

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: P299113

Luminaire Tested: **GLNA-AF-04-LED-E1-T3-7027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299113  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24140)  
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-T3-7027  
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE  
(4) 70 CRI, 2700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20794.5 lumens  
Efficiency: N/A  
Efficacy: 92.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short - Full Cutoff  
BUG Rating: B3 - U0 - G3

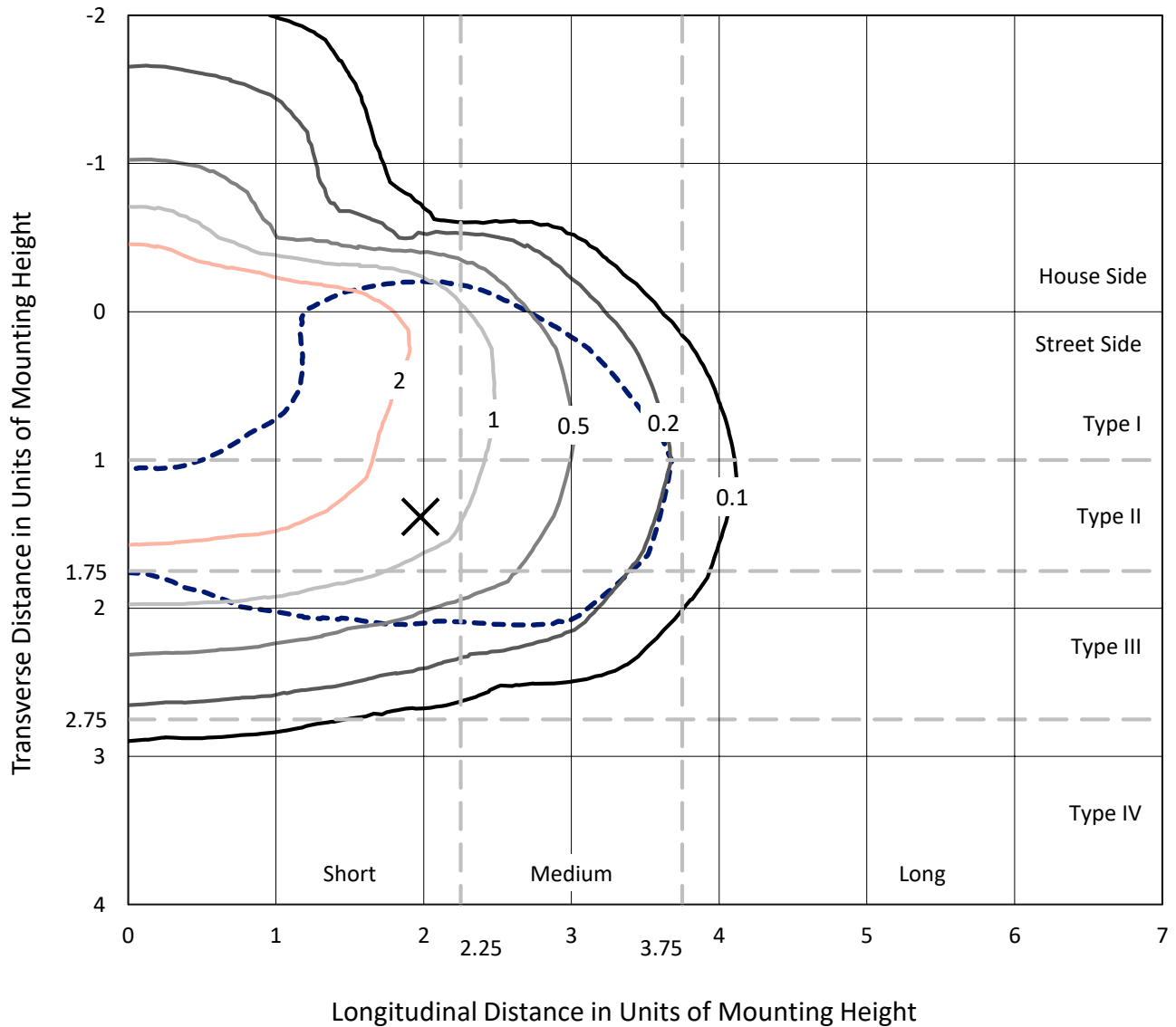
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

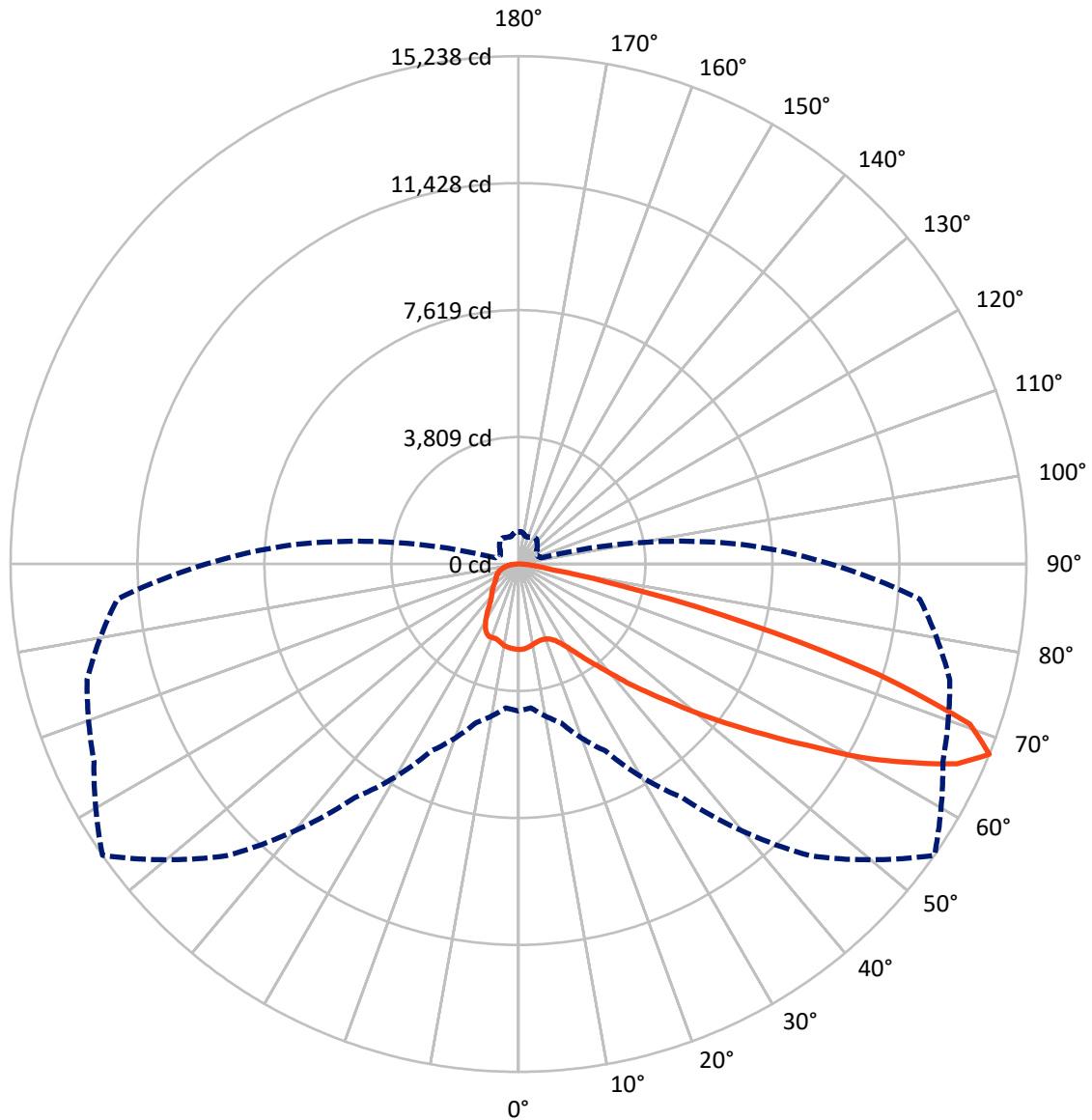
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.2 fc  
 Type III - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 55-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4492.0	0.0	4492.0
	% Fixture	21.6	0.0	21.6
<b>Street Side</b>	Lumens	16302.4	0.0	16302.4
	% Fixture	78.4	0.0	78.4
<b>Total</b>	Lumens	20794.5	0.0	20794.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	239.3	1.2
10°-20°	677.8	3.3
20°-30°	1135.5	5.5
30°-40°	1867.2	9.0
40°-50°	3143.1	15.1
50°-60°	4947.0	23.8
60°-70°	5903.7	28.4
70°-80°	2535.2	12.2
80°-90°	345.7	1.7
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°	20794.5	100.0
0°-180°	20794.5	100.0



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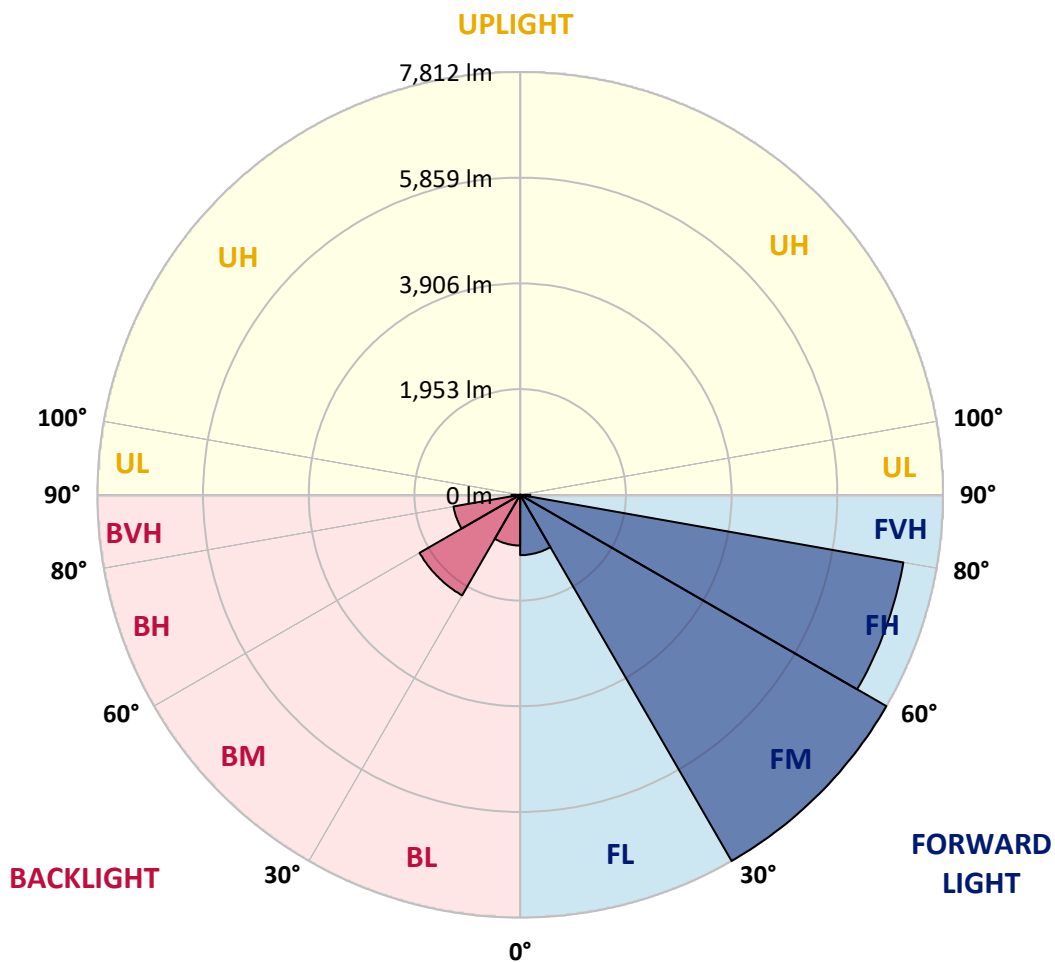
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1114.6	5.4			
FM	(30°-60°)	7811.9	37.6			
FH	(60°-80°)	7188.7	34.6			G3/7500
FVH	(80°-90°)	187.1	0.9			G2/225
BL	(0°-30°)	938.0	4.5	B2/1000		
BM	(30°-60°)	2145.4	10.3	B2/2500		
BH	(60°-80°)	1250.1	6.0	B3/2500		G3/2500
BVH	(80°-90°)	158.5	0.8			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2564.2	2564.2	2564.2	2564.2	2564.2	2564.2	2564.2	2564.2	2564.2	2564.2	2564.2
2.5°	2542.1	2543.1	2545.1	2553.1	2560.2	2558.2	2559.2	2555.1	2554.1	2548.1	2554.1
5°	2509.9	2513.0	2514.0	2527.0	2535.1	2537.1	2534.1	2529.0	2523.0	2517.0	2520.0
7.5°	2436.6	2444.7	2445.7	2463.7	2476.8	2493.9	2494.9	2495.9	2492.9	2488.9	2494.9
10°	2390.4	2392.4	2391.4	2404.5	2414.5	2433.6	2444.7	2463.7	2471.8	2473.8	2477.8
12.5°	2387.4	2385.4	2382.4	2382.4	2379.4	2387.4	2407.5	2434.6	2453.7	2459.7	2464.8
15°	2419.6	2418.5	2408.5	2393.4	2374.4	2368.3	2385.4	2415.5	2440.6	2453.7	2458.7
17.5°	2491.9	2485.8	2469.8	2435.6	2394.4	2378.4	2380.4	2405.5	2434.6	2451.7	2456.7
20°	2624.4	2624.4	2590.3	2526.0	2452.7	2414.5	2396.5	2411.5	2439.6	2462.7	2469.8
22.5°	2853.4	2855.5	2798.2	2692.7	2569.2	2487.9	2442.7	2439.6	2472.8	2498.9	2506.9
25°	3177.9	3169.8	3089.5	2938.8	2751.0	2616.4	2538.1	2520.0	2548.1	2577.2	2587.3
27.5°	3555.5	3526.4	3431.0	3249.2	3006.1	2809.3	2688.7	2659.6	2686.7	2719.9	2729.9
30°	3929.1	3899.0	3785.5	3586.6	3316.5	3067.4	2894.6	2847.4	2885.6	2932.8	2938.8
32.5°	4302.8	4302.8	4176.2	3944.2	3649.9	3375.7	3168.8	3112.6	3175.9	3233.1	3246.2
35°	4749.7	4751.7	4629.2	4350.0	4033.6	3743.3	3515.3	3474.2	3569.6	3609.7	3640.9
37.5°	5299.1	5310.2	5152.5	4815.0	4468.5	4163.2	3892.0	3835.7	3931.1	4040.6	4141.1
40°	5892.7	5906.8	5733.0	5317.2	4970.7	4651.3	4358.0	4256.6	4415.3	4624.2	4753.7
42.5°	6459.2	6531.5	6363.8	5935.9	5563.3	5232.8	4935.5	4787.9	4986.8	5302.1	5414.6
45°	7277.7	7330.0	7037.7	6650.0	6299.5	5929.9	5536.1	5380.5	5658.7	6056.4	6079.5
47.5°	7823.1	7784.0	7635.3	7394.3	7172.3	6826.8	6234.2	6063.4	6433.1	6901.1	6771.5
50°	8113.4	8125.4	8105.4	8119.4	8127.5	7910.5	7089.9	6855.9	7296.8	7862.3	7564.0
52.5°	8384.6	8304.2	8370.5	8699.9	9097.7	9017.3	8021.0	7776.9	8222.9	8928.9	8401.6
55°	8378.5	8256.0	8472.0	9053.5	9916.3	10008.7	9066.5	8785.3	9202.1	10072.9	9289.5
57.5°	8082.3	8088.3	8420.7	9182.1	10486.7	10940.7	10279.8	9858.0	10240.7	11232.0	10100.1
60°	7674.5	7729.7	8208.8	9161.0	10943.7	11705.1	11768.3	11014.0	11258.1	12285.6	10771.0
62.5°	7016.6	7074.9	7735.7	8942.0	10874.4	12441.3	13114.2	12325.8	12321.7	12924.4	10967.8
65°	5979.1	5962.0	6656.0	8123.4	10292.9	12985.6	14451.0	13459.7	13123.2	12934.4	10572.1
67.5°	4409.2	4332.9	4928.5	6187.0	8555.3	12376.0	15237.5	14050.3	13396.4	12083.7	9362.8
70°	2288.0	2211.6	2693.8	3612.8	5626.5	9659.1	14366.7	13745.0	12792.8	10129.2	7335.0
72.5°	978.3	965.2	1161.1	1584.9	2721.9	5571.3	11265.1	11896.9	10976.9	7546.9	5043.0
75°	657.9	653.9	727.2	863.8	1224.3	2260.9	7049.8	8444.8	8031.0	4679.4	2836.4
77.5°	516.3	511.2	554.4	620.7	793.5	891.9	3128.6	4533.8	4196.3	2036.9	1241.4
80°	403.8	399.7	426.9	463.0	570.5	562.5	1029.5	1803.9	1396.1	780.4	603.6
82.5°	318.4	318.4	340.5	341.5	404.8	383.7	537.3	794.5	697.0	455.0	369.6
85°	291.3	291.3	314.4	255.1	264.2	242.1	333.5	471.1	441.9	186.8	160.7
87.5°	146.6	142.6	264.2	226.0	143.6	128.6	162.7	228.0	245.1	103.5	80.4
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):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2564.2	2564.2	2564.2	2564.2	2564.2	2564.2	2564.2	2564.2	2564.2	2564.2
2.5°	2552.1	2551.1	2553.1	2554.1	2562.2	2573.2	2578.2	2585.3	2589.3	2587.3
5°	2522.0	2524.0	2532.0	2538.1	2552.1	2570.2	2580.3	2588.3	2595.3	2592.3
7.5°	2496.9	2501.9	2514.0	2519.0	2527.0	2532.0	2531.0	2534.1	2540.1	2533.0
10°	2482.8	2488.9	2497.9	2490.9	2471.8	2444.7	2419.6	2406.5	2410.5	2405.5
12.5°	2468.8	2476.8	2469.8	2436.6	2383.4	2348.2	2329.2	2331.2	2340.2	2342.2
15°	2460.7	2463.7	2433.6	2371.3	2317.1	2312.1	2322.1	2320.1	2321.1	2321.1
17.5°	2460.7	2452.7	2396.5	2334.2	2311.1	2302.0	2270.9	2231.7	2214.7	2208.6
20°	2473.8	2452.7	2384.4	2343.2	2293.0	2215.7	2133.3	2061.0	2028.8	2019.8
22.5°	2513.0	2476.8	2418.5	2347.2	2204.6	2075.1	1944.5	1858.1	1799.9	1789.8
25°	2592.3	2552.1	2485.8	2294.0	2064.0	1879.2	1730.5	1634.1	1575.9	1567.8
27.5°	2730.9	2704.8	2522.0	2176.5	1877.2	1679.3	1541.7	1467.4	1424.2	1421.2
30°	2939.8	2926.8	2503.9	2002.7	1647.2	1485.5	1419.2	1376.0	1343.9	1342.9
32.5°	3273.3	3167.8	2444.7	1790.8	1437.3	1347.9	1320.8	1294.6	1269.5	1269.5
35°	3702.1	3362.7	2332.2	1563.8	1309.7	1271.5	1237.4	1196.2	1163.1	1161.1
37.5°	4206.3	3483.2	2130.3	1381.0	1249.5	1220.3	1170.1	1108.8	1050.6	1040.5
40°	4715.6	3519.4	1846.1	1268.5	1211.3	1169.1	1107.8	1035.5	979.3	976.3
42.5°	5182.6	3450.0	1544.7	1191.2	1173.1	1116.9	1052.6	988.3	944.1	943.1
45°	5574.3	3270.3	1291.6	1117.9	1132.9	1069.7	1012.4	960.2	926.0	919.0
47.5°	5942.9	3016.2	1113.9	1040.5	1092.8	1043.6	995.3	946.1	913.0	908.0
50°	6370.8	2742.0	989.3	965.2	1057.6	1034.5	1009.4	958.2	902.9	896.9
52.5°	6889.1	2504.9	891.9	898.9	1030.5	1046.6	1045.6	992.3	895.9	887.9
55°	7467.6	2241.8	818.6	844.7	1019.4	1068.7	1054.6	1024.5	901.9	889.9
57.5°	8037.1	1934.4	767.3	803.5	1003.4	1066.7	1011.4	968.2	916.0	898.9
60°	8463.9	1521.6	728.2	767.3	968.2	1033.5	964.2	907.0	913.0	899.9
62.5°	8492.0	1176.1	681.0	736.2	915.0	1000.4	933.1	879.8	926.0	914.0
65°	7992.9	888.9	635.8	699.0	857.7	979.3	902.9	864.8	953.2	940.1
67.5°	6729.4	715.1	597.6	660.9	800.5	935.1	875.8	850.7	977.3	954.2
70°	4858.2	609.7	560.4	614.7	749.3	884.9	851.7	825.6	912.0	875.8
72.5°	2991.0	528.3	518.3	553.4	710.1	832.6	815.6	778.4	821.6	792.5
75°	1493.5	458.0	471.1	493.2	654.9	773.4	755.3	718.1	724.2	718.1
77.5°	715.1	391.7	415.8	432.9	583.5	706.1	687.0	648.8	641.8	642.8
80°	453.0	327.4	350.5	362.6	521.3	627.7	608.7	570.5	650.8	603.6
82.5°	283.2	266.2	272.2	294.3	454.0	546.4	521.3	487.1	586.6	464.0
85°	156.7	185.8	193.8	212.9	349.5	457.0	431.9	388.7	348.5	342.5
87.5°	93.4	110.5	113.5	127.6	235.0	330.4	292.3	277.2	230.0	229.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)