

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: P298876

Luminaire Tested: **GLNA-AF-04-LED-E1-T2**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P298876  
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-04-LED-E1-T2  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(4) 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: 23482 lumens  
Efficiency: N/A  
Efficacy: 104.4 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): 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

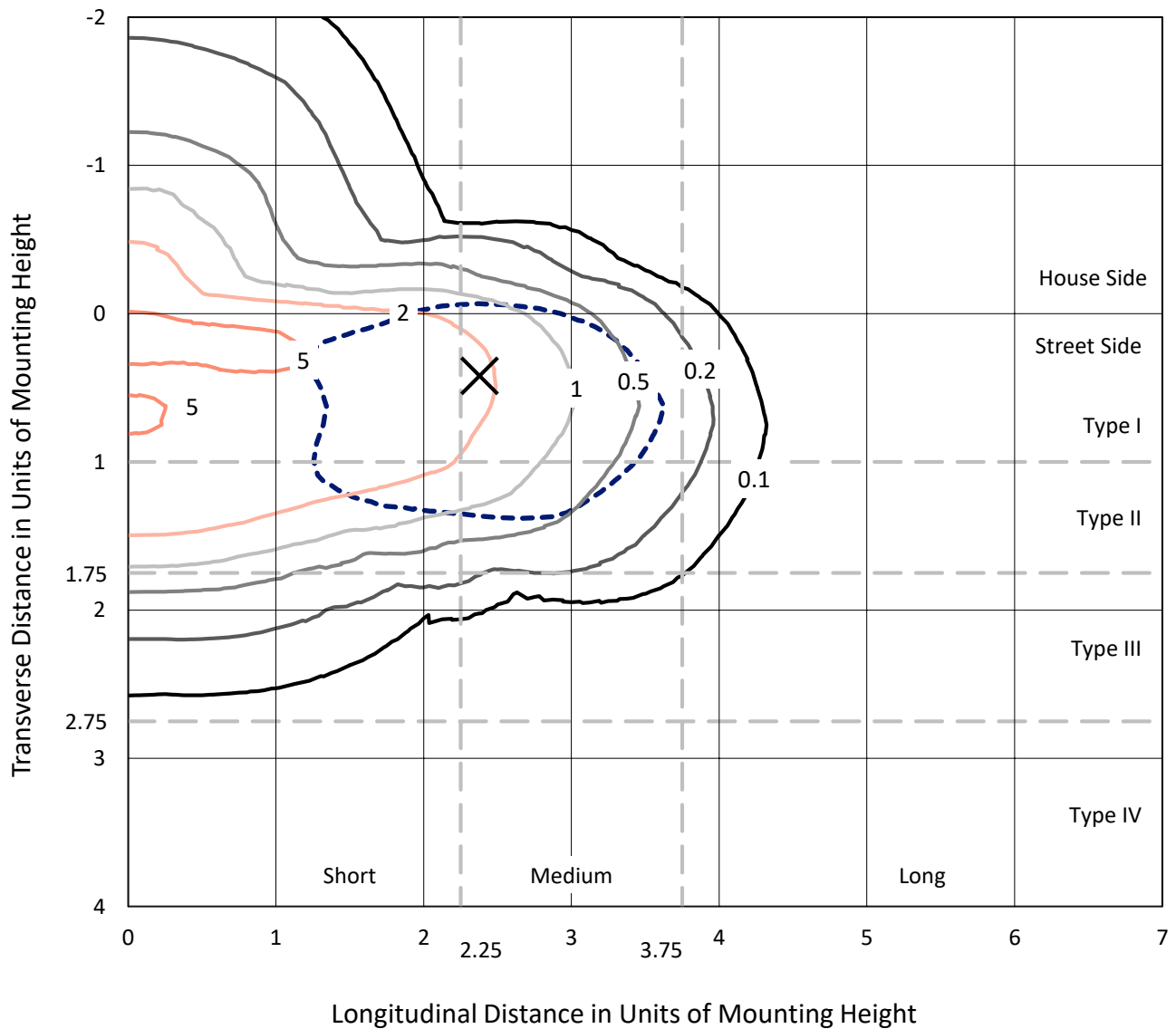


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### Iso-Footcandle Lines of Horizontal Illumination

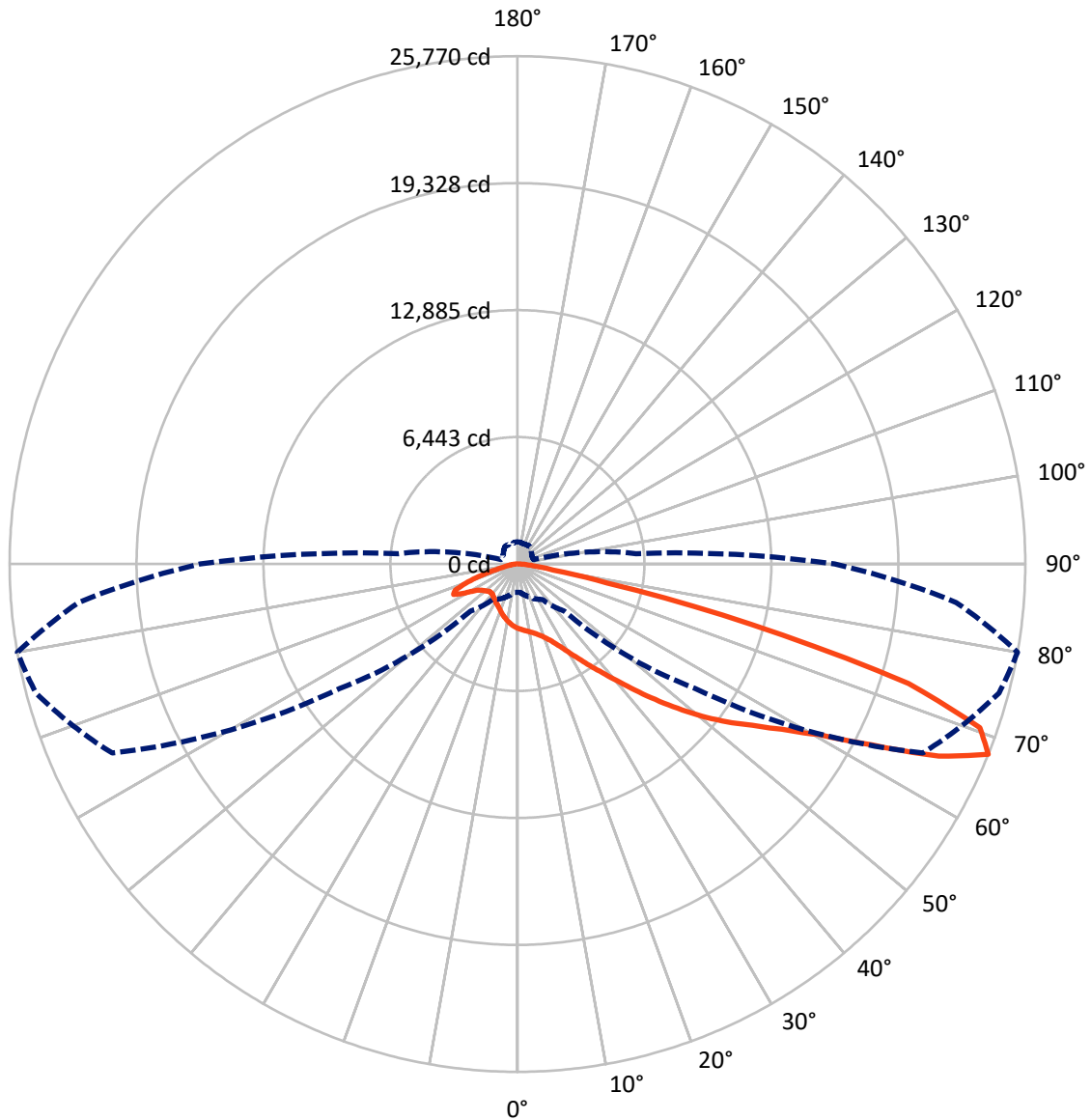
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.3 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	4324.5	0.0	4324.5
	% Fixture	18.4	0.0	18.4
<b>Street Side</b>	Lumens	19157.5	0.0	19157.5
	% Fixture	81.6	0.0	81.6
<b>Total</b>	Lumens	23482.0	0.0	23482.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	300.9	1.3
10°-20°	866.9	3.7
20°-30°	1434.9	6.1
30°-40°	2347.2	10.0
40°-50°	3789.7	16.1
50°-60°	5471.3	23.3
60°-70°	6037.9	25.7
70°-80°	2783.1	11.9
80°-90°	450.1	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°	23482.0	100.0
0°-180°	23482.0	100.0



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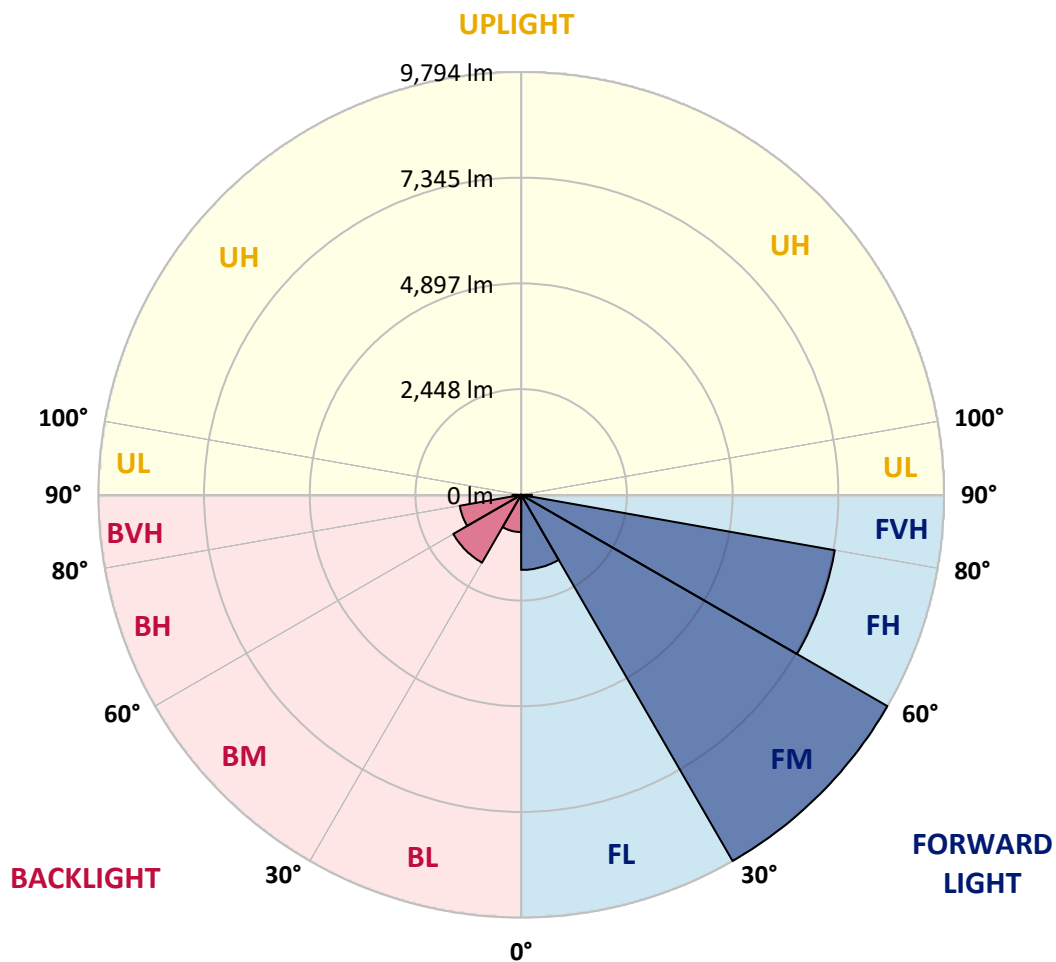
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1740.0	7.4			
FM (30°-60°)	9793.7	41.7			
FH (60°-80°)	7376.3	31.4			G3/7500
FVH (80°-90°)	247.5	1.1			G3/500
BL (0°-30°)	862.8	3.7	B2/1000		
BM (30°-60°)	1814.4	7.7	B2/2500		
BH (60°-80°)	1444.6	6.2	B3/2500		G3/2500
BVH (80°-90°)	202.7	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°	3262.3	3262.3	3262.3	3262.3	3262.3	3262.3	3262.3	3262.3	3262.3	3262.3	3262.3
2.5°	3568.7	3547.9	3551.3	3545.6	3528.2	3498.2	3465.8	3406.8	3345.6	3313.2	3287.8
5°	3866.9	3861.2	3853.1	3834.6	3790.6	3728.2	3650.8	3546.7	3434.6	3375.6	3319.0
7.5°	4090.1	4086.6	4076.2	4064.6	4021.8	3946.7	3829.9	3682.0	3519.0	3438.0	3350.2
10°	4108.5	4114.3	4122.4	4153.6	4159.4	4119.0	3999.9	3820.7	3606.8	3502.8	3390.7
12.5°	3951.3	3964.0	3995.3	4075.0	4159.4	4209.1	4147.9	3966.4	3709.7	3583.7	3441.5
15°	3743.2	3750.2	3788.3	3898.2	4049.6	4203.3	4261.1	4127.0	3842.7	3687.8	3517.8
17.5°	3654.2	3657.7	3684.3	3757.1	3898.2	4117.8	4324.7	4301.6	4005.7	3817.2	3611.5
20°	3609.1	3617.2	3655.4	3727.1	3816.1	4008.0	4334.0	4490.0	4199.9	3979.1	3729.4
22.5°	3737.5	3734.0	3747.9	3783.7	3858.8	3974.4	4327.0	4684.3	4447.3	4187.2	3883.1
25°	4036.9	4049.6	4025.3	3984.9	4009.1	4090.1	4364.0	4894.7	4757.1	4454.2	4084.3
27.5°	4463.5	4450.7	4414.9	4320.1	4270.4	4305.1	4486.6	5121.2	5142.0	4805.6	4350.2
30°	4888.9	4878.5	4843.8	4728.2	4626.5	4597.6	4724.7	5381.3	5601.0	5227.6	4676.2
32.5°	5330.5	5318.9	5286.5	5170.9	5048.4	4981.4	5063.4	5681.9	6142.0	5731.6	5060.0
35°	5875.0	5853.0	5784.8	5624.1	5503.9	5451.9	5490.0	6059.9	6766.3	6328.1	5525.8
37.5°	6387.1	6420.6	6351.3	6129.3	5973.2	5954.7	5997.5	6521.2	7439.1	6995.2	6061.1
40°	6901.5	6907.3	6844.9	6663.4	6502.7	6472.6	6580.2	7080.7	8233.3	7792.8	6711.9
42.5°	7433.3	7444.9	7339.7	7172.0	7054.1	7059.9	7182.4	7736.2	9144.2	8732.7	7461.1
45°	8063.3	8080.7	7965.1	7745.4	7637.9	7854.1	7803.2	8471.4	10143.1	9800.9	8321.1
47.5°	8722.3	8748.9	8661.0	8455.2	8321.1	8618.2	8424.0	9286.4	11218.2	10946.5	9265.6
50°	9081.8	9120.0	9205.5	9190.5	9161.6	9111.9	9116.5	10160.4	12326.8	12139.5	10236.7
52.5°	8888.8	8887.6	9199.7	9578.9	9983.5	10013.6	9960.4	11081.8	13362.6	13306.0	11151.1
55°	8005.5	8065.7	8538.5	9272.6	10377.7	11067.9	11225.1	12137.2	14379.9	14445.8	12079.4
57.5°	6535.1	6584.8	7222.9	8246.0	9846.0	11694.5	13023.9	13671.3	15517.5	15825.0	13315.2
60°	4432.2	4492.4	5168.6	6397.5	8414.8	11345.3	14736.0	16408.8	16879.3	17578.7	15049.3
62.5°	2604.5	2658.9	3210.3	4035.7	5924.7	9723.4	15487.4	20303.4	19042.2	20224.8	17694.3
65°	1793.0	1830.0	2098.2	2512.1	3404.5	6548.9	14555.6	22992.4	22370.4	23503.4	20761.2
67.5°	1442.7	1438.1	1650.8	1932.9	2191.8	3376.8	11006.6	22688.3	25297.5	25770.3	22353.1
70°	1188.4	1183.8	1328.3	1561.8	1751.4	1901.7	5995.2	19146.3	24701.0	24892.9	20887.2
72.5°	994.2	998.8	1091.3	1264.7	1437.0	1432.3	2634.6	13469.0	19431.8	20758.9	16650.4
75°	839.3	841.6	902.9	1025.4	1166.4	1153.7	1428.9	7296.9	11295.6	12219.3	9229.8
77.5°	714.4	716.7	756.0	824.3	924.8	920.2	1042.7	3152.5	4712.0	4654.2	3157.1
80°	637.0	637.0	655.5	668.2	723.7	702.9	773.4	1514.4	1991.8	1839.3	1260.1
82.5°	499.4	501.7	615.0	610.4	569.9	543.3	543.3	892.5	1055.5	975.7	737.6
85°	280.9	279.8	396.5	478.6	501.7	382.6	379.2	499.4	574.5	506.3	357.2
87.5°	120.2	122.5	183.8	212.7	284.4	238.1	234.7	257.8	292.5	253.2	165.3
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°	3262.3	3262.3	3262.3	3262.3	3262.3	3262.3	3262.3	3262.3	3262.3	3262.3	3262.3
2.5°	3263.5	3233.4	3167.5	3085.5	3011.5	2962.9	2919.0	2855.4	2858.9	2814.9	2782.6
5°	3261.2	3198.7	3046.2	2864.7	2690.1	2564.1	2469.3	2383.7	2362.9	2322.5	2298.2
7.5°	3263.5	3161.8	2905.1	2615.0	2398.8	2239.2	2158.3	2113.2	2102.8	2089.0	2090.1
10°	3271.6	3128.2	2750.2	2381.4	2154.8	2049.7	2030.0	2043.9	2060.1	2064.7	2065.8
12.5°	3290.1	3098.2	2580.3	2173.3	2002.3	1969.9	2003.4	2050.8	2082.0	2097.0	2095.9
15°	3331.7	3075.1	2417.3	2010.3	1917.9	1935.2	1997.6	2064.7	2109.8	2130.6	2131.7
17.5°	3376.8	3041.5	2249.6	1885.5	1855.4	1899.4	1976.8	2055.4	2110.9	2134.0	2138.7
20°	3435.7	2999.9	2073.9	1791.9	1796.5	1846.2	1919.0	1997.6	2058.9	2078.6	2087.8
22.5°	3513.2	2954.8	1920.2	1715.6	1729.4	1767.6	1824.2	1892.4	1945.6	1954.9	1962.9
25°	3617.2	2906.3	1797.6	1646.2	1652.0	1673.9	1712.1	1752.5	1789.5	1779.1	1787.2
27.5°	3757.1	2864.7	1706.3	1582.6	1572.2	1576.8	1596.5	1609.2	1628.9	1600.0	1603.4
30°	3921.3	2819.6	1635.8	1527.1	1498.2	1490.1	1494.8	1501.7	1516.7	1477.4	1471.6
32.5°	4112.0	2765.2	1569.9	1478.6	1438.1	1421.9	1424.2	1442.7	1500.5	1476.3	1463.5
35°	4334.0	2704.0	1500.5	1425.4	1397.6	1374.5	1372.2	1430.0	1602.3	1587.2	1575.7
37.5°	4594.1	2642.7	1431.2	1365.3	1367.6	1342.2	1334.1	1400.0	1621.9	1563.0	1554.9
40°	4924.7	2610.3	1372.2	1301.7	1330.6	1327.1	1310.9	1344.5	1492.4	1384.9	1371.1
42.5°	5333.9	2615.0	1328.3	1233.5	1286.7	1323.7	1298.2	1299.4	1352.6	1271.6	1258.9
45°	5839.1	2669.3	1297.1	1179.2	1237.0	1320.2	1293.6	1275.1	1279.7	1237.0	1230.0
47.5°	6428.7	2781.4	1275.1	1134.1	1189.6	1307.5	1292.4	1268.2	1257.8	1234.6	1228.9
50°	7084.2	2944.4	1258.9	1091.3	1146.8	1286.7	1293.6	1261.2	1249.7	1240.4	1237.0
52.5°	7728.1	3130.5	1234.6	1054.3	1113.3	1261.2	1297.1	1254.3	1241.6	1234.6	1231.2
55°	8446.0	3362.9	1197.7	1023.1	1085.5	1228.9	1297.1	1243.9	1230.0	1231.2	1230.0
57.5°	9415.9	3738.6	1153.7	996.5	1052.0	1189.6	1275.1	1232.3	1215.0	1216.1	1217.3
60°	10931.5	4401.0	1100.5	969.9	1010.4	1143.3	1245.0	1206.9	1189.6	1194.2	1195.3
62.5°	13160.3	5373.3	1031.2	930.6	966.4	1093.6	1203.4	1174.5	1157.2	1168.8	1168.8
65°	15477.0	6231.0	945.6	880.9	920.2	1039.3	1151.4	1134.1	1116.7	1143.3	1142.2
67.5°	16100.1	6039.1	860.1	826.6	874.0	979.2	1089.0	1079.7	1070.5	1116.7	1114.4
70°	14302.5	4848.4	781.5	771.1	823.1	914.4	1021.9	1021.9	1016.2	1050.8	1042.7
72.5°	10896.8	3438.0	706.3	712.1	765.3	843.9	949.1	957.2	947.9	965.3	958.4
75°	5833.4	1967.6	631.2	647.4	693.6	772.2	868.2	876.3	870.5	869.3	872.8
77.5°	1938.7	961.8	552.6	578.0	618.5	698.2	783.8	796.5	782.6	780.3	779.2
80°	863.6	604.6	465.9	499.4	535.2	613.9	694.8	705.2	690.2	711.0	684.4
82.5°	554.9	397.7	373.4	410.4	445.1	529.5	605.8	608.1	594.2	690.2	588.4
85°	269.4	246.2	280.9	314.4	344.5	416.2	501.7	502.9	468.2	426.6	411.5
87.5°	134.1	143.3	187.3	217.3	232.4	285.5	365.3	358.4	343.3	312.1	287.9
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)