

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: P301137

Luminaire Tested: **GLNA-AF-10-LED-E1-T3R**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P301137  
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-10-LED-E1-T3R  
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE  
(10) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III  
Roadway OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 60027.7 lumens  
Efficiency: N/A  
Efficacy: 107.6 lumens/watt  
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')  
IES Classification: Type III - Short - Full Cutoff  
BUG Rating: B4 - U0 - G5

Input Watts (W): 558  
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

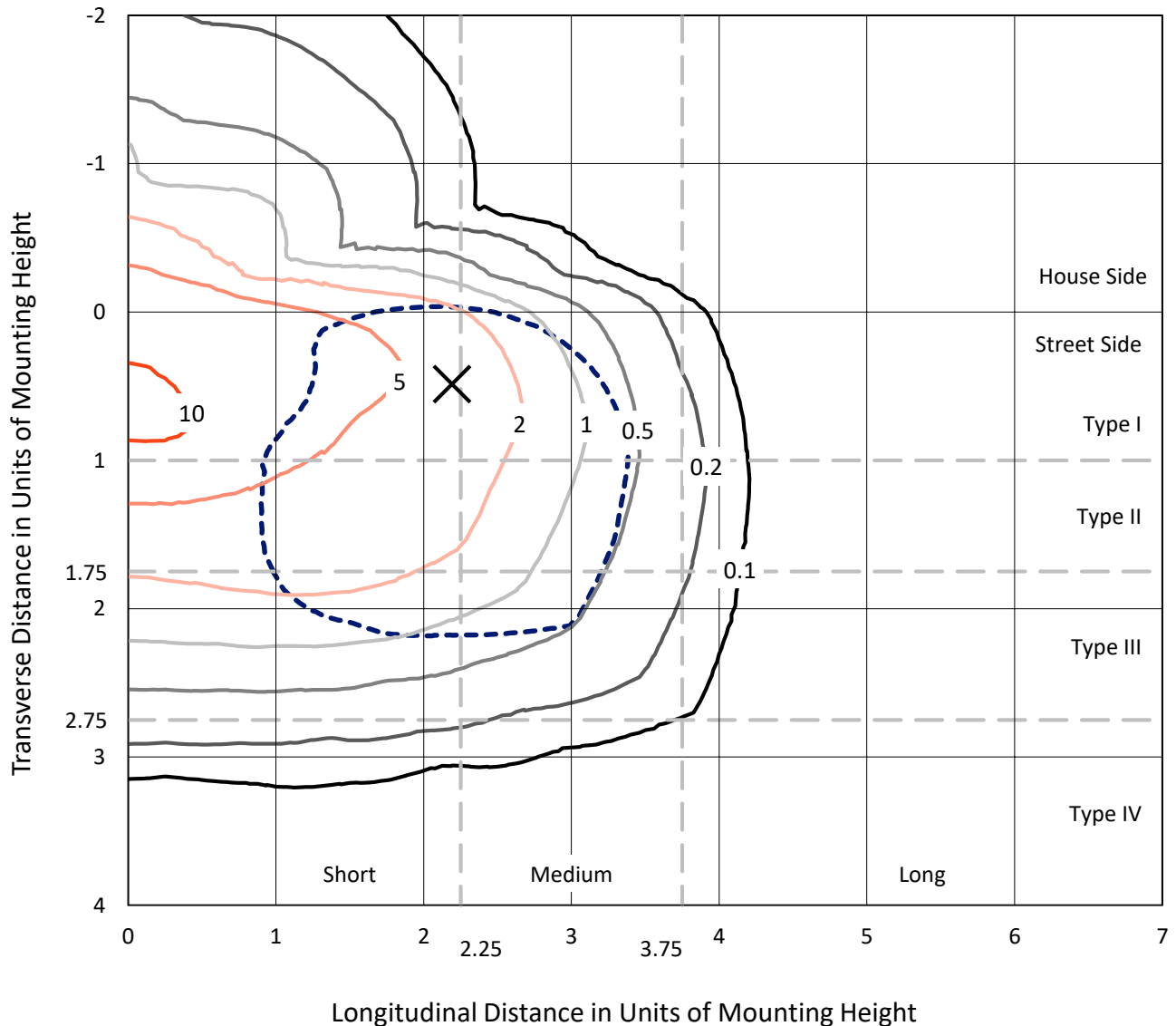


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

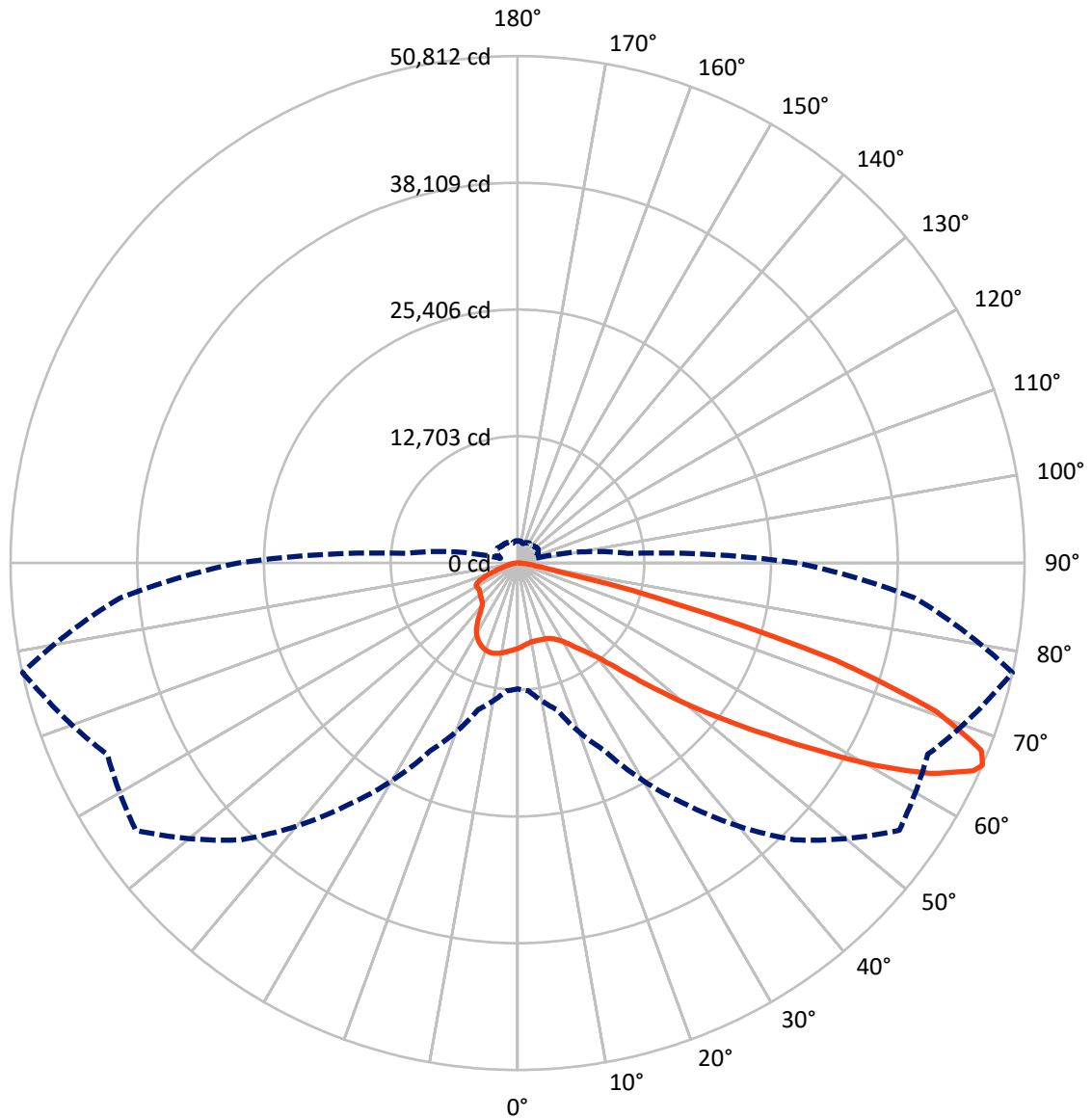


Based on 30 foot mounting height. Maximum calculated value = 11.7 fc  
 Type III - Short - Full Cutoff

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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	10255.4	0.0	10255.4
	% Fixture	17.1	0.0	17.1
<b>Street Side</b>	Lumens	49772.3	0.0	49772.3
	% Fixture	82.9	0.0	82.9
<b>Total</b>	Lumens	60027.7	0.0	60027.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	764.2	1.3
10°-20°	2156.1	3.6
20°-30°	3679.7	6.1
30°-40°	5890.5	9.8
40°-50°	9100.3	15.2
50°-60°	12907.3	21.5
60°-70°	17266.5	28.8
70°-80°	7498.6	12.5
80°-90°	764.6	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°	60027.7	100.0
0°-180°	60027.7	100.0



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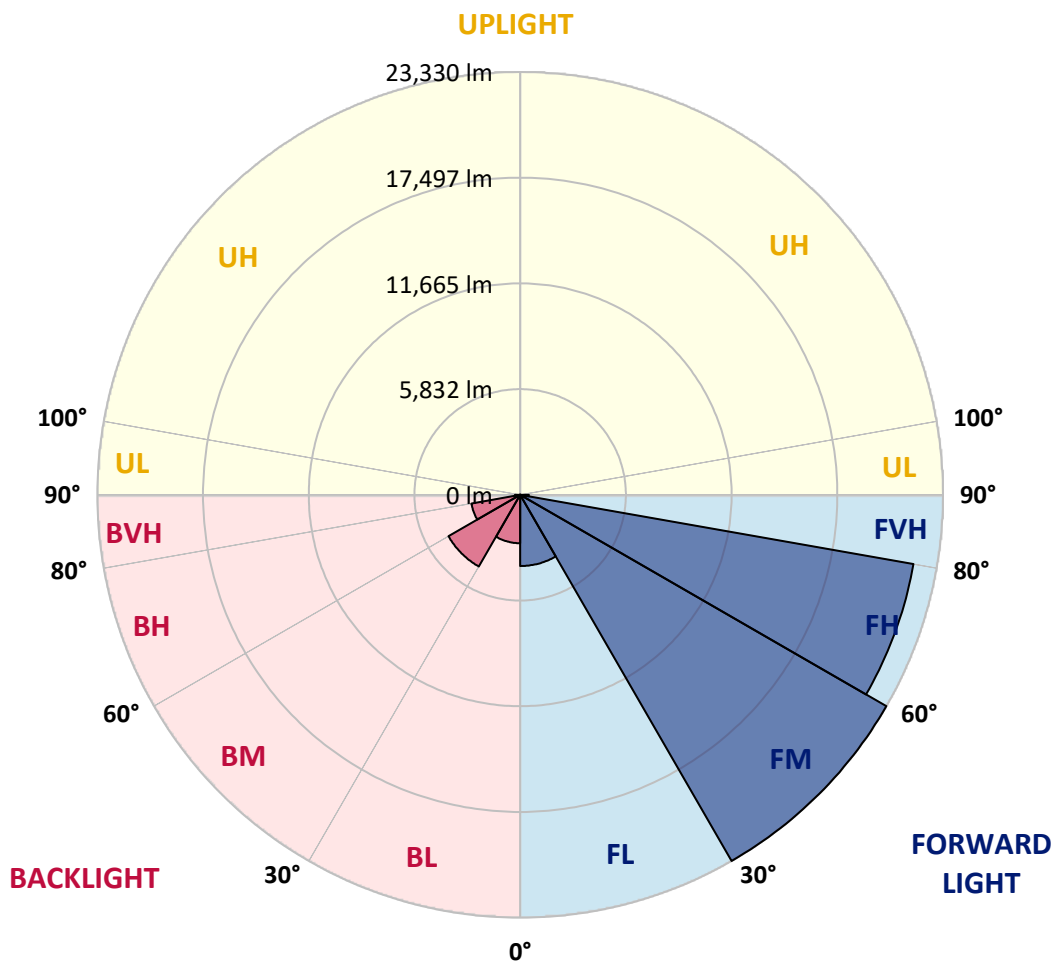
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3929.1	6.5			
FM	(30°-60°)	23329.9	38.9			
FH	(60°-80°)	22033.8	36.7			G5
FVH	(80°-90°)	479.6	0.8			G3/500
BL	(0°-30°)	2670.9	4.4	B4/5000		
BM	(30°-60°)	4568.2	7.6	B3/5000		
BH	(60°-80°)	2731.2	4.5	B4/5000		G4/5000
BVH	(80°-90°)	285.1	0.5			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 III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	8554.1	8554.1	8554.1	8554.1	8554.1	8554.1	8554.1	8554.1	8554.1	8554.1	8554.1
2.5°	7567.4	7618.1	7661.0	7700.5	7779.5	7910.1	8060.4	8182.3	8358.4	8392.7	8486.3
5°	6872.7	6872.7	6906.2	6966.3	7073.6	7269.4	7473.8	7746.1	8129.1	8219.2	8469.1
7.5°	6535.2	6537.8	6557.5	6608.2	6701.8	6880.4	7104.6	7425.7	7944.4	8094.7	8519.8
10°	6659.7	6631.4	6588.4	6563.5	6577.3	6682.0	6895.0	7252.3	7831.1	8023.4	8634.0
12.5°	7357.0	7303.8	7156.1	6960.3	6773.1	6696.6	6821.2	7169.8	7783.0	8007.1	8784.3
15°	8497.5	8475.1	8199.5	7794.1	7340.7	6960.3	6875.3	7138.9	7788.1	8026.9	8962.9
17.5°	9927.3	9895.5	9533.1	8943.2	8202.9	7462.7	7065.1	7164.7	7807.9	8060.4	9135.5
20°	11370.9	11273.9	10883.1	10179.8	9229.1	8145.4	7380.2	7229.9	7833.6	8097.3	9317.6
22.5°	12448.6	12368.8	12017.5	11334.0	10239.0	8937.2	7802.7	7343.3	7916.1	8205.5	9540.9
25°	13395.9	13401.0	13052.4	12392.0	11260.1	9777.0	8347.2	7646.4	8125.6	8426.2	9847.4
27.5°	14567.2	14499.4	14173.0	13517.8	12270.0	10624.6	9005.0	8063.8	8438.2	8741.4	10250.2
30°	15967.9	15919.8	15542.8	14799.9	13389.9	11534.9	9756.4	8548.1	8841.0	9155.3	10777.5
32.5°	17615.8	17593.5	17201.9	16246.1	14683.1	12607.5	10639.2	9189.6	9442.1	9768.4	11534.9
35°	19550.6	19553.2	19091.2	17942.2	16098.4	13855.3	11639.7	10014.9	10173.8	10513.8	12437.5
37.5°	20741.7	20886.0	20713.4	19542.0	17700.8	15250.8	12939.0	11109.8	11007.6	11351.1	13404.5
40°	20996.8	21172.8	21719.9	21124.7	19493.9	16788.0	14090.6	12161.8	12034.7	12453.8	14649.7
42.5°	20639.5	20883.4	22041.0	22460.1	21397.0	18682.4	15639.0	13724.8	13563.3	14127.5	16198.0
45°	20426.6	20608.6	21947.4	23155.7	23047.5	20824.2	17610.7	15687.0	15627.8	16368.0	17985.1
47.5°	20058.2	20223.0	21510.3	23317.2	24017.9	22786.4	19979.1	18087.3	18203.2	19173.6	20001.5
50°	20256.5	20324.4	21022.5	22905.8	24298.7	24224.9	22625.0	20866.3	21263.9	22474.7	22284.9
52.5°	20228.2	20404.2	20965.9	22230.8	24335.7	25112.8	25231.4	23966.4	24803.7	26193.2	24817.4
55°	16354.3	16677.2	20299.5	22060.8	24465.3	25982.8	27551.7	27234.0	28793.5	30413.1	27676.3
57.5°	15616.6	15821.0	17828.8	22418.0	25157.5	27645.3	30132.3	30830.5	33439.4	35320.1	31159.4
60°	15471.5	15724.0	17803.0	22855.1	26561.6	30353.9	33959.0	35184.4	39092.7	41152.0	35198.2
62.5°	15020.6	15292.9	17635.6	22797.6	28555.6	34100.7	38857.4	39813.2	44453.1	46455.7	38576.5
65°	13591.7	13846.7	16271.9	21882.2	29900.5	38099.9	44654.0	44056.3	48685.1	50190.5	40260.6
66°	12612.7	12862.6	15196.7	20804.4	29587.9	39234.4	46708.2	45369.4	49632.3	50812.2	39931.7
67.5°	10823.0	11018.8	13109.0	18390.4	27928.7	39552.1	48435.2	46356.1	49731.0	50148.4	38051.8
70°	6838.3	6895.0	8519.8	12695.1	21141.9	34301.6	45805.6	43906.0	45630.4	44501.2	31899.7
72.5°	2967.0	2947.3	4090.3	6457.9	11969.5	23016.6	37053.1	36227.8	35794.1	33218.7	22330.4
75°	1650.5	1673.7	2124.6	2997.9	4864.0	11305.6	24238.6	23195.2	19584.1	16711.6	10125.7
77.5°	1324.2	1356.0	1761.3	2127.2	2183.8	3942.6	11342.6	9229.1	5556.2	4458.7	2813.3
80°	1046.8	1103.5	1537.2	1656.6	1471.9	1624.8	3664.3	2930.1	2198.4	2016.4	1458.2
82.5°	827.8	868.2	1319.1	1253.8	1029.7	1094.9	1755.3	1710.7	1429.8	1301.9	842.4
85°	596.0	669.0	1083.8	944.6	675.0	737.7	1165.3	1117.3	819.3	669.0	371.8
87.5°	243.9	317.7	766.0	626.9	377.0	343.5	581.4	547.0	388.2	283.4	184.6
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°	8554.1	8554.1	8554.1	8554.1	8554.1	8554.1	8554.1	8554.1	8554.1	8554.1	8554.1
2.5°	8545.6	8613.4	8701.9	8756.0	8784.3	8804.1	8835.0	8832.4	8841.0	8843.6	8854.7
5°	8602.2	8715.6	8843.6	8877.9	8877.9	8846.1	8815.2	8763.7	8743.9	8738.8	8743.9
7.5°	8749.9	8874.5	8985.2	8945.7	8860.7	8735.3	8573.9	8432.2	8355.8	8330.0	8324.9
10°	8937.2	9087.4	9133.0	8982.7	8732.8	8432.2	8111.9	7879.2	7746.1	7709.1	7698.0
12.5°	9163.9	9305.6	9243.7	8926.0	8463.1	7978.8	7535.7	7164.7	6886.4	6798.8	6792.8
15°	9413.8	9524.6	9305.6	8749.9	8060.4	7345.9	6557.5	5916.9	5570.8	5460.0	5451.4
17.5°	9646.5	9703.2	9268.6	8443.4	7467.8	6311.1	5264.2	4770.4	4651.9	4680.3	4685.4
20°	9844.9	9844.9	9144.1	8003.7	6535.2	4946.5	4285.2	4277.5	4362.5	4447.5	4464.7
22.5°	10063.0	9932.5	8926.0	7382.8	5212.7	4047.4	3951.2	4030.2	4126.4	4220.0	4234.6
25°	10332.7	10003.7	8622.0	6441.6	4098.0	3675.5	3712.4	3777.7	3825.8	3885.9	3894.5
27.5°	10633.2	10093.9	8222.7	5144.9	3557.0	3443.6	3472.0	3494.3	3488.3	3511.5	3516.6
30°	10993.0	10199.5	7674.8	4021.6	3332.9	3244.4	3193.7	3174.0	3174.0	3210.9	3224.7
32.5°	11475.7	10355.0	6889.0	3446.2	3224.7	3102.7	2938.7	2864.8	2893.2	3017.7	3046.0
35°	12006.4	10522.4	5825.9	3250.4	3202.3	3037.4	2782.4	2645.9	2649.3	2765.2	2802.1
37.5°	12584.3	10735.4	4659.7	3213.5	3253.0	3040.9	2700.0	2512.7	2436.3	2436.3	2450.9
40°	13324.6	10953.5	3772.6	3239.3	3361.2	3074.4	2657.9	2408.0	2192.4	2198.4	2209.6
42.5°	14289.0	11140.7	3295.9	3292.5	3491.7	3119.9	2654.4	2268.9	2081.6	2209.6	2325.5
45°	15361.6	11234.4	3085.5	3341.5	3596.5	3148.2	2609.8	2246.5	2096.2	2475.8	2697.4
47.5°	16594.8	11180.3	2969.6	3357.8	3622.3	3148.2	2558.3	2300.6	2195.0	2867.4	3125.9
50°	17948.2	11024.8	2856.2	3324.3	3613.7	3142.2	2606.3	2353.9	2231.9	2935.3	3113.9
52.5°	19539.5	10894.3	2736.9	3250.4	3553.6	3111.3	2663.0	2331.5	2116.0	2669.0	2793.6
55°	21354.0	10931.2	2603.8	3145.7	3460.0	3052.0	2643.3	2240.5	1994.1	2351.3	2427.7
57.5°	23674.4	11370.9	2444.9	3012.5	3332.9	2952.4	2572.9	2198.4	1957.1	2133.2	2178.7
60°	26263.6	12136.1	2246.5	2878.6	3174.0	2793.6	2518.8	2218.2	1974.3	2116.0	2138.3
62.5°	28164.0	12581.8	2076.5	2682.8	2958.4	2617.5	2450.9	2243.1	2019.8	2175.2	2170.1
65°	28680.1	11850.1	1863.5	2396.8	2666.5	2433.7	2365.0	2271.4	2039.6	2223.3	2198.4
66°	27957.1	11061.7	1769.9	2263.7	2518.8	2342.7	2323.0	2268.9	2031.0	2229.4	2186.4
67.5°	26201.8	9444.7	1608.5	2067.9	2283.5	2207.0	2255.1	2243.1	2007.8	2223.3	2164.1
70°	21368.6	6444.2	1375.7	1721.8	1900.4	1942.5	2124.6	2152.9	1933.9	2124.6	1994.1
72.5°	14930.5	3925.4	1216.9	1336.2	1537.2	1656.6	1946.0	2027.5	1835.2	1854.9	1730.4
75°	7215.3	2085.1	1103.5	1035.7	1193.7	1384.3	1730.4	1857.5	1678.9	1551.8	1506.3
77.5°	2249.1	1273.5	936.1	833.9	936.1	1117.3	1446.2	1628.2	1495.1	1299.3	1282.1
80°	1208.3	936.1	720.5	669.0	740.3	876.8	1137.0	1358.6	1284.7	1165.3	1040.8
82.5°	796.9	607.1	533.3	518.7	564.2	669.0	845.0	1125.8	1125.8	998.7	726.5
85°	411.3	371.8	365.8	365.8	394.2	445.7	575.4	868.2	924.9	527.3	437.1
87.5°	204.4	213.0	198.4	207.0	221.6	218.1	274.8	437.1	522.1	320.3	266.2
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)