

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: P299957

Luminaire Tested: **GLNA-AF-04-LED-E1-5WQ-7050-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299957  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24143)  
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-E1-5WQ-7050-600  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(4) 70 CRI, 5000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV  
w/Spill Control OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16602.8 lumens  
Efficiency: N/A  
Efficacy: 128.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B4 - U0 - G2

Input Watts (W): 129  
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

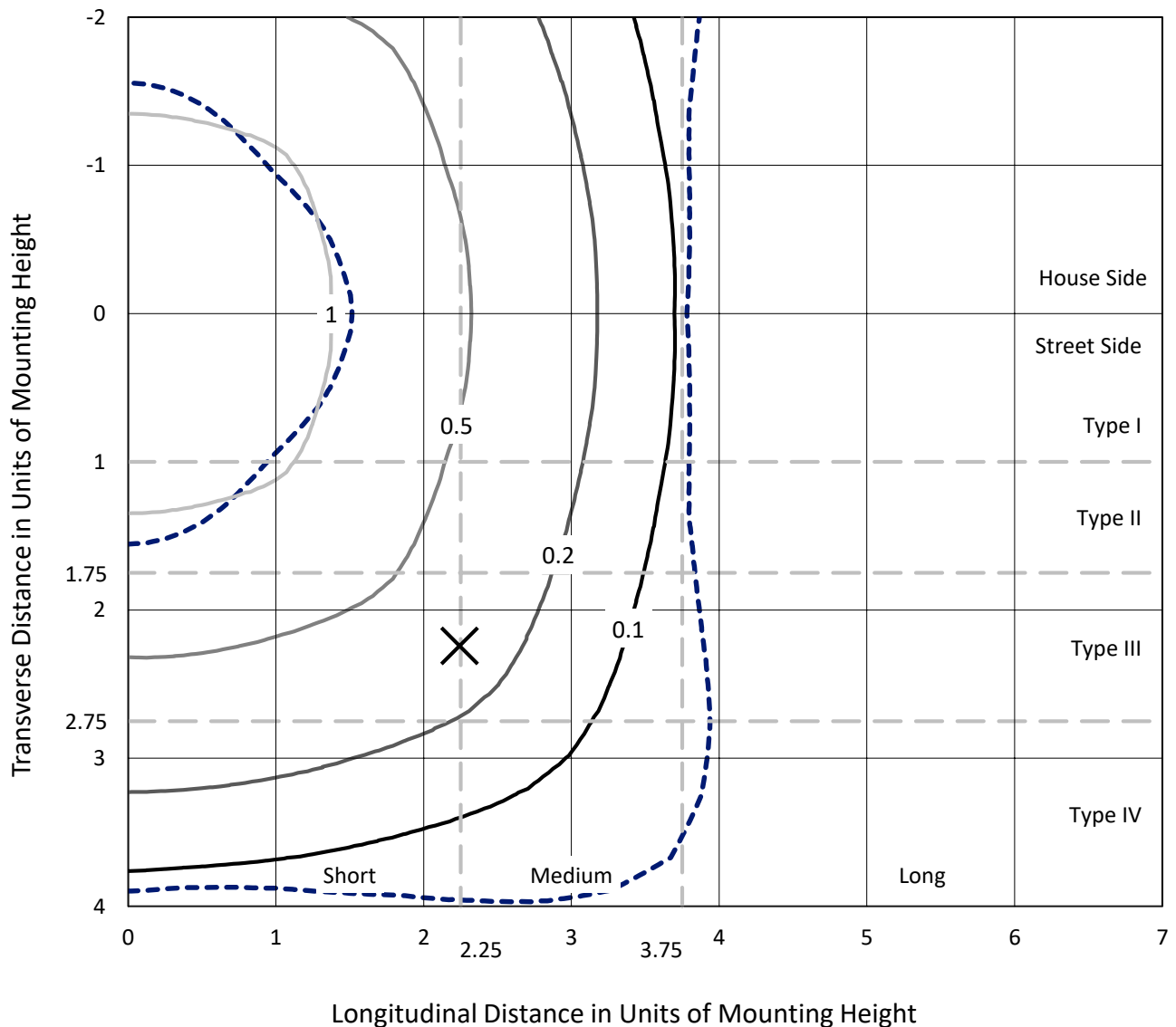


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

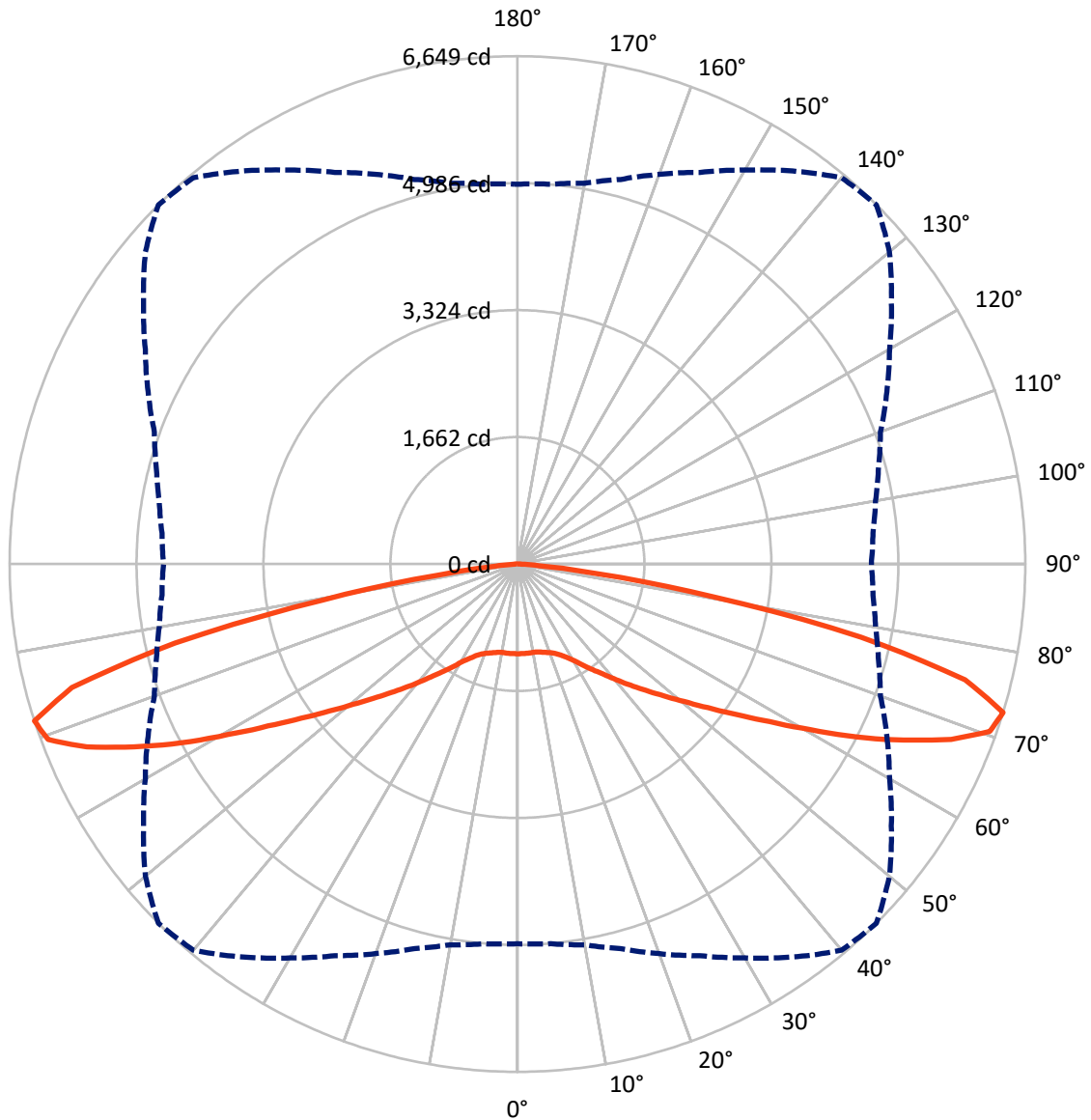


Based on 25 foot mounting height. Maximum calculated value = 1.9 fc  
 Type V - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 8301.4   | 0.0    | 8301.4  |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Street Side</b> | Lumens    | 8301.4   | 0.0    | 8301.4  |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Total</b>       | Lumens    | 16602.8  | 0.0    | 16602.8 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 112.3   | 0.7       |
| 10°-20°   | 341.0   | 2.1       |
| 20°-30°   | 623.1   | 3.8       |
| 30°-40°   | 1074.3  | 6.5       |
| 40°-50°   | 1836.6  | 11.1      |
| 50°-60°   | 2976.8  | 17.9      |
| 60°-70°   | 4938.5  | 29.7      |
| 70°-80°   | 4349.6  | 26.2      |
| 80°-90°   | 350.7   | 2.1       |
| 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°    | 16602.8 | 100.0     |
| 0°-180°   | 16602.8 | 100.0     |



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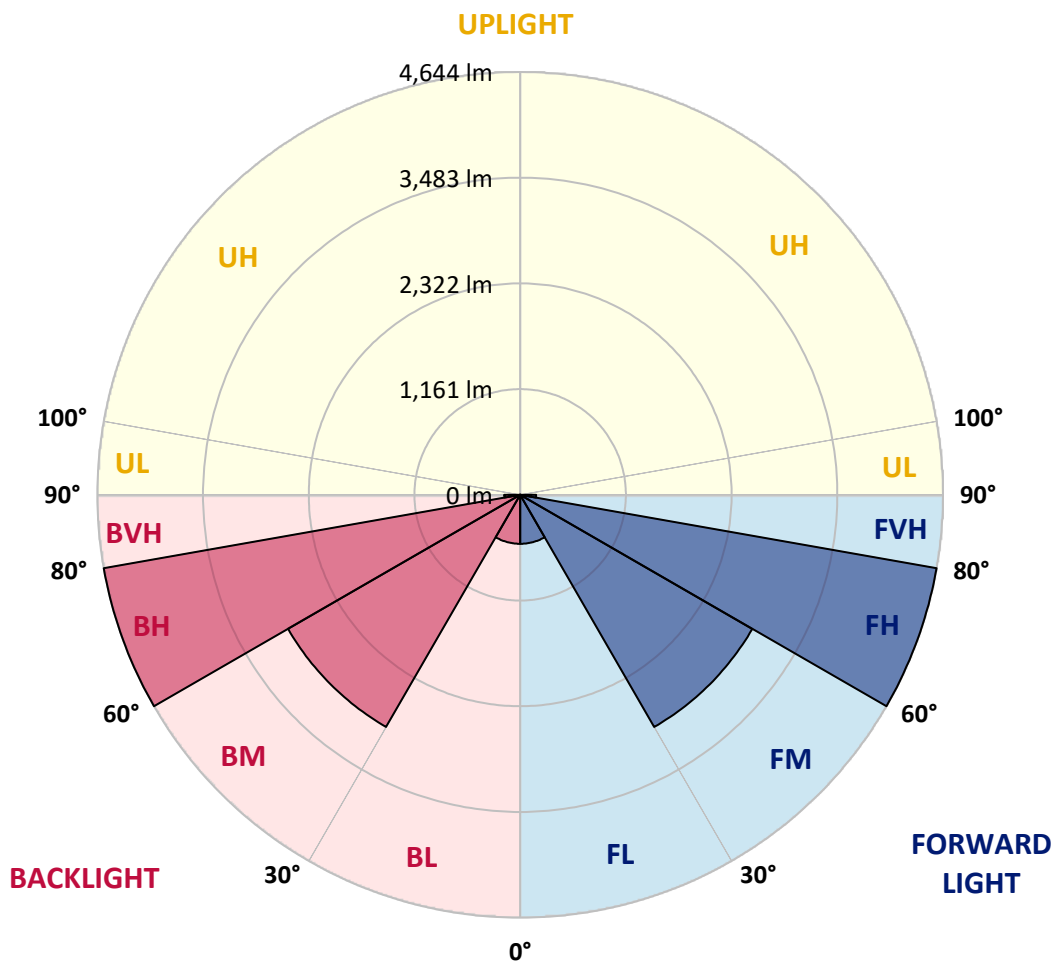
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 538.2  | 3.2       |                         |      |         |
| FM (30°-60°)   | 2943.9 | 17.7      |                         |      |         |
| FH (60°-80°)   | 4644.0 | 28.0      |                         |      | G2/5000 |
| FVH (80°-90°)  | 175.3  | 1.1       |                         |      | G2/225  |
| BL (0°-30°)    | 538.2  | 3.2       | B2/1000                 |      |         |
| BM (30°-60°)   | 2943.9 | 17.7      | B3/5000                 |      |         |
| BH (60°-80°)   | 4644.0 | 28.0      | B4/5000                 |      | G2/5000 |
| BVH (80°-90°)  | 175.3  | 1.1       |                         |      | G2/225  |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B4-U0-G2**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 25°    | 30°    | 35°    | 40°    | 45°    | 50°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1175.7 | 1175.7 | 1175.7 | 1175.7 | 1175.7 | 1175.7 | 1175.7 | 1175.7 | 1175.7 | 1175.7 | 1175.7 |
| 2.5°  | 1175.7 | 1176.5 | 1177.3 | 1176.5 | 1176.5 | 1175.7 | 1175.0 | 1175.7 | 1175.0 | 1173.5 | 1174.2 |
| 5°    | 1179.5 | 1181.1 | 1181.1 | 1179.5 | 1180.3 | 1179.5 | 1178.0 | 1178.8 | 1177.3 | 1175.0 | 1175.0 |
| 7.5°  | 1184.1 | 1184.9 | 1184.9 | 1183.4 | 1184.1 | 1182.6 | 1181.1 | 1180.3 | 1178.8 | 1175.7 | 1173.5 |
| 10°   | 1191.0 | 1191.7 | 1191.0 | 1189.4 | 1189.4 | 1187.2 | 1183.4 | 1181.8 | 1178.8 | 1174.2 | 1171.9 |
| 12.5° | 1198.6 | 1199.3 | 1198.6 | 1197.1 | 1196.3 | 1192.5 | 1189.4 | 1187.2 | 1184.9 | 1181.1 | 1177.3 |
| 15°   | 1209.2 | 1210.8 | 1209.2 | 1206.2 | 1203.9 | 1200.9 | 1199.3 | 1200.1 | 1200.9 | 1197.8 | 1194.0 |
| 17.5° | 1229.0 | 1229.8 | 1227.5 | 1220.7 | 1217.6 | 1214.6 | 1214.6 | 1216.1 | 1218.4 | 1216.9 | 1213.1 |
| 20°   | 1265.6 | 1263.3 | 1258.0 | 1249.6 | 1245.8 | 1240.5 | 1239.7 | 1240.5 | 1240.5 | 1239.7 | 1236.7 |
| 22.5° | 1311.3 | 1309.8 | 1302.9 | 1292.2 | 1286.9 | 1283.9 | 1279.3 | 1275.5 | 1274.7 | 1272.4 | 1269.4 |
| 25°   | 1366.1 | 1365.3 | 1357.0 | 1347.8 | 1344.0 | 1340.2 | 1336.4 | 1331.1 | 1326.5 | 1321.2 | 1318.1 |
| 27.5° | 1436.2 | 1433.1 | 1420.9 | 1416.4 | 1411.0 | 1408.8 | 1403.4 | 1397.3 | 1393.5 | 1386.7 | 1382.9 |
| 30°   | 1513.1 | 1513.1 | 1503.2 | 1501.7 | 1501.7 | 1496.3 | 1490.2 | 1479.6 | 1472.7 | 1465.9 | 1463.6 |
| 32.5° | 1590.0 | 1590.8 | 1580.9 | 1583.9 | 1586.2 | 1590.0 | 1591.5 | 1587.7 | 1583.1 | 1582.4 | 1577.8 |
| 35°   | 1701.2 | 1698.1 | 1688.2 | 1690.5 | 1689.7 | 1689.0 | 1689.0 | 1697.4 | 1698.9 | 1700.4 | 1691.3 |
| 37.5° | 1839.0 | 1839.0 | 1829.1 | 1829.1 | 1824.5 | 1820.0 | 1813.9 | 1819.2 | 1827.6 | 1829.9 | 1823.8 |
| 40°   | 1996.6 | 2002.0 | 1989.8 | 1989.0 | 1990.5 | 1976.1 | 1969.2 | 1977.6 | 1982.9 | 1992.1 | 1985.2 |
| 42.5° | 2182.4 | 2178.6 | 2166.4 | 2164.9 | 2156.5 | 2152.0 | 2145.9 | 2152.7 | 2161.1 | 2167.2 | 2169.5 |
| 45°   | 2360.6 | 2357.6 | 2343.9 | 2343.9 | 2335.5 | 2331.7 | 2334.7 | 2346.1 | 2350.0 | 2358.3 | 2366.7 |
| 47.5° | 2536.5 | 2532.7 | 2523.6 | 2527.4 | 2528.1 | 2535.0 | 2544.9 | 2555.6 | 2566.2 | 2577.6 | 2581.4 |
| 50°   | 2716.2 | 2717.0 | 2707.1 | 2716.2 | 2727.7 | 2746.7 | 2773.3 | 2790.9 | 2812.9 | 2827.4 | 2832.0 |
| 52.5° | 2880.0 | 2883.0 | 2893.7 | 2915.0 | 2937.8 | 2975.1 | 3020.8 | 3063.5 | 3100.0 | 3124.4 | 3122.9 |
| 55°   | 3076.4 | 3081.0 | 3106.9 | 3143.4 | 3180.7 | 3237.1 | 3304.9 | 3380.2 | 3441.2 | 3476.2 | 3454.1 |
| 57.5° | 3327.7 | 3337.6 | 3366.5 | 3416.0 | 3471.6 | 3544.7 | 3637.6 | 3751.1 | 3845.5 | 3892.7 | 3856.9 |
| 60°   | 3672.7 | 3678.8 | 3713.8 | 3768.6 | 3835.6 | 3926.2 | 4050.4 | 4202.7 | 4335.9 | 4398.4 | 4357.2 |
| 62.5° | 4127.3 | 4138.7 | 4166.9 | 4222.5 | 4291.0 | 4393.8 | 4545.3 | 4735.7 | 4901.7 | 4988.5 | 4895.6 |
| 65°   | 4670.2 | 4706.8 | 4730.4 | 4786.7 | 4850.7 | 4959.6 | 5118.0 | 5322.0 | 5500.2 | 5557.3 | 5450.0 |
| 67.5° | 5207.8 | 5239.8 | 5280.9 | 5345.7 | 5410.4 | 5533.0 | 5679.9 | 5877.9 | 6073.6 | 6125.4 | 5958.7 |
| 70°   | 5443.1 | 5461.4 | 5525.4 | 5613.7 | 5737.8 | 5882.5 | 6052.3 | 6274.7 | 6516.8 | 6559.5 | 6347.8 |
| 72.5° | 4971.8 | 4990.0 | 5061.6 | 5211.6 | 5427.9 | 5657.9 | 5954.1 | 6280.8 | 6600.6 | 6648.6 | 6356.9 |
| 75°   | 3760.2 | 3730.5 | 3836.4 | 4035.1 | 4326.8 | 4647.4 | 5061.6 | 5529.9 | 5992.2 | 6052.3 | 5704.3 |
| 77.5° | 1943.3 | 1939.5 | 2019.5 | 2266.2 | 2614.2 | 2978.9 | 3435.1 | 3964.3 | 4416.6 | 4599.4 | 4316.1 |
| 80°   | 547.5  | 553.6  | 591.7  | 714.3  | 917.6  | 1181.1 | 1537.4 | 2033.2 | 2403.3 | 2592.1 | 2433.7 |
| 82.5° | 214.7  | 231.5  | 246.0  | 268.8  | 295.5  | 334.3  | 446.2  | 664.0  | 890.9  | 1064.6 | 871.9  |
| 85°   | 76.9   | 82.2   | 116.5  | 137.8  | 140.1  | 147.7  | 168.3  | 196.5  | 236.8  | 282.5  | 232.3  |
| 87.5° | 28.9   | 32.0   | 37.3   | 61.7   | 60.9   | 55.6   | 67.8   | 70.8   | 53.3   | 48.7   | 60.2   |
| 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):**

|       | 55°    | 60°    | 65°    | 70°    | 75°    | 80°    | 85°    | 90°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1175.7 | 1175.7 | 1175.7 | 1175.7 | 1175.7 | 1175.7 | 1175.7 | 1175.7 |
| 2.5°  | 1172.7 | 1173.5 | 1173.5 | 1174.2 | 1175.0 | 1175.0 | 1176.5 | 1176.5 |
| 5°    | 1173.5 | 1173.5 | 1171.9 | 1172.7 | 1171.9 | 1171.9 | 1172.7 | 1172.7 |
| 7.5°  | 1171.9 | 1171.2 | 1169.6 | 1168.9 | 1167.4 | 1167.4 | 1167.4 | 1167.4 |
| 10°   | 1169.6 | 1168.9 | 1167.4 | 1166.6 | 1165.8 | 1165.8 | 1165.8 | 1165.8 |
| 12.5° | 1175.7 | 1173.5 | 1171.9 | 1171.2 | 1171.2 | 1171.2 | 1171.2 | 1171.2 |
| 15°   | 1191.7 | 1186.4 | 1182.6 | 1182.6 | 1183.4 | 1184.9 | 1184.9 | 1186.4 |
| 17.5° | 1211.5 | 1205.4 | 1201.6 | 1198.6 | 1200.1 | 1202.4 | 1203.9 | 1205.4 |
| 20°   | 1235.1 | 1232.1 | 1226.8 | 1223.7 | 1223.7 | 1226.8 | 1228.3 | 1229.0 |
| 22.5° | 1267.9 | 1265.6 | 1263.3 | 1259.5 | 1259.5 | 1261.0 | 1264.1 | 1264.1 |
| 25°   | 1316.6 | 1315.1 | 1313.6 | 1310.5 | 1309.8 | 1309.8 | 1311.3 | 1312.8 |
| 27.5° | 1377.5 | 1378.3 | 1376.8 | 1376.0 | 1373.7 | 1373.0 | 1375.2 | 1374.5 |
| 30°   | 1459.0 | 1462.8 | 1466.6 | 1463.6 | 1459.8 | 1457.5 | 1455.2 | 1452.2 |
| 32.5° | 1569.4 | 1564.9 | 1561.8 | 1556.5 | 1549.6 | 1543.5 | 1539.0 | 1533.6 |
| 35°   | 1673.8 | 1666.1 | 1663.1 | 1667.7 | 1666.9 | 1663.1 | 1657.8 | 1653.2 |
| 37.5° | 1801.7 | 1800.2 | 1801.7 | 1810.1 | 1808.5 | 1812.3 | 1801.7 | 1800.9 |
| 40°   | 1963.1 | 1964.6 | 1975.3 | 1985.2 | 1990.5 | 1995.9 | 1989.8 | 1983.7 |
| 42.5° | 2150.4 | 2149.7 | 2153.5 | 2167.2 | 2176.3 | 2182.4 | 2169.5 | 2168.0 |
| 45°   | 2348.4 | 2343.1 | 2346.1 | 2357.6 | 2366.7 | 2373.6 | 2359.1 | 2359.1 |
| 47.5° | 2566.2 | 2557.1 | 2547.2 | 2560.1 | 2565.5 | 2570.0 | 2558.6 | 2554.8 |
| 50°   | 2809.1 | 2790.1 | 2768.8 | 2774.1 | 2774.1 | 2772.6 | 2758.1 | 2757.4 |
| 52.5° | 3087.8 | 3052.8 | 3014.0 | 2999.5 | 2991.1 | 2982.0 | 2956.9 | 2944.7 |
| 55°   | 3408.4 | 3355.9 | 3295.0 | 3257.7 | 3237.9 | 3212.7 | 3170.8 | 3159.4 |
| 57.5° | 3783.1 | 3700.8 | 3595.8 | 3550.1 | 3505.9 | 3464.8 | 3418.3 | 3405.4 |
| 60°   | 4227.0 | 4105.9 | 3966.6 | 3882.1 | 3834.1 | 3794.5 | 3746.5 | 3744.2 |
| 62.5° | 4722.0 | 4530.9 | 4373.2 | 4297.1 | 4262.1 | 4227.0 | 4181.3 | 4187.4 |
| 65°   | 5225.3 | 5025.8 | 4878.1 | 4816.4 | 4783.7 | 4754.7 | 4709.0 | 4715.9 |
| 67.5° | 5721.8 | 5538.3 | 5376.1 | 5312.9 | 5276.4 | 5239.8 | 5198.7 | 5205.5 |
| 70°   | 6078.2 | 5850.5 | 5667.8 | 5527.6 | 5440.1 | 5341.1 | 5277.1 | 5261.1 |
| 72.5° | 5976.2 | 5625.1 | 5335.0 | 5057.0 | 4894.1 | 4761.6 | 4671.7 | 4632.9 |
| 75°   | 5172.0 | 4692.3 | 4319.2 | 3978.0 | 3786.1 | 3630.0 | 3516.6 | 3445.7 |
| 77.5° | 3841.0 | 3301.8 | 2860.9 | 2468.0 | 2157.3 | 1948.7 | 1801.7 | 1706.5 |
| 80°   | 2102.5 | 1599.1 | 1168.9 | 821.6  | 603.9  | 501.8  | 443.2  | 415.0  |
| 82.5° | 654.9  | 422.6  | 311.4  | 268.8  | 249.8  | 239.1  | 221.6  | 193.4  |
| 85°   | 208.6  | 182.8  | 169.8  | 162.2  | 154.6  | 134.8  | 92.9   | 84.5   |
| 87.5° | 80.7   | 83.0   | 82.2   | 77.7   | 79.2   | 57.1   | 45.7   | 40.4   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)