

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: P454101

Luminaire Tested: **GALN-SA5A-830-U-T4FT-HSS**

Issue Date: 1/4/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P454101  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-29)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/4/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GALN-SA5A-830-U-T4FT-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(5) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV  
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13105 lumens  
Efficiency: N/A  
Efficacy: 85.1 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G3

Input Watts (W): 154  
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: 24 FT

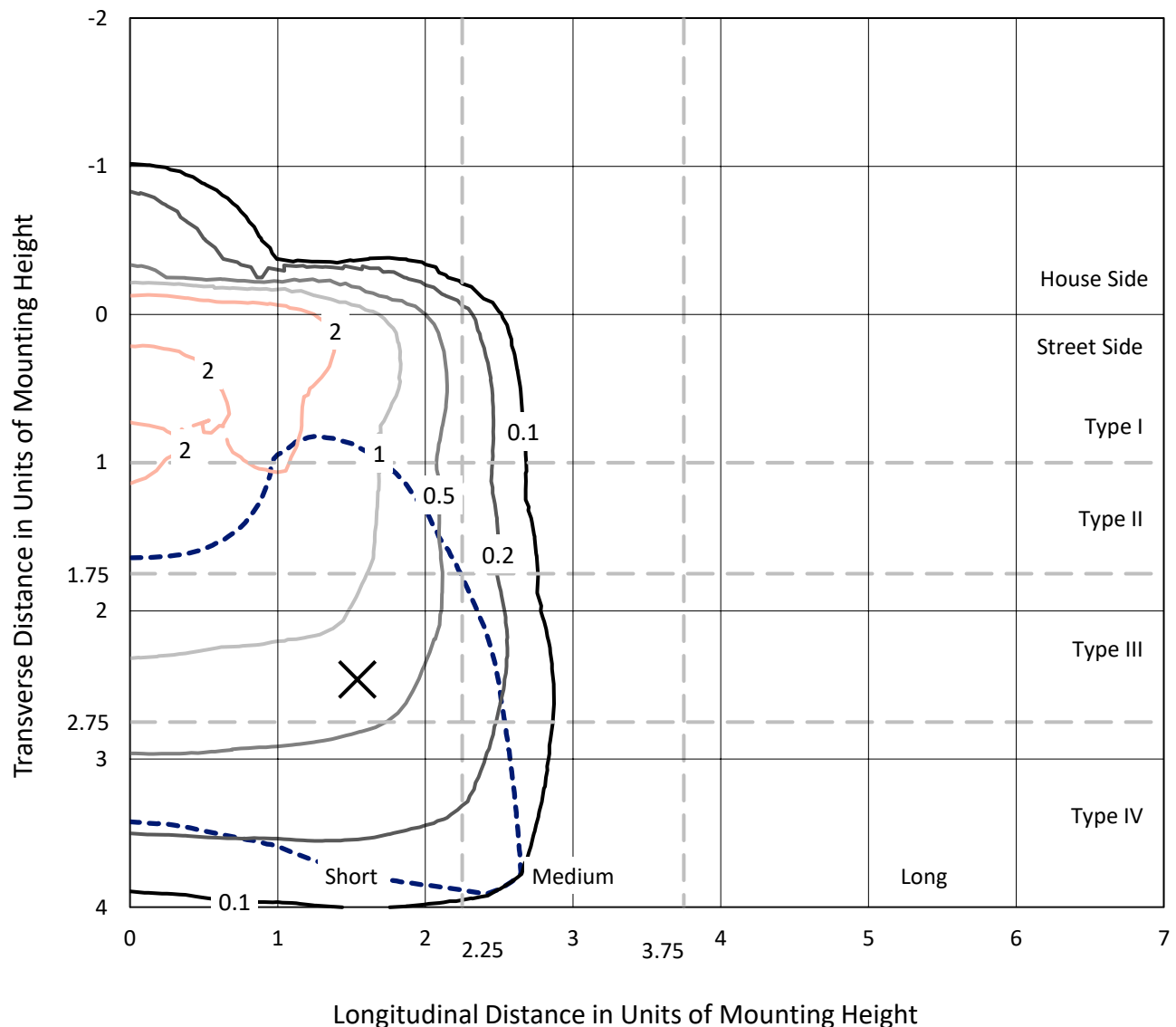


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## Iso-Footcandle Lines of Horizontal Illumination

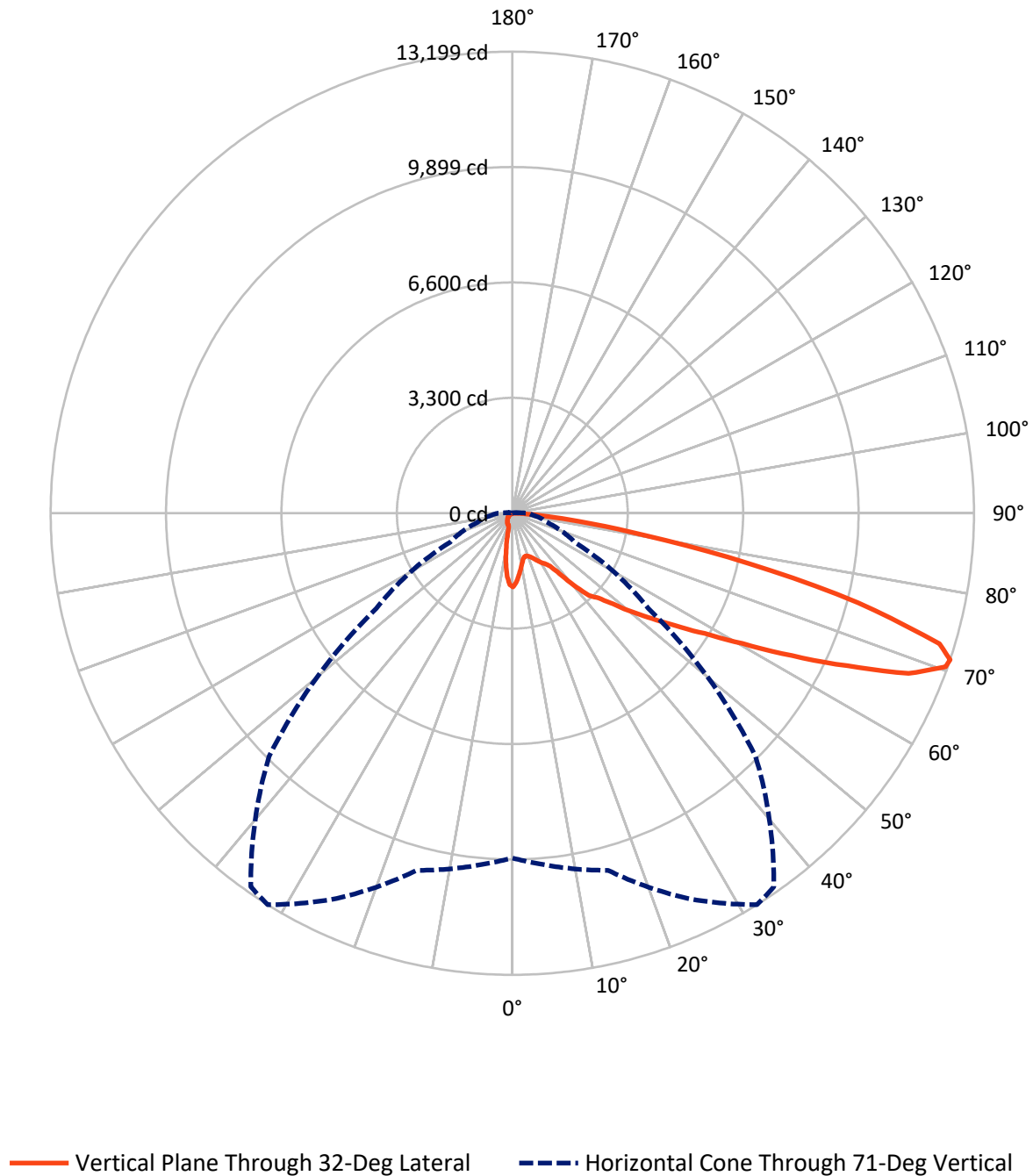
× Max cd  
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 fc  
Type IV - Short - N/A

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## Luminous Intensity Polar Plot



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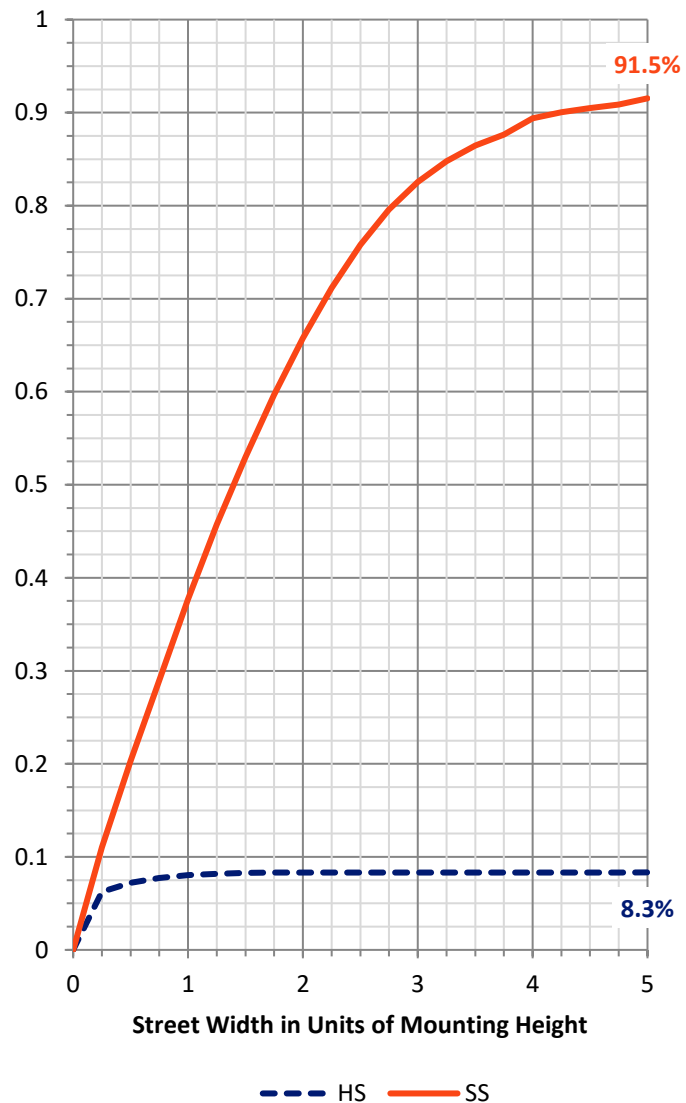
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 1097.7   | 0.0    | 1097.7  |
|                    | % Fixture | 8.4      | 0.0    | 8.4     |
| <b>Street Side</b> | Lumens    | 12007.3  | 0.0    | 12007.3 |
|                    | % Fixture | 91.6     | 0.0    | 91.6    |
| <b>Total</b>       | Lumens    | 13105.0  | 0.0    | 13105.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 171.4   | 1.3       |
| 10°-20°   | 371.9   | 2.8       |
| 20°-30°   | 578.6   | 4.4       |
| 30°-40°   | 963.9   | 7.4       |
| 40°-50°   | 1793.1  | 13.7      |
| 50°-60°   | 2878.9  | 22.0      |
| 60°-70°   | 3872.2  | 29.5      |
| 70°-80°   | 2297.4  | 17.5      |
| 80°-90°   | 177.6   | 1.4       |
| 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°    | 13105.0 | 100.0     |
| 0°-180°   | 13105.0 | 100.0     |

**Coefficient of Utilization**



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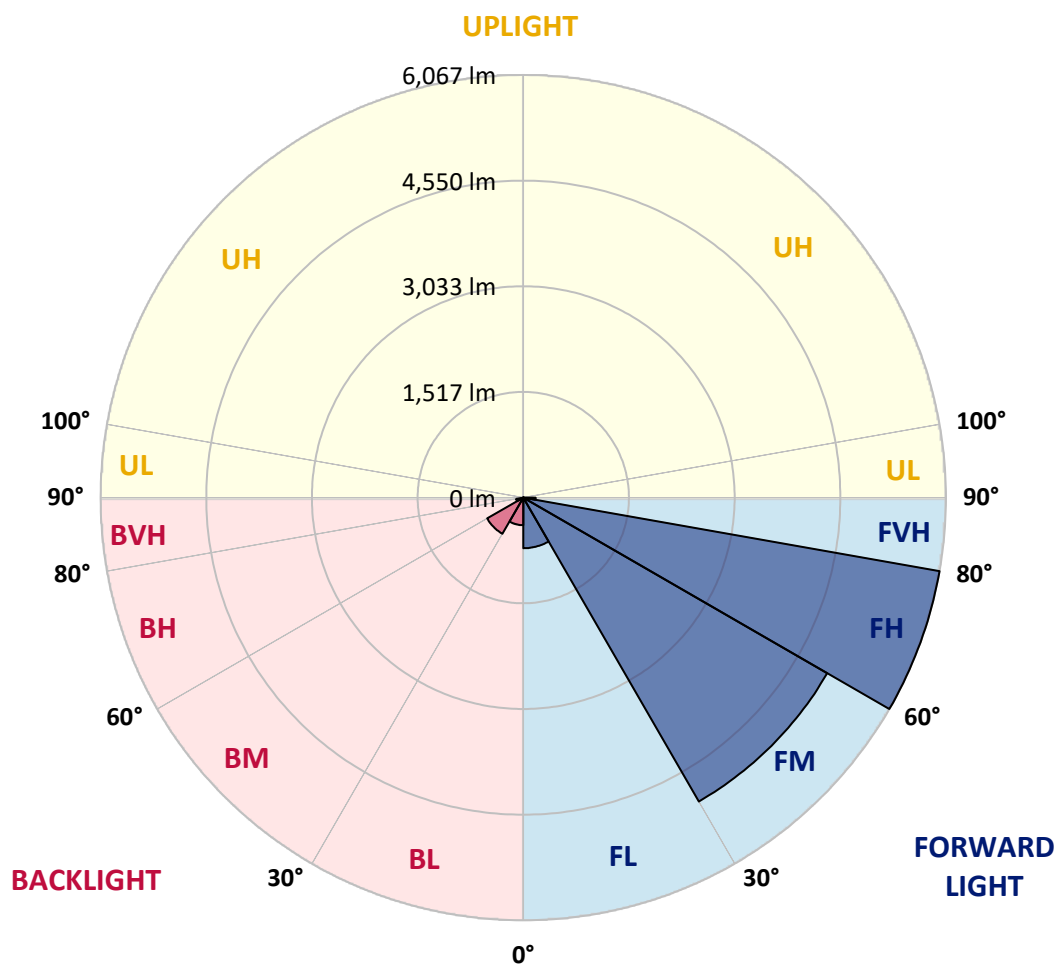
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 726.4  | 5.5       |                         |      |         |
| FM   | (30°-60°)   | 5037.1 | 38.4      |                         |      |         |
| FH   | (60°-80°)   | 6067.0 | 46.3      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 176.9  | 1.3       |                         |      | G2/225  |
| BL   | (0°-30°)    | 395.5  | 3.0       | B1/500                  |      |         |
| BM   | (30°-60°)   | 598.8  | 4.6       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 102.7  | 0.8       | B0/110                  |      | G0/110  |
| BVH  | (80°-90°)   | 0.7    | 0.0       |                         |      | G0/10   |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 32°     | 35°     | 45°     | 55°    | 65°    | 75°    | 85°    |
|-------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| 0°    | 2107.5  | 2107.5  | 2107.5  | 2107.5  | 2107.5  | 2107.5  | 2107.5  | 2107.5 | 2107.5 | 2107.5 | 2107.5 |
| 2.5°  | 1954.6  | 1974.7  | 1971.7  | 1978.7  | 1995.8  | 2002.9  | 2022.0  | 2043.1 | 2072.3 | 2092.4 | 2105.5 |
| 5°    | 1750.4  | 1765.5  | 1767.5  | 1802.7  | 1819.8  | 1838.9  | 1895.2  | 1956.6 | 2025.0 | 2079.3 | 2115.5 |
| 7.5°  | 1532.1  | 1540.1  | 1556.2  | 1602.5  | 1645.8  | 1664.9  | 1750.4  | 1857.0 | 1964.6 | 2066.2 | 2131.6 |
| 10°   | 1352.0  | 1361.1  | 1390.2  | 1439.5  | 1479.8  | 1504.9  | 1623.6  | 1757.4 | 1908.3 | 2059.2 | 2154.8 |
| 12.5° | 1249.4  | 1254.4  | 1265.5  | 1309.8  | 1361.1  | 1388.2  | 1516.0  | 1668.9 | 1863.0 | 2062.2 | 2194.0 |
| 15°   | 1242.4  | 1240.4  | 1227.3  | 1245.4  | 1291.7  | 1319.8  | 1444.6  | 1608.5 | 1822.8 | 2072.3 | 2240.3 |
| 17.5° | 1279.6  | 1274.6  | 1243.4  | 1243.4  | 1281.6  | 1304.7  | 1414.4  | 1576.3 | 1802.7 | 2095.4 | 2305.7 |
| 20°   | 1336.9  | 1328.9  | 1277.6  | 1273.5  | 1310.8  | 1334.9  | 1432.5  | 1578.4 | 1806.7 | 2138.7 | 2393.2 |
| 22.5° | 1409.4  | 1400.3  | 1322.8  | 1324.9  | 1365.1  | 1389.2  | 1484.8  | 1614.6 | 1831.9 | 2192.0 | 2486.7 |
| 25°   | 1503.9  | 1493.9  | 1402.3  | 1398.3  | 1440.5  | 1461.7  | 1562.3  | 1678.9 | 1867.1 | 2258.4 | 2609.5 |
| 27.5° | 1629.7  | 1608.5  | 1498.9  | 1492.8  | 1538.1  | 1565.3  | 1655.8  | 1765.5 | 1929.4 | 2349.9 | 2774.4 |
| 30°   | 1733.3  | 1710.1  | 1605.5  | 1589.4  | 1637.7  | 1658.8  | 1752.4  | 1882.2 | 2052.2 | 2509.9 | 3002.8 |
| 32.5° | 1869.1  | 1834.9  | 1712.1  | 1669.9  | 1721.2  | 1748.4  | 1892.2  | 2099.4 | 2234.2 | 2678.9 | 3274.4 |
| 35°   | 2174.9  | 2153.8  | 2003.9  | 1856.0  | 1853.0  | 1887.2  | 2098.4  | 2318.7 | 2421.3 | 2942.4 | 3644.6 |
| 37.5° | 2612.5  | 2597.4  | 2438.4  | 2240.3  | 2182.9  | 2166.8  | 2348.9  | 2560.2 | 2720.1 | 3304.6 | 4075.1 |
| 40°   | 3120.5  | 3085.3  | 2939.4  | 2771.4  | 2697.0  | 2649.7  | 2644.7  | 2919.3 | 3110.4 | 3796.5 | 4523.8 |
| 42.5° | 3484.6  | 3420.3  | 3243.2  | 3231.1  | 3215.1  | 3165.8  | 3022.9  | 3444.4 | 3614.4 | 4325.6 | 5003.7 |
| 45°   | 3866.9  | 3769.3  | 3505.8  | 3460.5  | 3454.5  | 3451.5  | 3594.3  | 4066.1 | 4163.7 | 4899.0 | 5496.6 |
| 47.5° | 4163.7  | 4086.2  | 3869.9  | 3849.8  | 3875.0  | 3943.4  | 4349.8  | 4726.0 | 4705.9 | 5410.1 | 5910.0 |
| 50°   | 4559.0  | 4500.7  | 4260.2  | 4298.5  | 4428.2  | 4539.9  | 5201.8  | 5445.3 | 5151.5 | 5812.4 | 6210.8 |
| 52.5° | 5025.8  | 4918.1  | 4694.8  | 4798.4  | 4997.6  | 5183.7  | 6106.2  | 6075.0 | 5464.4 | 6115.2 | 6435.1 |
| 55°   | 5430.2  | 5353.7  | 5277.3  | 5384.9  | 5682.7  | 5915.1  | 6923.0  | 6546.8 | 5691.7 | 6358.7 | 6533.7 |
| 57.5° | 6114.2  | 6096.1  | 6017.7  | 6127.3  | 6488.4  | 6729.9  | 7654.4  | 6913.0 | 5837.6 | 6485.4 | 6418.0 |
| 60°   | 7126.2  | 7097.1  | 6951.2  | 7091.0  | 7561.8  | 7941.1  | 8328.4  | 7241.9 | 5870.8 | 6436.1 | 6085.1 |
| 62.5° | 8343.4  | 8243.9  | 8119.1  | 8325.3  | 8971.2  | 9138.2  | 8963.1  | 7437.1 | 5747.1 | 6043.8 | 5282.3 |
| 65°   | 9480.2  | 9377.6  | 9380.6  | 9815.2  | 10518.3 | 10632.0 | 9703.5  | 7407.9 | 5384.9 | 5061.0 | 3896.1 |
| 67.5° | 10350.3 | 10333.2 | 10456.0 | 11304.0 | 12223.4 | 12145.0 | 10365.4 | 6971.3 | 4311.5 | 3280.4 | 2070.3 |
| 70°   | 10394.6 | 10427.8 | 10779.9 | 12211.4 | 13144.9 | 13020.2 | 10309.1 | 5666.6 | 2687.9 | 1508.9 | 815.8  |
| 71°   | 9859.4  | 10082.7 | 10569.6 | 12183.2 | 13199.2 | 13037.3 | 9834.3  | 4746.1 | 1971.7 | 1052.2 | 588.5  |
| 72.5° | 8401.8  | 8519.5  | 9571.7  | 11465.9 | 12769.7 | 12423.6 | 8630.1  | 3326.7 | 1262.5 | 643.8  | 338.0  |
| 75°   | 4627.4  | 4917.1  | 6410.0  | 8995.3  | 10213.5 | 9909.7  | 5624.3  | 1580.4 | 629.7  | 352.1  | 139.8  |
| 77.5° | 2203.1  | 2146.7  | 3127.5  | 5349.7  | 6925.0  | 6908.9  | 2833.8  | 702.2  | 367.2  | 238.4  | 70.4   |
| 80°   | 629.7   | 708.2   | 1197.1  | 2543.1  | 3844.8  | 3887.0  | 1088.5  | 339.0  | 254.5  | 186.1  | 36.2   |
| 82.5° | 190.1   | 194.2   | 439.6   | 1124.7  | 1912.3  | 1802.7  | 408.4   | 173.0  | 183.1  | 147.9  | 21.1   |
| 85°   | 33.2    | 41.2    | 129.8   | 396.3   | 729.3   | 553.3   | 102.6   | 82.5   | 120.7  | 97.6   | 12.1   |
| 87.5° | 2.0     | 3.0     | 43.3    | 45.3    | 64.4    | 37.2    | 18.1    | 12.1   | 26.2   | 26.2   | 7.0    |
| 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°    | 2107.5 | 2107.5 | 2107.5 | 2107.5 | 2107.5 | 2107.5 | 2107.5 | 2107.5 | 2107.5 | 2107.5 | 2107.5 |
| 2.5°  | 2114.5 | 2120.6 | 2116.5 | 2107.5 | 2092.4 | 2074.3 | 2050.1 | 2030.0 | 2012.9 | 2003.9 | 2014.9 |
| 5°    | 2127.6 | 2135.7 | 2115.5 | 2070.3 | 2001.9 | 1927.4 | 1842.9 | 1777.5 | 1726.2 | 1710.1 | 1704.1 |
| 7.5°  | 2147.7 | 2152.8 | 2098.4 | 1997.8 | 1853.0 | 1676.9 | 1523.0 | 1393.3 | 1292.7 | 1262.5 | 1218.2 |
| 10°   | 2173.9 | 2170.9 | 2068.3 | 1881.1 | 1626.6 | 1362.1 | 1123.7 | 946.6  | 812.8  | 764.5  | 760.5  |
| 12.5° | 2214.1 | 2198.0 | 2030.0 | 1722.2 | 1357.0 | 1011.0 | 716.2  | 560.3  | 475.8  | 447.7  | 441.6  |
| 15°   | 2264.4 | 2226.2 | 1969.7 | 1536.1 | 1039.2 | 652.9  | 441.6  | 394.3  | 383.3  | 381.3  | 379.2  |
| 17.5° | 2323.8 | 2263.4 | 1890.2 | 1307.7 | 730.3  | 423.5  | 369.2  | 368.2  | 369.2  | 367.2  | 366.2  |
| 20°   | 2404.2 | 2302.6 | 1795.6 | 1037.1 | 482.9  | 357.1  | 352.1  | 352.1  | 353.1  | 352.1  | 352.1  |
| 22.5° | 2489.8 | 2348.9 | 1678.9 | 791.7  | 364.2  | 339.0  | 338.0  | 340.0  | 342.0  | 341.0  | 341.0  |
| 25°   | 2595.4 | 2409.3 | 1525.0 | 542.2  | 325.9  | 323.9  | 324.9  | 328.9  | 333.0  | 334.0  | 333.0  |
| 27.5° | 2748.3 | 2483.7 | 1360.1 | 373.2  | 298.8  | 300.8  | 310.8  | 320.9  | 326.9  | 327.9  | 327.9  |
| 30°   | 2920.3 | 2566.2 | 1144.8 | 302.8  | 276.6  | 276.6  | 288.7  | 307.8  | 320.9  | 322.9  | 323.9  |
| 32.5° | 3141.6 | 2661.8 | 906.4  | 272.6  | 255.5  | 253.5  | 264.6  | 287.7  | 311.8  | 318.9  | 318.9  |
| 35°   | 3415.2 | 2774.4 | 674.0  | 253.5  | 240.4  | 235.4  | 241.4  | 260.5  | 291.7  | 311.8  | 313.9  |
| 37.5° | 3736.1 | 2881.1 | 492.9  | 236.4  | 226.3  | 219.3  | 223.3  | 238.4  | 263.6  | 293.7  | 301.8  |
| 40°   | 4032.9 | 2975.6 | 368.2  | 222.3  | 212.3  | 207.2  | 210.2  | 217.3  | 238.4  | 266.6  | 271.6  |
| 42.5° | 4356.8 | 3049.1 | 292.7  | 207.2  | 198.2  | 196.2  | 196.2  | 199.2  | 213.3  | 229.4  | 230.4  |
| 45°   | 4679.7 | 3075.2 | 245.5  | 189.1  | 183.1  | 185.1  | 184.1  | 182.1  | 188.1  | 186.1  | 186.1  |
| 47.5° | 4910.1 | 3044.0 | 203.2  | 172.0  | 172.0  | 175.0  | 170.0  | 163.0  | 159.9  | 147.9  | 148.9  |
| 50°   | 5068.0 | 2930.4 | 167.0  | 151.9  | 159.9  | 164.0  | 153.9  | 142.8  | 131.8  | 118.7  | 115.7  |
| 52.5° | 5133.4 | 2728.2 | 136.8  | 125.7  | 141.8  | 146.9  | 134.8  | 121.7  | 104.6  | 93.6   | 90.5   |
| 55°   | 5091.2 | 2478.7 | 113.7  | 102.6  | 119.7  | 125.7  | 113.7  | 98.6   | 79.5   | 67.4   | 65.4   |
| 57.5° | 4905.1 | 2180.9 | 96.6   | 81.5   | 95.6   | 99.6   | 91.5   | 75.4   | 56.3   | 44.3   | 44.3   |
| 60°   | 4583.2 | 1873.1 | 78.5   | 64.4   | 71.4   | 77.5   | 69.4   | 54.3   | 38.2   | 27.2   | 25.1   |
| 62.5° | 3930.3 | 1521.0 | 63.4   | 50.3   | 50.3   | 55.3   | 48.3   | 39.2   | 24.1   | 14.1   | 13.1   |
| 65°   | 2837.8 | 1043.2 | 50.3   | 37.2   | 36.2   | 36.2   | 30.2   | 26.2   | 14.1   | 6.0    | 4.0    |
| 67.5° | 1542.1 | 588.5  | 40.2   | 28.2   | 25.1   | 24.1   | 19.1   | 15.1   | 6.0    | 1.0    | 0.0    |
| 70°   | 606.6  | 226.3  | 31.2   | 19.1   | 16.1   | 15.1   | 10.1   | 7.0    | 4.0    | 0.0    | 0.0    |
| 71°   | 411.4  | 155.9  | 27.2   | 16.1   | 13.1   | 11.1   | 8.0    | 6.0    | 3.0    | 0.0    | 0.0    |
| 72.5° | 235.4  | 96.6   | 21.1   | 12.1   | 10.1   | 8.0    | 6.0    | 4.0    | 3.0    | 0.0    | 0.0    |
| 75°   | 102.6  | 49.3   | 13.1   | 9.1    | 7.0    | 5.0    | 4.0    | 3.0    | 1.0    | 0.0    | 0.0    |
| 77.5° | 52.3   | 27.2   | 9.1    | 7.0    | 4.0    | 3.0    | 2.0    | 1.0    | 0.0    | 0.0    | 0.0    |
| 80°   | 29.2   | 14.1   | 6.0    | 4.0    | 3.0    | 2.0    | 1.0    | 1.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 16.1   | 8.0    | 3.0    | 2.0    | 1.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 10.1   | 5.0    | 1.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 5.0    | 2.0    | 0.0    | 0.0    | 0.0    | 0.0    | 1.0    | 1.0    | 0.0    | 0.0    | 0.0    |
| 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)