

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: P299011

Luminaire Tested: **GLNA-AF-07-LED-E1-T2-7027-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299011  
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-07-LED-E1-T2-7027-600  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(7) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 23566.9 lumens  
Efficiency: N/A  
Efficacy: 104.3 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B3 - U0 - G3

Input Watts (W): 226  
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

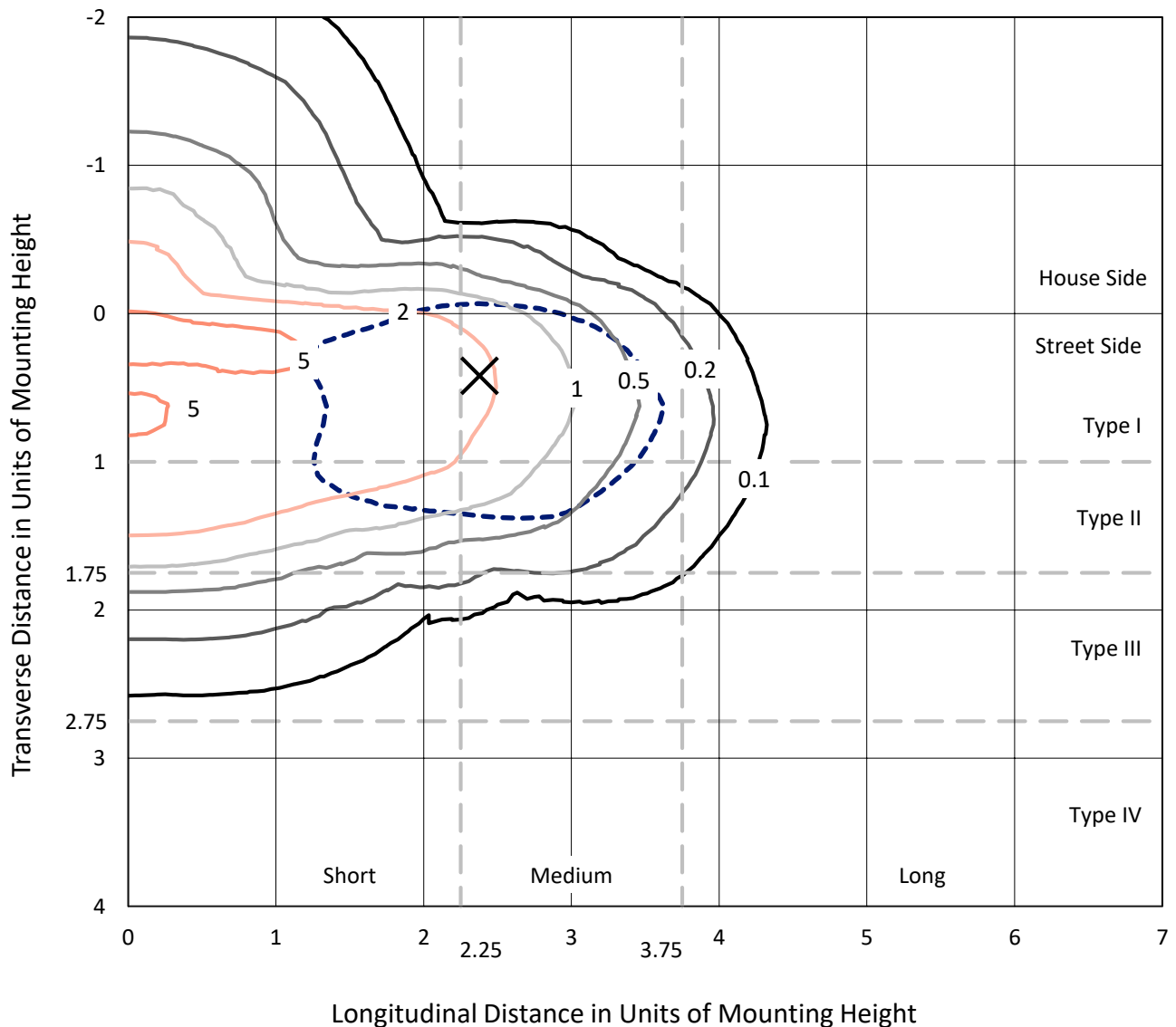


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### Iso-Footcandle Lines of Horizontal Illumination

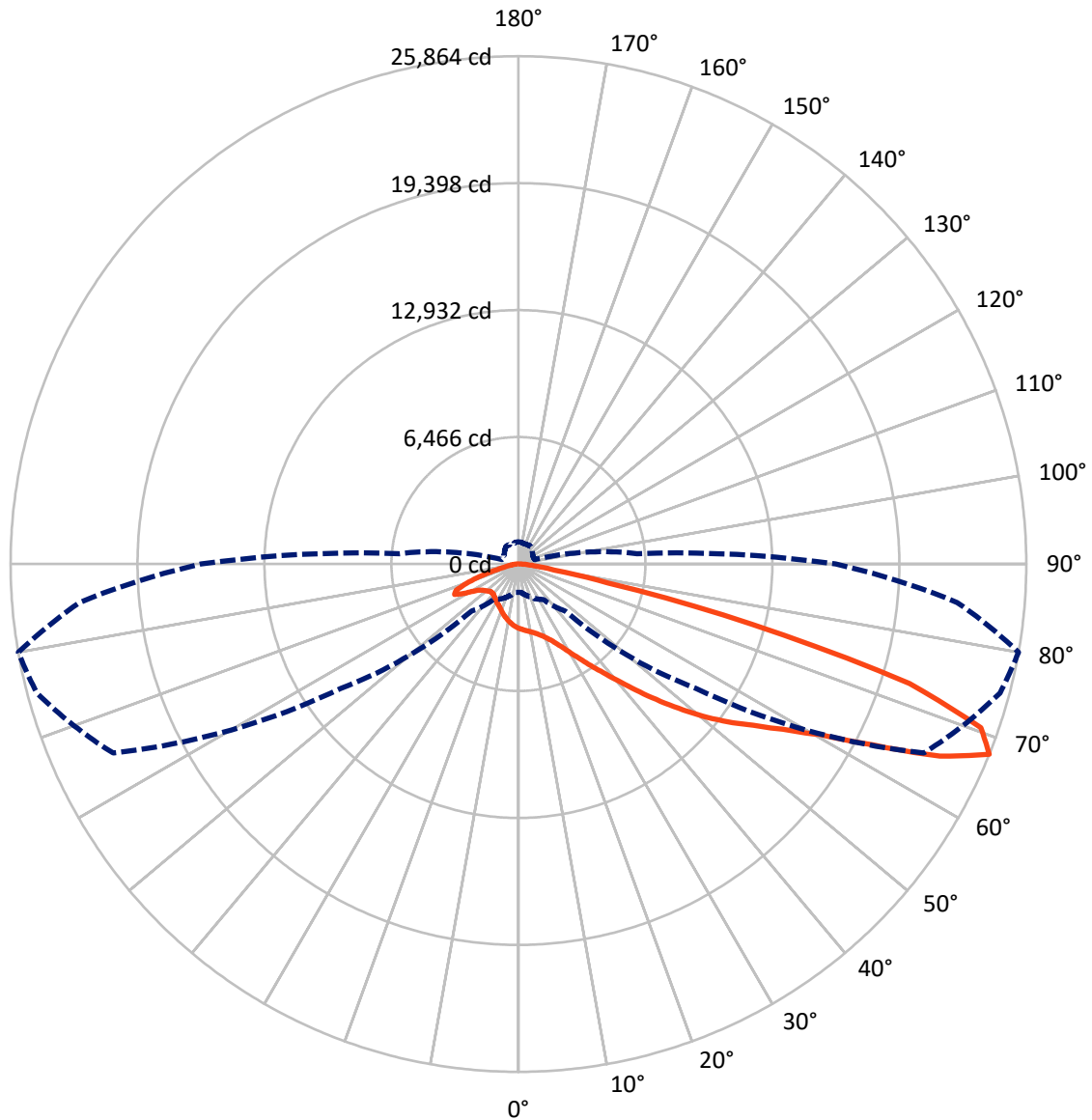
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.4 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    | 4340.1   | 0.0    | 4340.1  |
|                    | % Fixture | 18.4     | 0.0    | 18.4    |
| <b>Street Side</b> | Lumens    | 19226.8  | 0.0    | 19226.8 |
|                    | % Fixture | 81.6     | 0.0    | 81.6    |
| <b>Total</b>       | Lumens    | 23566.9  | 0.0    | 23566.9 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 302.0   | 1.3       |
| 10°-20°   | 870.0   | 3.7       |
| 20°-30°   | 1440.1  | 6.1       |
| 30°-40°   | 2355.6  | 10.0      |
| 40°-50°   | 3803.4  | 16.1      |
| 50°-60°   | 5491.0  | 23.3      |
| 60°-70°   | 6059.7  | 25.7      |
| 70°-80°   | 2793.1  | 11.9      |
| 80°-90°   | 451.8   | 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°    | 23566.9 | 100.0     |
| 0°-180°   | 23566.9 | 100.0     |



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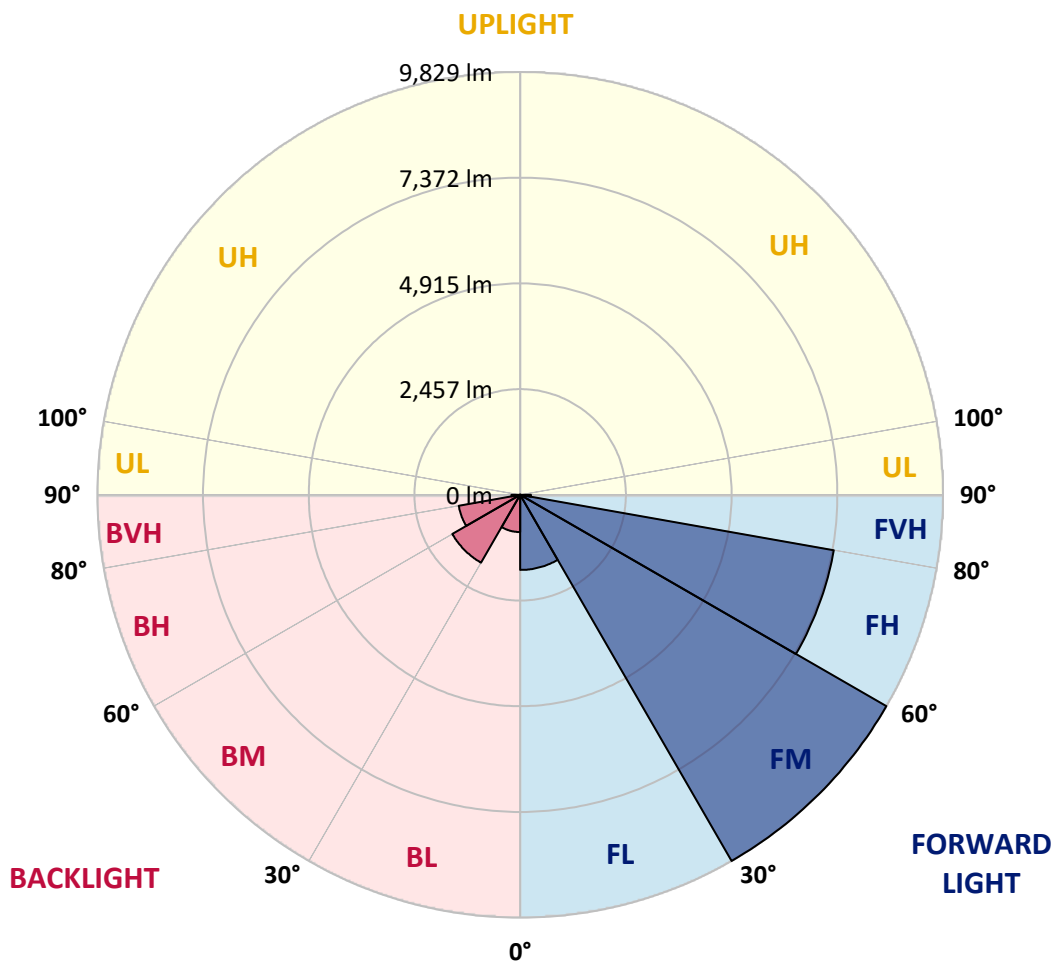
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 1746.3 | 7.4       |                         |      |         |
| FM (30°-60°)   | 9829.1 | 41.7      |                         |      |         |
| FH (60°-80°)   | 7403.0 | 31.4      |                         |      | G3/7500 |
| FVH (80°-90°)  | 248.4  | 1.1       |                         |      | G3/500  |
| BL (0°-30°)    | 865.9  | 3.7       | B2/1000                 |      |         |
| BM (30°-60°)   | 1821.0 | 7.7       | B2/2500                 |      |         |
| BH (60°-80°)   | 1449.9 | 6.2       | B3/2500                 |      | G3/2500 |
| BVH (80°-90°)  | 203.4  | 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°    | 3274.1 | 3274.1 | 3274.1 | 3274.1 | 3274.1  | 3274.1  | 3274.1  | 3274.1  | 3274.1  | 3274.1  | 3274.1  |
| 2.5°  | 3581.6 | 3560.7 | 3564.2 | 3558.4 | 3541.0  | 3510.8  | 3478.3  | 3419.2  | 3357.7  | 3325.2  | 3299.6  |
| 5°    | 3880.9 | 3875.1 | 3867.0 | 3848.4 | 3804.3  | 3741.7  | 3664.0  | 3559.5  | 3447.0  | 3387.8  | 3331.0  |
| 7.5°  | 4104.8 | 4101.4 | 4090.9 | 4079.3 | 4036.4  | 3961.0  | 3843.8  | 3695.3  | 3531.7  | 3450.5  | 3362.3  |
| 10°   | 4123.4 | 4129.2 | 4137.3 | 4168.7 | 4174.5  | 4133.8  | 4014.3  | 3834.5  | 3619.9  | 3515.4  | 3402.9  |
| 12.5° | 3965.6 | 3978.4 | 4009.7 | 4089.8 | 4174.5  | 4224.3  | 4162.8  | 3980.7  | 3723.1  | 3596.7  | 3454.0  |
| 15°   | 3756.8 | 3763.7 | 3802.0 | 3912.2 | 4064.2  | 4218.5  | 4276.6  | 4142.0  | 3856.6  | 3701.1  | 3530.5  |
| 17.5° | 3667.4 | 3670.9 | 3697.6 | 3770.7 | 3912.2  | 4132.7  | 4340.4  | 4317.2  | 4020.1  | 3831.0  | 3624.5  |
| 20°   | 3622.2 | 3630.3 | 3668.6 | 3740.5 | 3829.9  | 4022.5  | 4349.6  | 4506.3  | 4215.1  | 3993.5  | 3742.9  |
| 22.5° | 3751.0 | 3747.5 | 3761.4 | 3797.4 | 3872.8  | 3988.8  | 4342.7  | 4701.2  | 4463.3  | 4202.3  | 3897.2  |
| 25°   | 4051.5 | 4064.2 | 4039.9 | 3999.3 | 4023.6  | 4104.8  | 4379.8  | 4912.3  | 4774.3  | 4470.3  | 4099.0  |
| 27.5° | 4479.6 | 4466.8 | 4430.9 | 4335.7 | 4285.8  | 4320.6  | 4502.8  | 5139.7  | 5160.6  | 4823.0  | 4365.9  |
| 30°   | 4906.5 | 4896.1 | 4861.3 | 4745.3 | 4643.2  | 4614.2  | 4741.8  | 5400.8  | 5621.2  | 5246.5  | 4693.1  |
| 32.5° | 5349.7 | 5338.1 | 5305.7 | 5189.6 | 5066.7  | 4999.4  | 5081.7  | 5702.5  | 6164.2  | 5752.3  | 5078.3  |
| 35°   | 5896.2 | 5874.2 | 5805.7 | 5644.4 | 5523.8  | 5471.6  | 5509.9  | 6081.8  | 6790.7  | 6351.0  | 5545.8  |
| 37.5° | 6410.2 | 6443.8 | 6374.2 | 6151.5 | 5994.8  | 5976.3  | 6019.2  | 6544.8  | 7466.0  | 7020.5  | 6083.0  |
| 40°   | 6926.5 | 6932.3 | 6869.6 | 6687.5 | 6526.2  | 6496.0  | 6603.9  | 7106.3  | 8263.0  | 7821.0  | 6736.2  |
| 42.5° | 7460.2 | 7471.8 | 7366.2 | 7198.0 | 7079.6  | 7085.4  | 7208.4  | 7764.2  | 9177.3  | 8764.3  | 7488.0  |
| 45°   | 8092.5 | 8109.9 | 7993.9 | 7773.4 | 7665.5  | 7882.5  | 7831.4  | 8502.1  | 10179.7 | 9836.3  | 8351.2  |
| 47.5° | 8753.8 | 8780.5 | 8692.3 | 8485.8 | 8351.2  | 8649.4  | 8454.5  | 9320.0  | 11258.7 | 10986.1 | 9299.1  |
| 50°   | 9114.6 | 9152.9 | 9238.8 | 9223.7 | 9194.7  | 9144.8  | 9149.5  | 10197.1 | 12371.4 | 12183.4 | 10273.7 |
| 52.5° | 8920.9 | 8919.7 | 9233.0 | 9613.5 | 10019.6 | 10049.8 | 9996.4  | 11121.8 | 13410.9 | 13354.1 | 11191.4 |
| 55°   | 8034.5 | 8094.8 | 8569.3 | 9306.1 | 10415.2 | 11107.9 | 11265.7 | 12181.1 | 14431.9 | 14498.0 | 12123.1 |
| 57.5° | 6558.7 | 6608.6 | 7249.0 | 8275.8 | 9881.5  | 11736.7 | 13071.0 | 13720.7 | 15573.6 | 15882.2 | 13363.3 |
| 60°   | 4448.3 | 4508.6 | 5187.3 | 6420.6 | 8445.2  | 11386.3 | 14789.3 | 16468.1 | 16940.3 | 17642.2 | 15103.7 |
| 62.5° | 2614.0 | 2668.5 | 3221.9 | 4050.3 | 5946.1  | 9758.6  | 15543.4 | 20376.8 | 19111.1 | 20298.0 | 17758.2 |
| 65°   | 1799.5 | 1836.6 | 2105.8 | 2521.1 | 3416.8  | 6572.6  | 14608.3 | 23075.5 | 22451.3 | 23588.3 | 20836.3 |
| 67.5° | 1447.9 | 1443.3 | 1656.8 | 1939.9 | 2199.8  | 3389.0  | 11046.4 | 22770.4 | 25389.0 | 25863.5 | 22433.9 |
| 70°   | 1192.7 | 1188.1 | 1333.1 | 1567.4 | 1757.7  | 1908.6  | 6016.9  | 19215.5 | 24790.3 | 24982.9 | 20962.8 |
| 72.5° | 997.8  | 1002.4 | 1095.2 | 1269.3 | 1442.1  | 1437.5  | 2644.1  | 13517.7 | 19502.0 | 20834.0 | 16710.6 |
| 75°   | 842.3  | 844.6  | 906.1  | 1029.1 | 1170.7  | 1157.9  | 1434.0  | 7323.3  | 11336.5 | 12263.5 | 9263.2  |
| 77.5° | 717.0  | 719.3  | 758.8  | 827.2  | 928.2   | 923.5   | 1046.5  | 3163.9  | 4729.0  | 4671.0  | 3168.5  |
| 80°   | 639.3  | 639.3  | 657.8  | 670.6  | 726.3   | 705.4   | 776.2   | 1519.9  | 1999.0  | 1845.9  | 1264.6  |
| 82.5° | 501.2  | 503.5  | 617.2  | 612.6  | 572.0   | 545.3   | 545.3   | 895.7   | 1059.3  | 979.2   | 740.2   |
| 85°   | 281.9  | 280.8  | 398.0  | 480.3  | 503.5   | 384.0   | 380.6   | 501.2   | 576.6   | 508.2   | 358.5   |
| 87.5° | 120.7  | 123.0  | 184.5  | 213.5  | 285.4   | 239.0   | 235.5   | 258.7   | 293.5   | 254.1   | 165.9   |
| 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°    | 3274.1  | 3274.1 | 3274.1 | 3274.1 | 3274.1 | 3274.1 | 3274.1 | 3274.1 | 3274.1 | 3274.1 | 3274.1 |
| 2.5°  | 3275.3  | 3245.1 | 3179.0 | 3096.6 | 3022.4 | 2973.6 | 2929.5 | 2865.7 | 2869.2 | 2825.1 | 2792.6 |
| 5°    | 3273.0  | 3210.3 | 3057.2 | 2875.0 | 2699.8 | 2573.4 | 2478.2 | 2392.4 | 2371.5 | 2330.9 | 2306.5 |
| 7.5°  | 3275.3  | 3173.2 | 2915.6 | 2624.4 | 2407.4 | 2247.3 | 2166.1 | 2120.9 | 2110.4 | 2096.5 | 2097.7 |
| 10°   | 3283.4  | 3139.5 | 2760.2 | 2390.0 | 2162.6 | 2057.1 | 2037.3 | 2051.3 | 2067.5 | 2072.1 | 2073.3 |
| 12.5° | 3302.0  | 3109.4 | 2589.6 | 2181.2 | 2009.5 | 1977.0 | 2010.7 | 2058.2 | 2089.5 | 2104.6 | 2103.5 |
| 15°   | 3343.7  | 3086.2 | 2426.0 | 2017.6 | 1924.8 | 1942.2 | 2004.9 | 2072.1 | 2117.4 | 2138.3 | 2139.4 |
| 17.5° | 3389.0  | 3052.5 | 2257.8 | 1892.3 | 1862.1 | 1906.2 | 1984.0 | 2062.9 | 2118.6 | 2141.8 | 2146.4 |
| 20°   | 3448.2  | 3010.8 | 2081.4 | 1798.3 | 1803.0 | 1852.9 | 1926.0 | 2004.9 | 2066.3 | 2086.1 | 2095.3 |
| 22.5° | 3525.9  | 2965.5 | 1927.1 | 1721.8 | 1735.7 | 1774.0 | 1830.8 | 1899.3 | 1952.6 | 1961.9 | 1970.0 |
| 25°   | 3630.3  | 2916.8 | 1804.1 | 1652.1 | 1657.9 | 1680.0 | 1718.3 | 1758.9 | 1796.0 | 1785.6 | 1793.7 |
| 27.5° | 3770.7  | 2875.0 | 1712.5 | 1588.3 | 1577.9 | 1582.5 | 1602.3 | 1615.0 | 1634.7 | 1605.7 | 1609.2 |
| 30°   | 3935.4  | 2829.8 | 1641.7 | 1532.6 | 1503.6 | 1495.5 | 1500.2 | 1507.1 | 1522.2 | 1482.8 | 1477.0 |
| 32.5° | 4126.9  | 2775.2 | 1575.6 | 1483.9 | 1443.3 | 1427.1 | 1429.4 | 1447.9 | 1506.0 | 1481.6 | 1468.8 |
| 35°   | 4349.6  | 2713.7 | 1506.0 | 1430.5 | 1402.7 | 1379.5 | 1377.2 | 1435.2 | 1608.1 | 1593.0 | 1581.4 |
| 37.5° | 4610.7  | 2652.3 | 1436.3 | 1370.2 | 1372.5 | 1347.0 | 1338.9 | 1405.0 | 1627.8 | 1568.6 | 1560.5 |
| 40°   | 4942.5  | 2619.8 | 1377.2 | 1306.4 | 1335.4 | 1331.9 | 1315.7 | 1349.3 | 1497.8 | 1389.9 | 1376.0 |
| 42.5° | 5353.2  | 2624.4 | 1333.1 | 1237.9 | 1291.3 | 1328.4 | 1302.9 | 1304.1 | 1357.5 | 1276.2 | 1263.5 |
| 45°   | 5860.2  | 2678.9 | 1301.8 | 1183.4 | 1241.4 | 1325.0 | 1298.3 | 1279.7 | 1284.4 | 1241.4 | 1234.5 |
| 47.5° | 6452.0  | 2791.5 | 1279.7 | 1138.2 | 1193.9 | 1312.2 | 1297.1 | 1272.8 | 1262.3 | 1239.1 | 1233.3 |
| 50°   | 7109.8  | 2955.1 | 1263.5 | 1095.2 | 1150.9 | 1291.3 | 1298.3 | 1265.8 | 1254.2 | 1244.9 | 1241.4 |
| 52.5° | 7756.0  | 3141.9 | 1239.1 | 1058.1 | 1117.3 | 1265.8 | 1301.8 | 1258.8 | 1246.1 | 1239.1 | 1235.6 |
| 55°   | 8476.5  | 3375.1 | 1202.0 | 1026.8 | 1089.4 | 1233.3 | 1301.8 | 1248.4 | 1234.5 | 1235.6 | 1234.5 |
| 57.5° | 9449.9  | 3752.1 | 1157.9 | 1000.1 | 1055.8 | 1193.9 | 1279.7 | 1236.8 | 1219.4 | 1220.5 | 1221.7 |
| 60°   | 10971.0 | 4416.9 | 1104.5 | 973.4  | 1014.0 | 1147.5 | 1249.6 | 1211.3 | 1193.9 | 1198.5 | 1199.7 |
| 62.5° | 13207.9 | 5392.7 | 1034.9 | 934.0  | 969.9  | 1097.6 | 1207.8 | 1178.8 | 1161.4 | 1173.0 | 1173.0 |
| 65°   | 15533.0 | 6253.6 | 949.1  | 884.1  | 923.5  | 1043.0 | 1155.6 | 1138.2 | 1120.8 | 1147.5 | 1146.3 |
| 67.5° | 16158.3 | 6061.0 | 863.2  | 829.6  | 877.1  | 982.7  | 1092.9 | 1083.6 | 1074.4 | 1120.8 | 1118.4 |
| 70°   | 14354.2 | 4865.9 | 784.3  | 773.9  | 826.1  | 917.7  | 1025.6 | 1025.6 | 1019.8 | 1054.6 | 1046.5 |
| 72.5° | 10936.2 | 3450.5 | 708.9  | 714.7  | 768.1  | 847.0  | 952.5  | 960.7  | 951.4  | 968.8  | 961.8  |
| 75°   | 5854.4  | 1974.7 | 633.5  | 649.7  | 696.1  | 775.0  | 871.3  | 879.4  | 873.6  | 872.5  | 876.0  |
| 77.5° | 1945.7  | 965.3  | 554.6  | 580.1  | 620.7  | 700.8  | 786.6  | 799.4  | 785.5  | 783.1  | 782.0  |
| 80°   | 866.7   | 606.8  | 467.6  | 501.2  | 537.2  | 616.1  | 697.3  | 707.7  | 692.6  | 713.5  | 686.8  |
| 82.5° | 556.9   | 399.1  | 374.7  | 411.9  | 446.7  | 531.4  | 608.0  | 610.3  | 596.4  | 692.6  | 590.5  |
| 85°   | 270.3   | 247.1  | 281.9  | 315.6  | 345.7  | 417.7  | 503.5  | 504.7  | 469.9  | 428.1  | 413.0  |
| 87.5° | 134.6   | 143.9  | 188.0  | 218.1  | 233.2  | 286.6  | 366.6  | 359.7  | 344.6  | 313.3  | 288.9  |
| 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)