

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: P299823

Luminaire Tested: **GLNA-AF-02-LED-E1-SL3-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299823  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24288)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GLNA-AF-02-LED-E1-SL3-8030  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(2) 80 CRI, 3000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V  
Square Medium OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9904.8 lumens  
Efficiency: N/A  
Efficacy: 87.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 113  
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

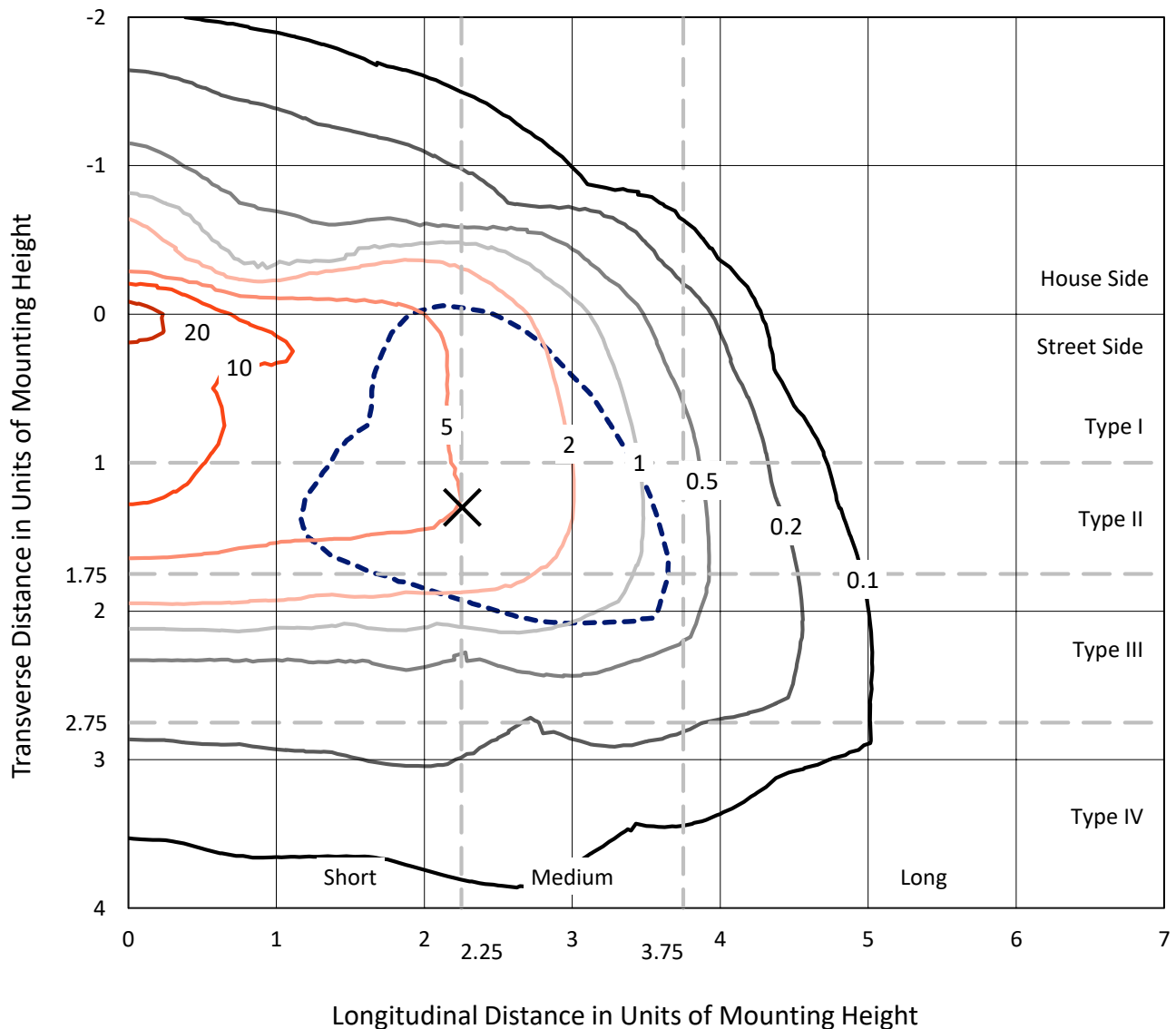


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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
- - - 1/2 Max cd

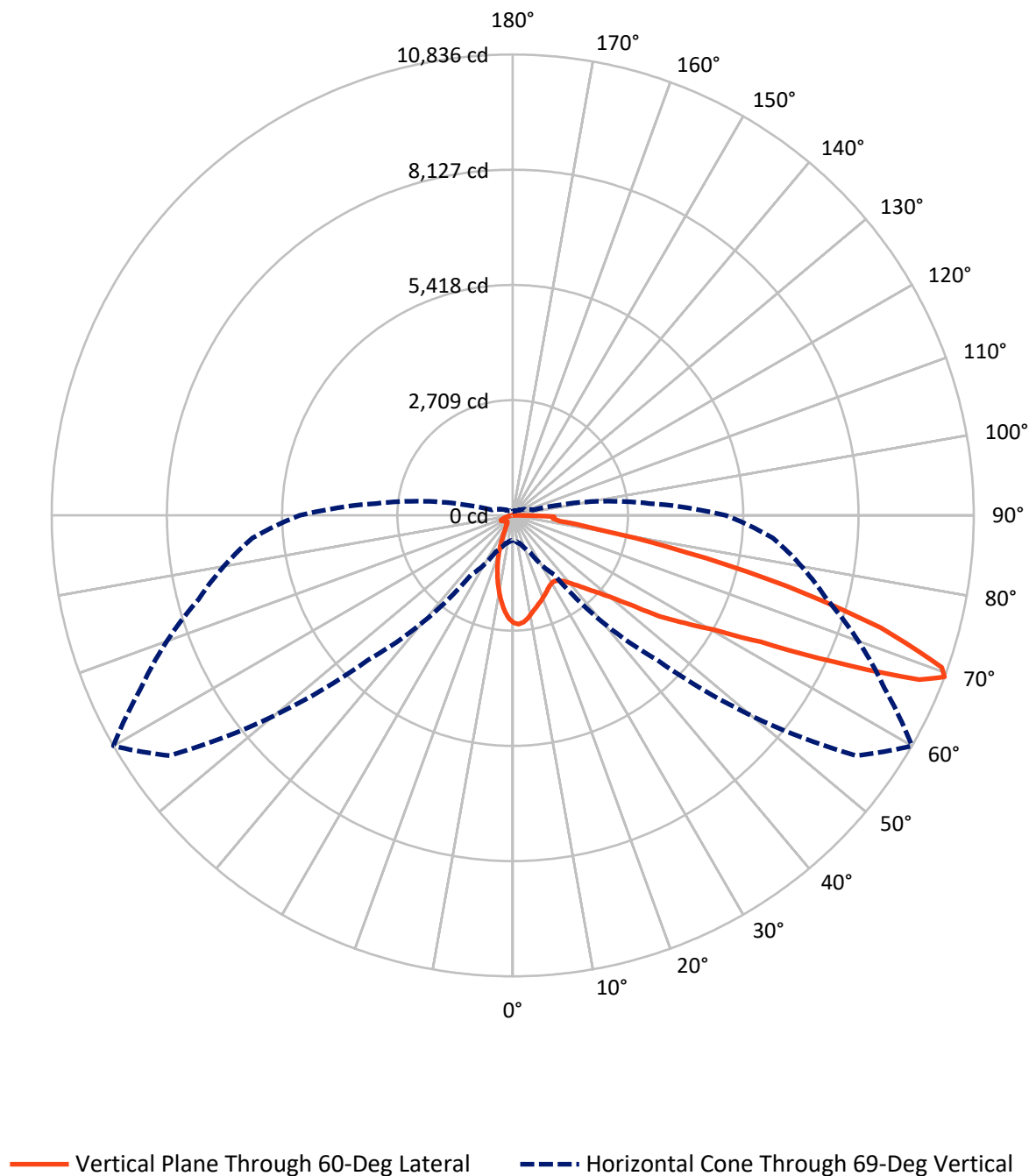


Based on 10 foot mounting height. Maximum calculated value = 25.2 fc  
Type III - Medium - Non-Cutoff

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## Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1409.1   | 0.0    | 1409.1 |
|                    | % Fixture | 14.2     | 0.0    | 14.2   |
| <b>Street Side</b> | Lumens    | 8495.7   | 0.0    | 8495.7 |
|                    | % Fixture | 85.8     | 0.0    | 85.8   |
| <b>Total</b>       | Lumens    | 9904.8   | 0.0    | 9904.8 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 213.4  | 2.2       |
| 10°-20°   | 454.7  | 4.6       |
| 20°-30°   | 579.3  | 5.8       |
| 30°-40°   | 796.4  | 8.0       |
| 40°-50°   | 1292.3 | 13.0      |
| 50°-60°   | 2072.5 | 20.9      |
| 60°-70°   | 2758.4 | 27.8      |
| 70°-80°   | 1489.3 | 15.0      |
| 80°-90°   | 248.5  | 2.5       |
| 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°    | 9904.8 | 100.0     |
| 0°-180°   | 9904.8 | 100.0     |

**Coefficient of Utilization**



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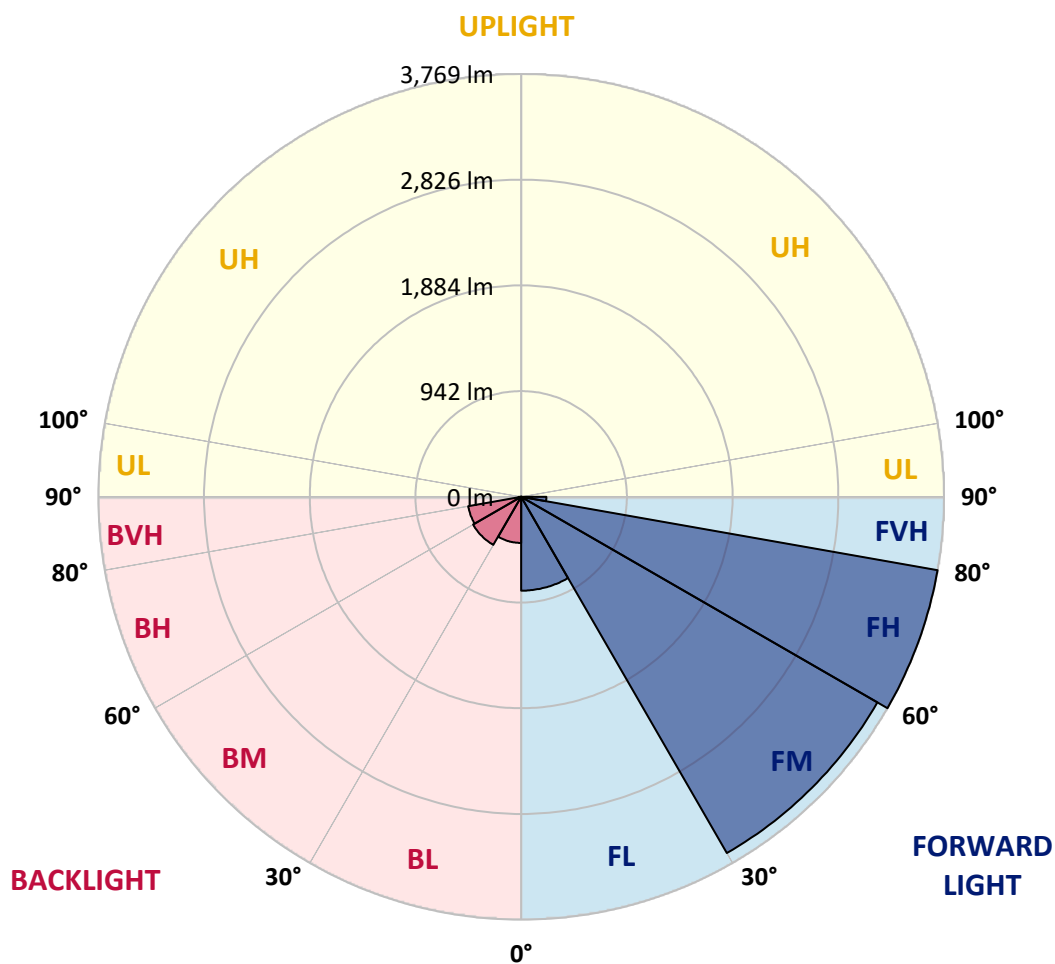
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 836.3  | 8.4       |                         |      |         |
| FM   | (30°-60°)   | 3666.2 | 37.0      |                         |      |         |
| FH   | (60°-80°)   | 3768.6 | 38.0      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 224.6  | 2.3       |                         |      | G2/225  |
| BL   | (0°-30°)    | 411.1  | 4.2       | B1/500                  |      |         |
| BM   | (30°-60°)   | 495.1  | 5.0       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 479.1  | 4.8       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 23.9   | 0.2       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G2**

Type III Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 60°     | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|
| 0°    | 2523.9 | 2523.9 | 2523.9 | 2523.9 | 2523.9 | 2523.9 | 2523.9 | 2523.9  | 2523.9 | 2523.9 | 2523.9 |
| 2.5°  | 2575.6 | 2581.3 | 2578.9 | 2577.5 | 2581.8 | 2575.1 | 2561.2 | 2556.9  | 2550.2 | 2534.4 | 2507.6 |
| 5°    | 2478.9 | 2496.1 | 2495.2 | 2508.1 | 2529.6 | 2535.4 | 2529.2 | 2530.1  | 2517.7 | 2498.1 | 2453.6 |
| 7.5°  | 2311.9 | 2319.1 | 2322.9 | 2351.2 | 2390.4 | 2422.0 | 2448.8 | 2457.4  | 2451.7 | 2434.9 | 2377.5 |
| 10°   | 2139.7 | 2145.4 | 2154.5 | 2187.5 | 2237.3 | 2280.8 | 2331.6 | 2360.7  | 2373.2 | 2370.3 | 2306.2 |
| 12.5° | 1991.8 | 1997.6 | 2009.5 | 2046.9 | 2106.2 | 2159.8 | 2233.5 | 2269.8  | 2299.5 | 2317.2 | 2248.3 |
| 15°   | 1859.3 | 1871.8 | 1883.2 | 1926.3 | 1992.8 | 2063.1 | 2146.4 | 2192.3  | 2238.3 | 2278.0 | 2197.1 |
| 17.5° | 1756.0 | 1768.4 | 1775.1 | 1814.3 | 1885.1 | 1971.3 | 2068.9 | 2122.9  | 2180.4 | 2245.4 | 2146.4 |
| 20°   | 1696.2 | 1701.9 | 1699.0 | 1721.0 | 1784.7 | 1876.1 | 1991.8 | 2054.5  | 2123.9 | 2214.8 | 2095.7 |
| 22.5° | 1679.4 | 1679.9 | 1669.4 | 1667.0 | 1708.1 | 1785.1 | 1909.6 | 1985.6  | 2070.8 | 2194.7 | 2052.1 |
| 25°   | 1720.1 | 1718.6 | 1689.9 | 1666.5 | 1670.8 | 1715.8 | 1830.1 | 1918.6  | 2026.3 | 2190.4 | 2018.6 |
| 27.5° | 1810.5 | 1814.8 | 1772.2 | 1728.2 | 1684.7 | 1683.2 | 1769.8 | 1863.1  | 1989.9 | 2210.0 | 2004.3 |
| 30°   | 1937.3 | 1944.5 | 1899.0 | 1843.0 | 1761.2 | 1693.8 | 1746.4 | 1830.1  | 1967.4 | 2250.7 | 2001.9 |
| 32.5° | 2076.1 | 2083.7 | 2049.3 | 1990.4 | 1883.2 | 1758.8 | 1762.7 | 1833.0  | 1966.5 | 2307.6 | 2018.2 |
| 35°   | 2223.9 | 2232.5 | 2214.8 | 2165.1 | 2045.9 | 1878.9 | 1824.9 | 1879.4  | 1997.6 | 2394.7 | 2061.7 |
| 37.5° | 2389.0 | 2402.4 | 2407.2 | 2359.8 | 2232.5 | 2037.3 | 1926.8 | 1967.4  | 2067.9 | 2515.8 | 2141.6 |
| 40°   | 2626.8 | 2645.4 | 2644.0 | 2576.1 | 2446.4 | 2251.2 | 2084.2 | 2094.7  | 2177.5 | 2677.5 | 2269.4 |
| 42.5° | 3082.3 | 3086.1 | 2967.0 | 2819.1 | 2681.8 | 2476.1 | 2269.8 | 2261.2  | 2328.7 | 2882.3 | 2457.4 |
| 45°   | 3661.7 | 3645.9 | 3380.8 | 3095.2 | 2927.7 | 2734.4 | 2511.5 | 2469.4  | 2520.5 | 3132.0 | 2692.8 |
| 47.5° | 4142.5 | 4106.2 | 3771.3 | 3377.0 | 3188.0 | 3015.3 | 2795.2 | 2721.5  | 2749.7 | 3415.3 | 2997.1 |
| 50°   | 4309.5 | 4282.3 | 4004.7 | 3611.4 | 3434.4 | 3357.9 | 3144.5 | 3040.2  | 3047.8 | 3753.1 | 3353.6 |
| 52.5° | 4273.6 | 4269.8 | 4084.6 | 3766.0 | 3665.0 | 3717.7 | 3639.2 | 3498.1  | 3423.4 | 4128.2 | 3738.2 |
| 55°   | 4189.0 | 4197.1 | 4130.1 | 3945.9 | 3928.7 | 4065.0 | 4285.6 | 4181.3  | 3949.2 | 4506.7 | 4135.8 |
| 57.5° | 3894.7 | 3915.8 | 4063.1 | 4172.2 | 4353.1 | 4555.9 | 4806.2 | 4776.5  | 4515.3 | 4915.7 | 4608.6 |
| 60°   | 3137.8 | 3186.6 | 3581.8 | 4128.2 | 4789.9 | 5424.3 | 5536.3 | 5467.4  | 5099.0 | 5423.4 | 5233.0 |
| 62.5° | 2198.5 | 2249.3 | 2719.1 | 3574.1 | 4718.1 | 6405.2 | 6841.6 | 6544.4  | 5937.3 | 6171.2 | 6041.1 |
| 65°   | 1177.0 | 1201.4 | 1560.3 | 2479.9 | 3983.2 | 6607.6 | 8749.2 | 8297.0  | 7264.5 | 7093.2 | 6732.5 |
| 67.5° | 649.3  | 662.7  | 800.0  | 1252.1 | 2551.2 | 5818.6 | 9964.5 | 10306.1 | 8923.4 | 7707.1 | 6606.6 |
| 69°   | 587.1  | 599.5  | 689.5  | 948.3  | 1707.2 | 4811.0 | 9845.8 | 10835.8 | 9650.6 | 7646.3 | 6141.6 |
| 70°   | 574.2  | 585.6  | 666.5  | 874.2  | 1381.8 | 3965.5 | 9448.2 | 10700.4 | 9823.8 | 7428.6 | 5735.8 |
| 72.5° | 516.7  | 529.2  | 607.6  | 785.2  | 1180.8 | 1977.0 | 7484.1 | 9047.3  | 8919.0 | 6441.1 | 4350.7 |
| 75°   | 481.8  | 493.3  | 626.3  | 768.9  | 1130.6 | 1251.2 | 4933.9 | 6667.9  | 6556.4 | 4505.7 | 2345.9 |
| 77.5° | 206.2  | 205.3  | 290.4  | 650.7  | 1147.4 | 1211.5 | 2651.2 | 4165.5  | 3800.4 | 1925.8 | 673.7  |
| 80°   | 137.8  | 135.4  | 137.8  | 191.4  | 1052.1 | 1218.2 | 1389.0 | 2114.3  | 1597.1 | 490.9  | 332.1  |
| 82.5° | 118.7  | 116.7  | 121.1  | 116.7  | 369.9  | 1390.4 | 1180.8 | 1124.4  | 759.3  | 278.9  | 164.6  |
| 85°   | 79.9   | 76.6   | 104.3  | 104.8  | 174.6  | 1235.4 | 1330.1 | 949.8   | 614.3  | 165.5  | 81.3   |
| 87.5° | 38.3   | 37.3   | 60.8   | 74.2   | 102.4  | 501.9  | 1492.3 | 973.2   | 619.6  | 84.7   | 38.8   |
| 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°    | 2523.9 | 2523.9 | 2523.9 | 2523.9 | 2523.9 | 2523.9 | 2523.9 | 2523.9 | 2523.9 | 2523.9 | 2523.9 |
| 2.5°  | 2499.5 | 2479.9 | 2460.7 | 2437.8 | 2413.9 | 2387.1 | 2373.7 | 2360.3 | 2356.9 | 2353.1 | 2339.7 |
| 5°    | 2430.6 | 2402.8 | 2355.0 | 2302.4 | 2246.9 | 2192.8 | 2151.7 | 2125.8 | 2106.2 | 2096.2 | 2078.4 |
| 7.5°  | 2341.6 | 2300.9 | 2217.2 | 2126.3 | 2033.0 | 1947.8 | 1874.1 | 1827.7 | 1783.7 | 1763.1 | 1739.7 |
| 10°   | 2256.9 | 2196.2 | 2066.0 | 1932.0 | 1798.1 | 1669.4 | 1548.3 | 1462.7 | 1386.6 | 1344.0 | 1313.9 |
| 12.5° | 2184.2 | 2100.9 | 1920.6 | 1739.2 | 1555.5 | 1372.2 | 1190.9 | 1048.3 | 929.2  | 866.5  | 834.4  |
| 15°   | 2113.4 | 2012.9 | 1782.3 | 1552.1 | 1316.3 | 1067.0 | 828.7  | 667.0  | 568.4  | 529.2  | 515.8  |
| 17.5° | 2049.3 | 1920.6 | 1643.5 | 1363.6 | 1069.4 | 767.9  | 556.9  | 467.9  | 430.1  | 417.2  | 412.9  |
| 20°   | 1979.9 | 1827.3 | 1499.5 | 1166.5 | 812.0  | 536.8  | 434.9  | 395.7  | 380.4  | 376.6  | 374.6  |
| 22.5° | 1912.9 | 1735.4 | 1361.7 | 955.5  | 583.2  | 414.3  | 373.7  | 357.4  | 355.0  | 358.4  | 358.4  |
| 25°   | 1856.0 | 1653.1 | 1212.9 | 734.9  | 428.2  | 348.8  | 334.4  | 330.6  | 339.7  | 352.1  | 354.5  |
| 27.5° | 1813.4 | 1585.6 | 1054.5 | 542.6  | 341.1  | 303.3  | 302.9  | 309.1  | 331.6  | 355.5  | 360.3  |
| 30°   | 1784.2 | 1521.5 | 885.2  | 391.4  | 286.1  | 267.0  | 274.6  | 288.0  | 321.0  | 355.0  | 364.1  |
| 32.5° | 1769.4 | 1474.1 | 708.6  | 302.9  | 245.0  | 234.4  | 247.4  | 263.6  | 296.2  | 327.7  | 339.7  |
| 35°   | 1780.8 | 1439.2 | 542.1  | 252.6  | 216.3  | 208.1  | 221.5  | 237.3  | 256.5  | 269.9  | 278.9  |
| 37.5° | 1823.9 | 1425.3 | 409.1  | 226.3  | 196.6  | 189.0  | 199.5  | 208.6  | 216.3  | 220.1  | 224.4  |
| 40°   | 1916.7 | 1440.2 | 327.7  | 212.9  | 185.6  | 176.1  | 180.4  | 183.7  | 188.5  | 192.3  | 194.3  |
| 42.5° | 2053.6 | 1484.7 | 293.8  | 207.7  | 179.9  | 166.0  | 165.1  | 166.5  | 172.7  | 179.9  | 181.3  |
| 45°   | 2245.0 | 1563.1 | 291.4  | 211.0  | 177.0  | 157.9  | 153.6  | 155.5  | 165.1  | 176.1  | 178.0  |
| 47.5° | 2489.4 | 1682.8 | 310.5  | 221.1  | 179.4  | 153.6  | 146.4  | 148.8  | 160.8  | 175.6  | 178.0  |
| 50°   | 2785.6 | 1849.7 | 342.6  | 235.9  | 190.0  | 154.5  | 144.0  | 145.5  | 157.9  | 174.2  | 176.6  |
| 52.5° | 3135.4 | 2086.6 | 377.5  | 250.2  | 201.0  | 160.8  | 145.9  | 142.6  | 154.1  | 168.4  | 171.3  |
| 55°   | 3524.4 | 2390.4 | 413.4  | 263.2  | 206.7  | 168.4  | 149.8  | 138.8  | 146.9  | 158.9  | 161.2  |
| 57.5° | 4001.9 | 2815.3 | 475.6  | 275.6  | 210.5  | 173.7  | 153.6  | 134.9  | 137.8  | 146.4  | 148.3  |
| 60°   | 4648.3 | 3416.2 | 585.2  | 296.2  | 219.1  | 175.6  | 153.1  | 131.6  | 128.7  | 133.5  | 134.4  |
| 62.5° | 5422.9 | 4068.9 | 676.5  | 322.0  | 233.5  | 177.0  | 150.2  | 129.2  | 121.1  | 121.1  | 122.0  |
| 65°   | 5882.7 | 4243.5 | 625.8  | 343.5  | 245.5  | 175.6  | 146.9  | 126.8  | 115.3  | 110.0  | 110.5  |
| 67.5° | 5492.8 | 3732.0 | 536.4  | 347.8  | 245.0  | 168.9  | 141.6  | 122.5  | 109.6  | 101.4  | 101.0  |
| 69°   | 5004.3 | 3220.1 | 496.2  | 336.4  | 233.5  | 160.3  | 134.9  | 117.7  | 105.3  | 96.6   | 96.2   |
| 70°   | 4610.5 | 2907.6 | 469.9  | 323.9  | 221.1  | 154.1  | 129.7  | 113.4  | 101.9  | 93.8   | 92.8   |
| 72.5° | 3352.1 | 1905.2 | 401.4  | 278.5  | 182.3  | 129.2  | 112.0  | 99.5   | 90.9   | 86.1   | 85.2   |
| 75°   | 1675.1 | 908.6  | 325.8  | 225.8  | 139.7  | 103.3  | 91.9   | 83.3   | 78.9   | 78.0   | 77.5   |
| 77.5° | 550.2  | 416.3  | 233.0  | 168.4  | 103.8  | 80.9   | 74.2   | 67.9   | 67.0   | 69.9   | 68.9   |
| 80°   | 302.4  | 242.1  | 147.8  | 111.5  | 70.8   | 59.3   | 58.4   | 55.0   | 56.5   | 61.2   | 60.3   |
| 82.5° | 154.1  | 125.8  | 91.4   | 67.0   | 47.8   | 42.6   | 46.4   | 44.5   | 46.4   | 50.7   | 50.2   |
| 85°   | 76.1   | 68.9   | 57.9   | 40.7   | 31.6   | 27.3   | 33.0   | 34.4   | 35.4   | 38.8   | 38.8   |
| 87.5° | 44.0   | 40.7   | 30.6   | 19.1   | 15.8   | 14.4   | 19.1   | 18.7   | 22.0   | 23.9   | 23.4   |
| 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)