

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: P298870

Luminaire Tested: **GLNA-AF-03-LED-E1-T2**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P298870  
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-03-LED-E1-T2  
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE  
(3) 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: 17771.7 lumens  
Efficiency: N/A  
Efficacy: 107.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B3 - U0 - G3

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

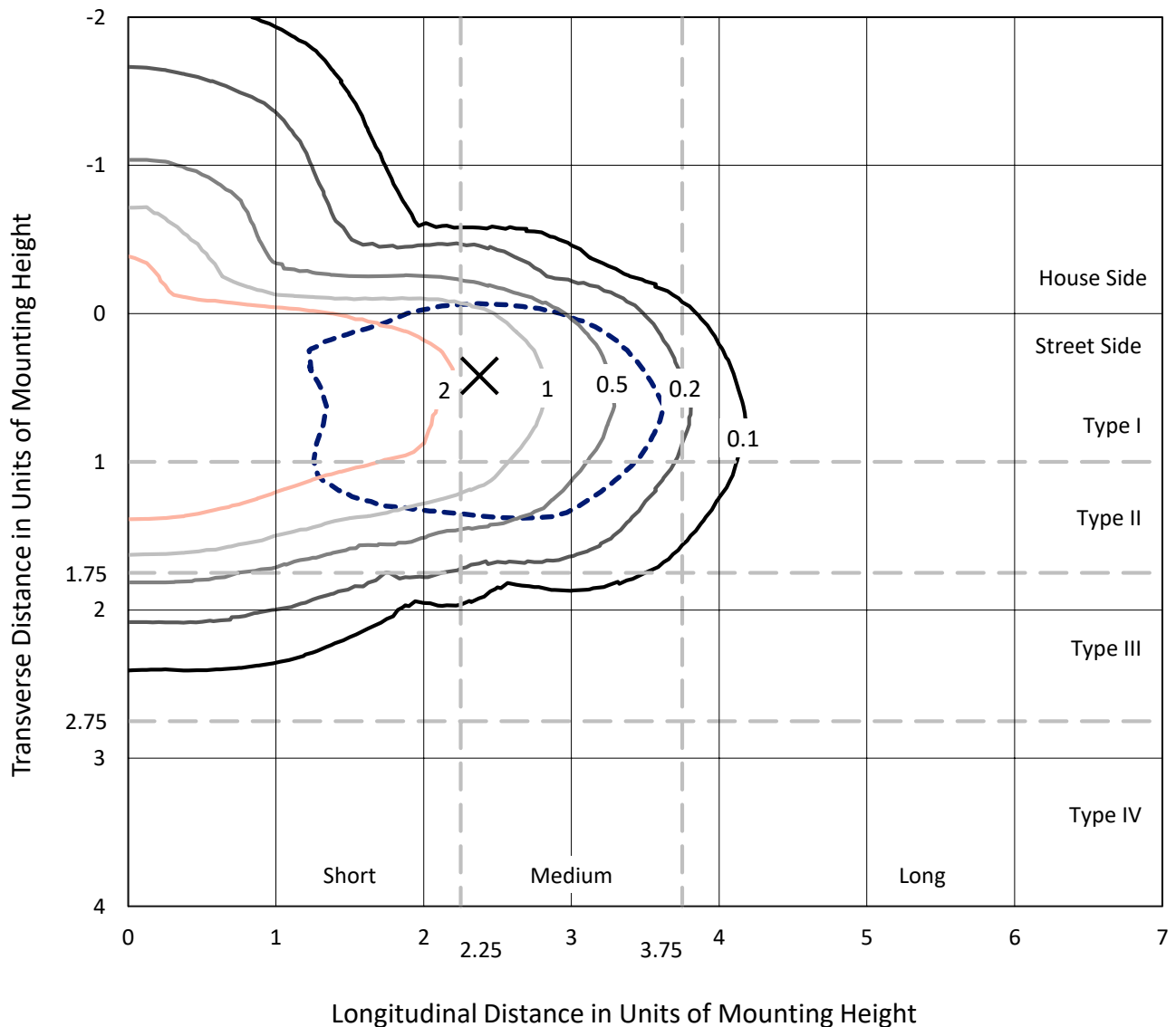


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

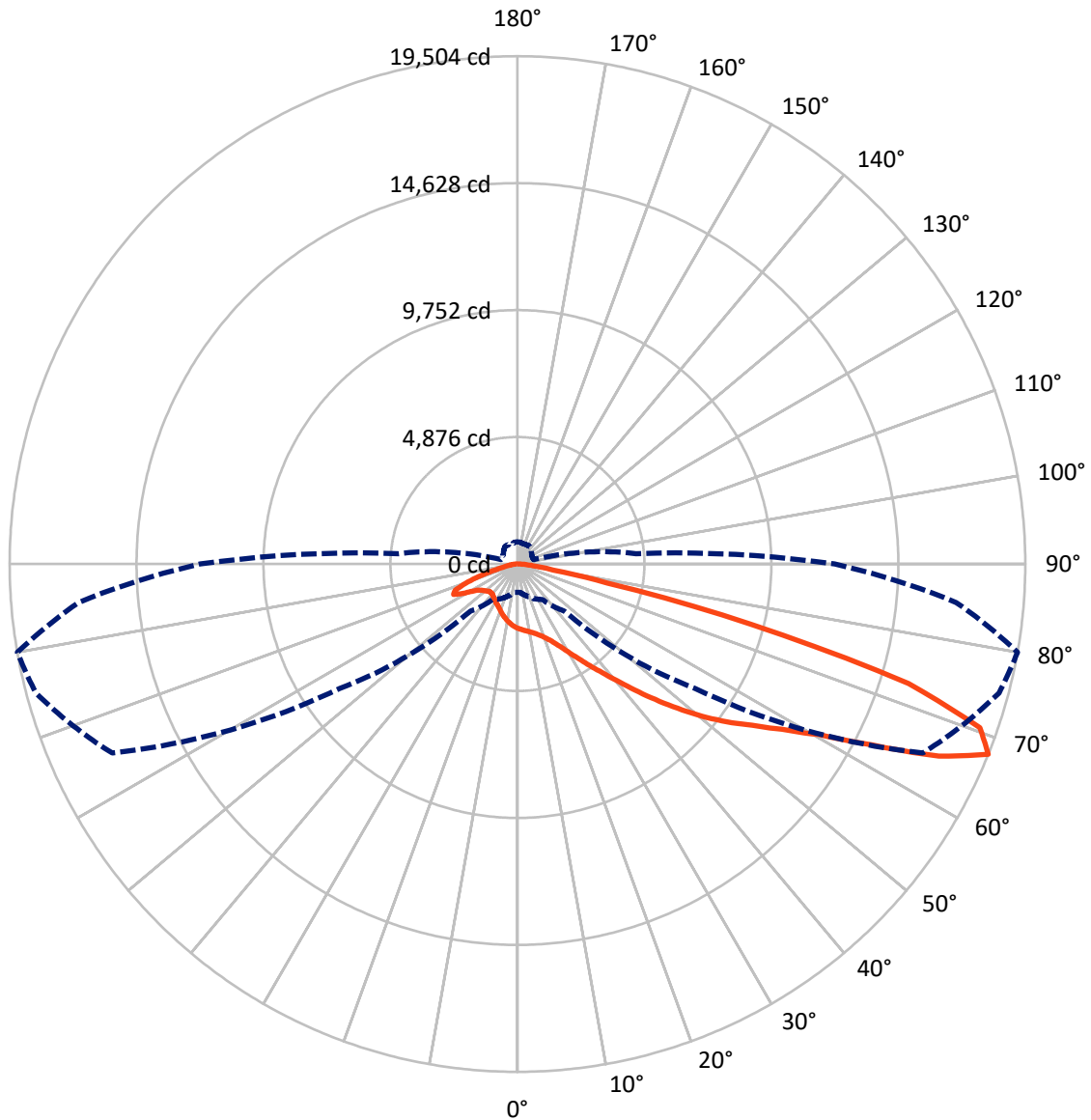


Based on 25 foot mounting height. Maximum calculated value = 4.8 fc  
 Type II - Medium - Full Cutoff

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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
<b>House Side</b>	Lumens	3272.9	0.0	3272.9
	% Fixture	18.4	0.0	18.4
<b>Street Side</b>	Lumens	14498.8	0.0	14498.8
	% Fixture	81.6	0.0	81.6
<b>Total</b>	Lumens	17771.7	0.0	17771.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	227.8	1.3
10°-20°	656.1	3.7
20°-30°	1086.0	6.1
30°-40°	1776.4	10.0
40°-50°	2868.1	16.1
50°-60°	4140.8	23.3
60°-70°	4569.6	25.7
70°-80°	2106.3	11.9
80°-90°	340.7	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°	17771.7	100.0
0°-180°	17771.7	100.0



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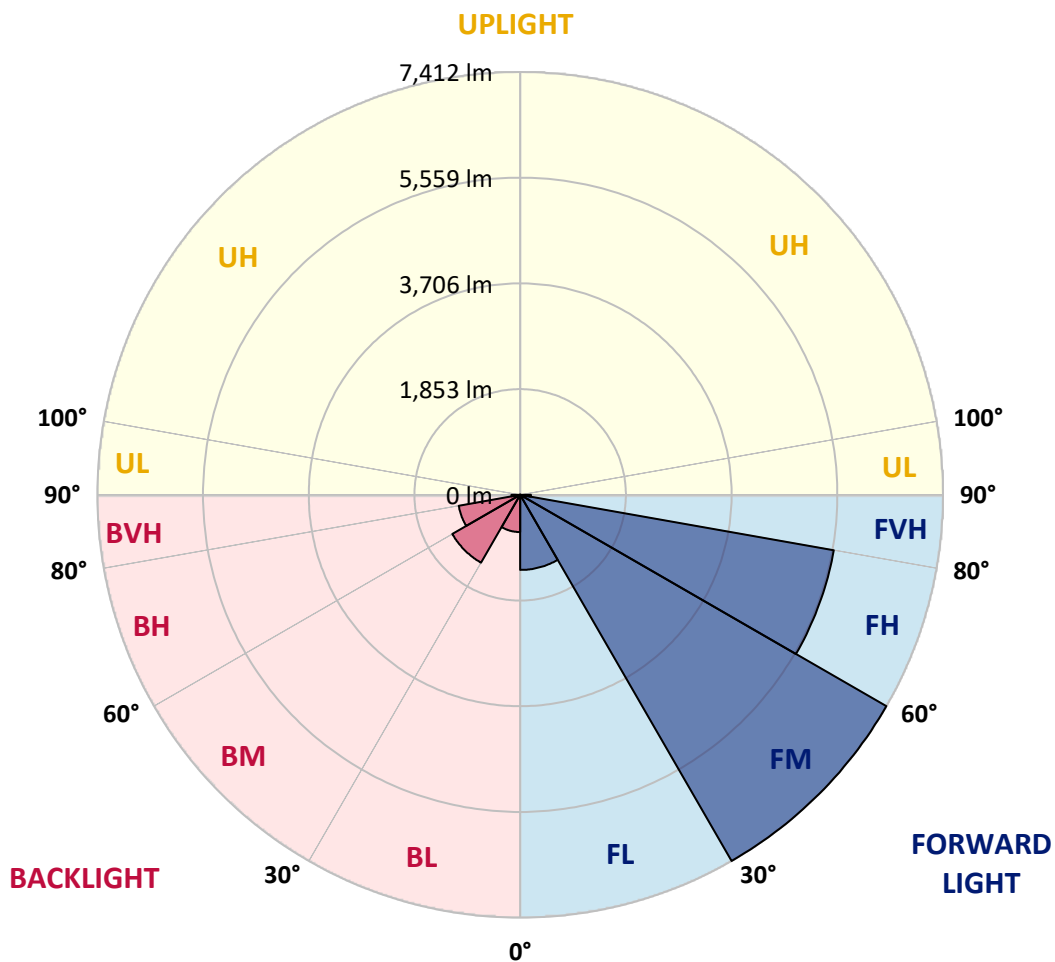
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1316.8	7.4			
FM (30°-60°)	7412.1	41.7			
FH (60°-80°)	5582.5	31.4			G3/7500
FVH (80°-90°)	187.3	1.1			G2/225
BL (0°-30°)	653.0	3.7	B2/1000		
BM (30°-60°)	1373.2	7.7	B2/2500		
BH (60°-80°)	1093.3	6.2	B3/2500		G3/2500
BVH (80°-90°)	153.4	0.9			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 II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	80°	85°
0°	2469.0	2469.0	2469.0	2469.0	2469.0	2469.0	2469.0	2469.0	2469.0	2469.0	2469.0
2.5°	2700.9	2685.1	2687.7	2683.4	2670.2	2647.5	2623.0	2578.4	2532.0	2507.5	2488.3
5°	2926.6	2922.2	2916.1	2902.1	2868.8	2821.6	2763.0	2684.2	2599.4	2554.7	2511.9
7.5°	3095.4	3092.8	3084.9	3076.2	3043.8	2987.0	2898.6	2786.6	2663.2	2602.0	2535.5
10°	3109.4	3113.8	3119.9	3143.6	3147.9	3117.3	3027.2	2891.6	2729.7	2651.0	2566.1
12.5°	2990.5	3000.1	3023.7	3084.1	3147.9	3185.6	3139.2	3001.8	2807.6	2712.2	2604.6
15°	2833.0	2838.2	2867.1	2950.2	3064.8	3181.2	3224.9	3123.4	2908.2	2791.0	2662.4
17.5°	2765.6	2768.2	2788.3	2843.5	2950.2	3116.4	3273.0	3255.6	3031.6	2889.0	2733.2
20°	2731.5	2737.6	2766.5	2820.7	2888.1	3033.3	3280.0	3398.2	3178.6	3011.5	2822.5
22.5°	2828.6	2826.0	2836.5	2863.6	2920.5	3008.0	3274.8	3545.1	3365.8	3168.9	2938.8
25°	3055.2	3064.8	3046.4	3015.8	3034.2	3095.4	3302.8	3704.4	3600.3	3371.0	3091.1
27.5°	3378.0	3368.4	3341.3	3269.6	3231.9	3258.2	3395.5	3875.9	3891.6	3637.0	3292.3
30°	3700.0	3692.1	3665.9	3578.4	3501.4	3479.5	3575.8	4072.7	4239.0	3956.4	3539.0
32.5°	4034.2	4025.5	4001.0	3913.5	3820.7	3770.0	3832.1	4300.2	4648.4	4337.8	3829.5
35°	4446.3	4429.7	4378.1	4256.5	4165.5	4126.1	4155.0	4586.3	5120.9	4789.3	4182.1
37.5°	4833.9	4859.3	4806.8	4638.8	4520.7	4506.7	4539.0	4935.4	5630.1	5294.1	4587.2
40°	5223.2	5227.6	5180.4	5043.0	4921.4	4898.6	4980.0	5358.8	6231.1	5897.8	5079.7
42.5°	5625.7	5634.4	5554.8	5428.0	5338.7	5343.1	5435.8	5854.9	6920.6	6609.1	5646.7
45°	6102.5	6115.6	6028.2	5861.9	5780.6	5944.2	5905.7	6411.4	7676.5	7417.5	6297.6
47.5°	6601.2	6621.3	6554.8	6399.1	6297.6	6522.5	6375.5	7028.2	8490.2	8284.6	7012.4
50°	6873.3	6902.2	6966.9	6955.6	6933.7	6896.1	6899.6	7689.6	9329.2	9187.5	7747.4
52.5°	6727.2	6726.3	6962.6	7249.5	7555.7	7578.5	7538.3	8386.9	10113.1	10070.2	8439.4
55°	6058.8	6104.3	6462.1	7017.7	7854.1	8376.4	8495.4	9185.7	10883.0	10932.9	9142.0
57.5°	4945.9	4983.5	5466.5	6240.8	7451.6	8850.6	9856.8	10346.7	11744.0	11976.7	10077.2
60°	3354.4	3399.9	3911.7	4841.8	6368.5	8586.4	11152.5	12418.5	12774.6	13303.9	11389.6
62.5°	1971.2	2012.3	2429.6	3054.3	4483.9	7358.9	11721.2	15366.1	14411.6	15306.6	13391.4
65°	1357.0	1385.0	1588.0	1901.2	2576.6	4956.4	11016.0	17401.1	16930.4	17787.9	15712.6
67.5°	1091.9	1088.4	1249.4	1462.9	1658.8	2555.6	8330.0	17171.0	19145.7	19503.6	16917.3
70°	899.4	895.9	1005.3	1182.0	1325.5	1439.2	4537.3	14490.3	18694.3	18839.5	15807.9
72.5°	752.4	755.9	825.9	957.2	1087.5	1084.0	1993.9	10193.6	14706.4	15710.8	12601.4
75°	635.2	636.9	683.3	776.0	882.8	873.2	1081.4	5522.5	8548.8	9247.8	6985.3
77.5°	540.7	542.4	572.2	623.8	699.9	696.4	789.2	2385.9	3566.1	3522.4	2389.4
80°	482.1	482.1	496.1	505.7	547.7	531.9	585.3	1146.1	1507.5	1392.0	953.7
82.5°	378.0	379.7	465.5	462.0	431.3	411.2	411.2	675.4	798.8	738.4	558.2
85°	212.6	211.7	300.1	362.2	379.7	289.6	287.0	378.0	434.8	383.2	270.3
87.5°	91.0	92.7	139.1	161.0	215.2	180.2	177.6	195.1	221.4	191.6	125.1
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°	2469.0	2469.0	2469.0	2469.0	2469.0	2469.0	2469.0	2469.0	2469.0	2469.0	2469.0
2.5°	2469.9	2447.1	2397.3	2335.1	2279.1	2242.4	2209.2	2161.0	2163.7	2130.4	2105.9
5°	2468.1	2420.9	2305.4	2168.0	2035.9	1940.6	1868.8	1804.1	1788.3	1757.7	1739.3
7.5°	2469.9	2392.9	2198.7	1979.1	1815.4	1694.7	1633.5	1599.3	1591.5	1581.0	1581.8
10°	2476.0	2367.5	2081.4	1802.3	1630.8	1551.2	1536.3	1546.8	1559.1	1562.6	1563.5
12.5°	2490.0	2344.8	1952.8	1644.8	1515.3	1490.9	1516.2	1552.1	1575.7	1587.1	1586.2
15°	2521.5	2327.3	1829.4	1521.5	1451.5	1464.6	1511.8	1562.6	1596.7	1612.5	1613.3
17.5°	2555.6	2301.9	1702.6	1427.0	1404.2	1437.5	1496.1	1555.6	1597.6	1615.1	1618.6
20°	2600.2	2270.4	1569.6	1356.1	1359.6	1397.2	1452.4	1511.8	1558.2	1573.1	1580.1
22.5°	2658.9	2236.3	1453.2	1298.4	1308.9	1337.7	1380.6	1432.2	1472.5	1479.5	1485.6
25°	2737.6	2199.5	1360.5	1245.9	1250.3	1266.9	1295.7	1326.4	1354.4	1346.5	1352.6
27.5°	2843.5	2168.0	1291.4	1197.8	1189.9	1193.4	1208.3	1217.9	1232.8	1210.9	1213.5
30°	2967.7	2133.9	1238.0	1155.8	1133.9	1127.8	1131.3	1136.5	1147.9	1118.1	1113.8
32.5°	3112.1	2092.8	1188.1	1119.0	1088.4	1076.1	1077.9	1091.9	1135.6	1117.3	1107.6
35°	3280.0	2046.4	1135.6	1078.8	1057.8	1040.3	1038.5	1082.3	1212.6	1201.3	1192.5
37.5°	3476.9	2000.1	1083.1	1033.3	1035.0	1015.8	1009.6	1059.5	1227.5	1182.9	1176.8
40°	3727.1	1975.6	1038.5	985.2	1007.0	1004.4	992.2	1017.5	1129.5	1048.1	1037.6
42.5°	4036.8	1979.1	1005.3	933.5	973.8	1001.8	982.5	983.4	1023.6	962.4	952.8
45°	4419.2	2020.2	981.7	892.4	936.2	999.2	979.0	965.0	968.5	936.2	930.9
47.5°	4865.4	2105.0	965.0	858.3	900.3	989.5	978.2	959.8	951.9	934.4	930.0
50°	5361.5	2228.4	952.8	825.9	867.9	973.8	979.0	954.5	945.8	938.8	936.2
52.5°	5848.8	2369.3	934.4	797.9	842.5	954.5	981.7	949.3	939.7	934.4	931.8
55°	6392.1	2545.1	906.4	774.3	821.5	930.0	981.7	941.4	930.9	931.8	930.9
57.5°	7126.2	2829.5	873.2	754.2	796.2	900.3	965.0	932.7	919.5	920.4	921.3
60°	8273.2	3330.8	832.9	734.1	764.7	865.3	942.3	913.4	900.3	903.8	904.7
62.5°	9960.0	4066.6	780.4	704.3	731.4	827.7	910.8	888.9	875.8	884.5	884.5
65°	11713.3	4715.8	715.7	666.7	696.4	786.5	871.4	858.3	845.2	865.3	864.4
67.5°	12184.9	4570.5	650.9	625.6	661.4	741.1	824.2	817.2	810.2	845.2	843.4
70°	10824.4	3669.4	591.4	583.6	622.9	692.1	773.4	773.4	769.0	795.3	789.2
72.5°	8246.9	2602.0	534.6	538.9	579.2	638.7	718.3	724.4	717.4	730.6	725.3
75°	4414.8	1489.1	477.7	490.0	524.9	584.4	657.1	663.2	658.8	657.9	660.6
77.5°	1467.2	727.9	418.2	437.5	468.1	528.4	593.2	602.8	592.3	590.6	589.7
80°	653.6	457.6	352.6	378.0	405.1	464.6	525.8	533.7	522.3	538.1	517.9
82.5°	420.0	301.0	282.6	310.6	336.8	400.7	458.5	460.2	449.7	522.3	445.3
85°	203.9	186.4	212.6	238.0	260.7	315.0	379.7	380.6	354.3	322.8	311.5
87.5°	101.5	108.5	141.7	164.5	175.9	216.1	276.5	271.2	259.8	236.2	217.9
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)