870.3	1899.1	1951.7	2006.5	2079.6	2182.5	2206.7	2273.8
7.5°	1754.5	1755.2	1760.5	1774.1	1799.3	1847.2	1907.4	1993.6	2132.9	2173.2	2287.4
10°	1788.0	1780.4	1768.8	1762.1	1765.8	1794.0	1851.1	1947.1	2102.5	2154.1	2318.0
12.5°	1975.2	1960.9	1921.2	1868.7	1818.4	1797.9	1831.3	1924.9	2089.5	2149.7	2358.4
15°	2281.4	2275.4	2201.4	2092.5	1970.8	1868.7	1845.8	1916.6	2090.9	2155.0	2406.3
17.5°	2665.2	2656.7	2559.4	2401.0	2202.3	2003.5	1896.8	1923.5	2096.2	2164.0	2452.7
20°	3052.8	3026.8	2921.9	2733.0	2477.8	2186.8	1981.4	1941.1	2103.1	2173.9	2501.5
22.5°	3342.2	3320.7	3226.4	3042.9	2748.9	2399.4	2094.8	1971.5	2125.3	2203.0	2561.5
25°	3596.5	3597.8	3504.2	3326.9	3023.1	2624.9	2241.0	2052.9	2181.5	2262.2	2643.8
27.5°	3910.9	3892.7	3805.1	3629.2	3294.2	2852.5	2417.6	2164.9	2265.5	2346.8	2751.9
30°	4287.0	4274.1	4172.9	3973.4	3594.8	3096.8	2619.4	2295.0	2373.6	2458.0	2893.5
32.5°	4729.4	4723.4	4618.3	4361.7	3942.1	3384.8	2856.4	2467.2	2535.0	2622.6	3096.8
35°	5248.9	5249.6	5125.5	4817.0	4322.0	3719.8	3125.0	2688.8	2731.4	2822.7	3339.2
37.5°	5568.6	5607.4	5561.0	5246.6	4752.2	4094.5	3473.8	2982.7	2955.3	3047.5	3598.8
40°	5637.1	5684.4	5831.3	5671.5	5233.6	4507.2	3783.0	3265.2	3231.0	3343.5	3933.1
42.5°	5541.2	5606.7	5917.5	6030.0	5744.6	5015.8	4198.7	3684.8	3641.4	3792.9	4348.8
45°	5484.0	5532.9	5892.4	6216.7	6187.7	5590.8	4728.0	4211.6	4195.7	4394.4	4828.6
47.5°	5385.1	5429.4	5775.0	6260.1	6448.2	6117.6	5363.9	4856.0	4887.1	5147.7	5369.9
50°	5438.4	5456.6	5644.0	6149.7	6523.6	6503.8	6074.3	5602.1	5708.8	6033.9	5983.0
52.5°	5430.8	5478.0	5628.8	5968.4	6533.5	6742.2	6774.0	6434.4	6659.2	7032.2	6662.9
55°	4390.7	4477.4	5449.9	5922.8	6568.3	6975.7	7397.0	7311.7	7730.4	8165.2	7430.4
57.5°	4192.7	4247.6	4786.6	6018.7	6754.2	7422.1	8089.8	8277.2	8977.7	9482.6	8365.5
60°	4153.7	4221.5	4779.7	6136.1	7131.1	8149.3	9117.2	9446.2	10495.4	11048.3	9449.8
62.5°	4032.7	4105.8	4734.7	6120.6	7666.5	9155.2	10432.3	10688.9	11934.6	12472.2	10356.9
65°	3649.0	3717.5	4368.6	5874.8	8027.5	10228.9	11988.5	11828.0	13070.8	13474.9	10809.0
66°	3386.2	3453.3	4079.9	5585.5	7943.6	10533.5	12540.0	12180.6	13325.1	13641.8	10720.7
67.5°	2905.7	2958.3	3519.5	4937.4	7498.2	10618.8	13003.7	12445.5	13351.6	13463.6	10216.0
70°	1835.9	1851.1	2287.4	3408.3	5676.1	9209.1	12297.7	11787.7	12250.7	11947.5	8564.3
72.5°	796.6	791.3	1098.1	1733.8	3213.5	6179.4	9947.9	9726.3	9609.9	8918.4	5995.2
75°	443.1	449.4	570.4	804.9	1305.9	3035.3	6507.5	6227.4	5257.9	4486.6	2718.5
77.5°	355.5	364.0	472.9	571.1	586.3	1058.5	3045.2	2477.8	1491.7	1197.1	755.3
80°	281.0	296.3	412.7	444.7	395.2	436.2	983.8	786.7	590.2	541.3	391.5
82.5°	222.3	233.1	354.1	336.6	276.4	294.0	471.3	459.3	383.9	349.5	226.2
85°	160.0	179.6	291.0	253.6	181.2	198.0	312.9	300.0	220.0	179.6	99.8
87.5°	65.5	85.3	205.7	168.3	101.2	92.2	156.1	146.9	104.2	76.1	49.6
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°	2296.6	2296.6	2296.6	2296.6	2296.6	2296.6	2296.6	2296.6	2296.6	2296.6	2296.6
2.5°	2294.3	2312.5	2336.2	2350.8	2358.4	2363.7	2372.0	2371.3	2373.6	2374.3	2377.3
5°	2309.5	2339.9	2374.3	2383.5	2383.5	2375.0	2366.7	2352.8	2347.5	2346.2	2347.5
7.5°	2349.1	2382.6	2412.3	2401.7	2378.9	2345.2	2301.9	2263.8	2243.3	2236.4	2235.0
10°	2399.4	2439.8	2452.0	2411.6	2344.5	2263.8	2177.8	2115.4	2079.6	2069.7	2066.7
12.5°	2460.3	2498.3	2481.7	2396.4	2272.1	2142.1	2023.1	1923.5	1848.8	1825.3	1823.7
15°	2527.4	2557.1	2498.3	2349.1	2164.0	1972.2	1760.5	1588.5	1495.6	1465.9	1463.6
17.5°	2589.8	2605.1	2488.4	2266.8	2004.9	1694.4	1413.3	1280.7	1248.9	1256.5	1257.9
20°	2643.1	2643.1	2455.0	2148.8	1754.5	1328.0	1150.5	1148.4	1171.2	1194.1	1198.7
22.5°	2701.7	2666.6	2396.4	1982.1	1399.5	1086.6	1060.8	1082.0	1107.8	1133.0	1136.9
25°	2774.1	2685.8	2314.8	1729.4	1100.2	986.8	996.7	1014.2	1027.1	1043.3	1045.6
27.5°	2854.8	2710.0	2207.6	1381.3	955.0	924.5	932.1	938.1	936.5	942.7	944.1
30°	2951.4	2738.3	2060.5	1079.7	894.8	871.0	857.4	852.1	852.1	862.1	865.7
32.5°	3080.9	2780.1	1849.5	925.2	865.7	833.0	789.0	769.1	776.7	810.2	817.8
35°	3223.4	2825.0	1564.1	872.7	859.7	815.5	747.0	710.3	711.3	742.4	752.3
37.5°	3378.6	2882.2	1251.0	862.7	873.4	816.4	724.9	674.6	654.1	654.1	658.0
40°	3577.3	2940.8	1012.8	869.7	902.4	825.4	713.6	646.5	588.6	590.2	593.2
42.5°	3836.2	2991.0	884.9	884.0	937.4	837.6	712.7	609.1	558.9	593.2	624.3
45°	4124.2	3016.1	828.4	897.1	965.6	845.2	700.7	603.1	562.8	664.7	724.2
47.5°	4455.3	3001.6	797.3	901.5	972.5	845.2	686.8	617.7	589.3	769.8	839.2
50°	4818.6	2959.9	766.8	892.5	970.2	843.6	699.7	632.0	599.2	788.0	836.0
52.5°	5245.9	2924.8	734.8	872.7	954.0	835.3	715.0	626.0	568.1	716.6	750.0
55°	5733.0	2934.8	699.0	844.5	928.9	819.4	709.7	601.5	535.4	631.3	651.8
57.5°	6356.0	3052.8	656.4	808.8	894.8	792.7	690.7	590.2	525.4	572.7	584.9
60°	7051.1	3258.2	603.1	772.8	852.1	750.0	676.2	595.5	530.1	568.1	574.1
62.5°	7561.4	3377.9	557.5	720.3	794.3	702.7	658.0	602.2	542.3	584.0	582.6
65°	7699.9	3181.5	500.3	643.5	715.9	653.4	635.0	609.8	547.6	596.9	590.2
66°	7505.8	2969.8	475.2	607.7	676.2	629.0	623.7	609.1	545.3	598.5	587.0
67.5°	7034.5	2535.7	431.8	555.2	613.1	592.5	605.4	602.2	539.0	596.9	581.0
70°	5737.0	1730.1	369.4	462.3	510.2	521.5	570.4	578.0	519.2	570.4	535.4
72.5°	4008.5	1053.9	326.7	358.7	412.7	444.7	522.4	544.3	492.7	498.0	464.6
75°	1937.1	559.8	296.3	278.1	320.5	371.7	464.6	498.7	450.7	416.6	404.4
77.5°	603.8	341.9	251.3	223.9	251.3	300.0	388.3	437.1	401.4	348.8	344.2
80°	324.4	251.3	193.4	179.6	198.7	235.4	305.3	364.7	344.9	312.9	279.4
82.5°	214.0	163.0	143.2	139.3	151.5	179.6	226.9	302.3	302.3	268.1	195.1
85°	110.4	99.8	98.2	98.2	105.8	119.7	154.5	233.1	248.3	141.6	117.4
87.5°	54.9	57.2	53.3	55.6	59.5	58.6	73.8	117.4	140.2	86.0	71.5
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)