

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: STREETWORKS

Report Number: P299995

Luminaire Tested: **GAA-AF-02-LED-U-SL3-7027-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299995  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194479)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: GAA-AF-02-LED-U-SL3-7027-HSS  
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE  
(2) 70 CRI  
2700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III w/Spill  
Control WITH HOUSESIDE SHEILD OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8211.3 lumens  
Efficiency: N/A  
Efficacy: 72.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: 28.75 FT

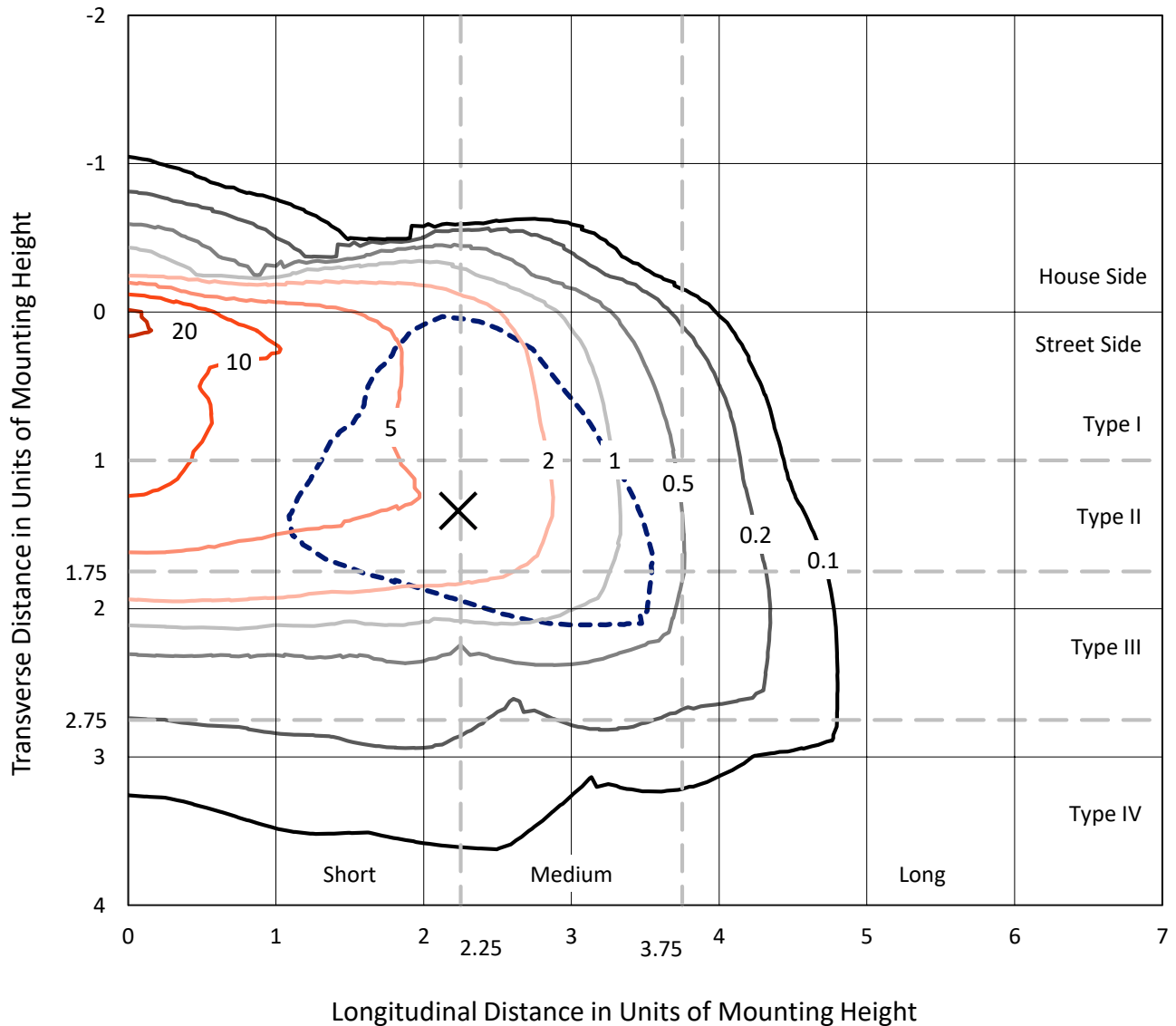


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

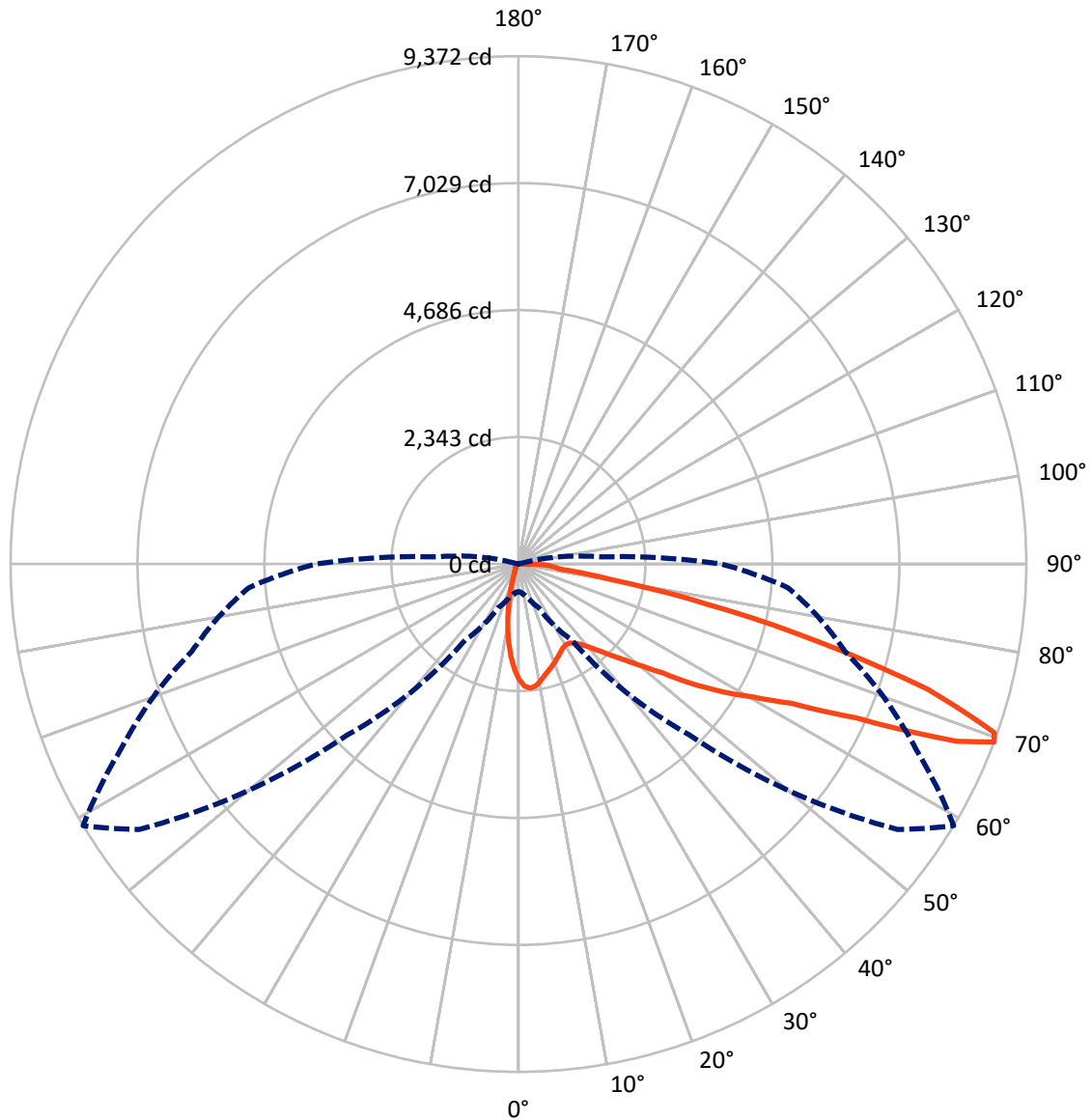


Based on 10 foot mounting height. Maximum calculated value = 21.5 fc  
 Type III - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 668.7    | 0.0    | 668.7  |
|                    | % Fixture | 8.1      | 0.0    | 8.1    |
| <b>Street Side</b> | Lumens    | 7542.6   | 0.0    | 7542.6 |
|                    | % Fixture | 91.9     | 0.0    | 91.9   |
| <b>Total</b>       | Lumens    | 8211.3   | 0.0    | 8211.3 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 173.5  | 2.1       |
| 10°-20°   | 358.5  | 4.4       |
| 20°-30°   | 482.4  | 5.9       |
| 30°-40°   | 700.4  | 8.5       |
| 40°-50°   | 1166.1 | 14.2      |
| 50°-60°   | 1819.2 | 22.2      |
| 60°-70°   | 2251.1 | 27.4      |
| 70°-80°   | 1140.8 | 13.9      |
| 80°-90°   | 119.4  | 1.5       |
| 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°    | 8211.3 | 100.0     |
| 0°-180°   | 8211.3 | 100.0     |



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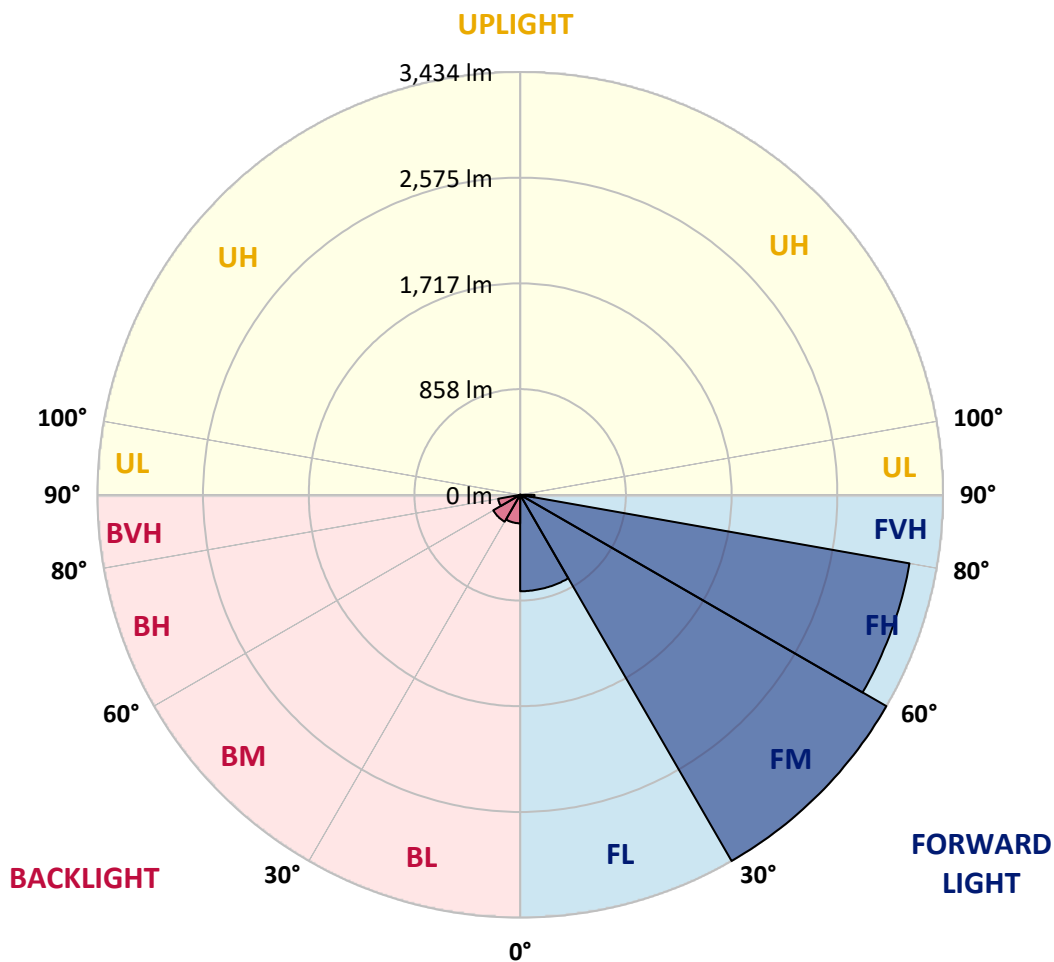
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 782.9  | 9.5       |                         |      |         |
| FM   | (30°-60°)   | 3433.7 | 41.8      |                         |      |         |
| FH   | (60°-80°)   | 3210.3 | 39.1      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 115.7  | 1.4       |                         |      | G2/225  |
| BL   | (0°-30°)    | 231.5  | 2.8       | B1/500                  |      |         |
| BM   | (30°-60°)   | 252.0  | 3.1       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 181.6  | 2.2       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 3.7    | 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-G2**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 59°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2137.2 | 2137.2 | 2137.2 | 2137.2 | 2137.2 | 2137.2 | 2137.2 | 2137.2 | 2137.2 | 2137.2 | 2137.2 |
| 2.5°  | 2342.5 | 2341.6 | 2331.4 | 2326.7 | 2318.3 | 2300.7 | 2273.3 | 2259.0 | 2235.8 | 2195.3 | 2141.0 |
| 5°    | 2321.1 | 2332.4 | 2338.3 | 2338.8 | 2344.9 | 2338.3 | 2313.7 | 2301.7 | 2269.7 | 2204.6 | 2107.2 |
| 7.5°  | 2176.3 | 2180.4 | 2197.7 | 2212.5 | 2241.3 | 2268.7 | 2277.5 | 2272.3 | 2253.4 | 2183.8 | 2054.2 |
| 10°   | 2021.3 | 2025.3 | 2045.9 | 2065.3 | 2104.3 | 2146.5 | 2191.1 | 2200.5 | 2208.4 | 2154.0 | 2003.1 |
| 12.5° | 1887.4 | 1891.6 | 1912.6 | 1938.0 | 1983.6 | 2035.6 | 2104.8 | 2120.1 | 2155.0 | 2125.7 | 1962.2 |
| 15°   | 1772.3 | 1774.1 | 1794.6 | 1826.1 | 1880.5 | 1947.3 | 2025.9 | 2050.5 | 2103.9 | 2105.8 | 1926.5 |
| 17.5° | 1674.3 | 1679.0 | 1691.6 | 1721.7 | 1781.2 | 1863.8 | 1955.3 | 1990.6 | 2053.2 | 2089.0 | 1891.6 |
| 20°   | 1614.4 | 1619.1 | 1618.6 | 1635.4 | 1688.8 | 1776.9 | 1884.8 | 1926.9 | 2003.1 | 2071.9 | 1860.6 |
| 22.5° | 1602.9 | 1602.9 | 1590.8 | 1588.4 | 1620.0 | 1693.9 | 1811.4 | 1862.8 | 1958.0 | 2064.4 | 1838.8 |
| 25°   | 1644.2 | 1642.3 | 1612.2 | 1587.6 | 1589.0 | 1633.0 | 1740.2 | 1801.5 | 1920.0 | 2069.5 | 1827.1 |
| 27.5° | 1731.5 | 1729.1 | 1691.0 | 1644.2 | 1606.6 | 1606.1 | 1686.4 | 1752.3 | 1889.8 | 2093.7 | 1831.8 |
| 30°   | 1852.1 | 1851.3 | 1810.0 | 1750.9 | 1682.7 | 1620.0 | 1667.8 | 1727.7 | 1870.3 | 2137.2 | 1842.4 |
| 32.5° | 1984.0 | 1982.6 | 1951.5 | 1889.4 | 1802.9 | 1682.7 | 1687.4 | 1737.6 | 1875.9 | 2195.3 | 1868.5 |
| 35°   | 2123.9 | 2121.5 | 2108.0 | 2053.7 | 1958.6 | 1798.3 | 1751.5 | 1790.4 | 1911.2 | 2282.2 | 1919.5 |
| 37.5° | 2275.2 | 2277.5 | 2287.2 | 2235.2 | 2135.4 | 1960.4 | 1858.8 | 1885.2 | 1982.2 | 2400.1 | 2002.6 |
| 40°   | 2498.5 | 2498.1 | 2501.3 | 2433.0 | 2337.0 | 2158.6 | 2008.6 | 2017.0 | 2101.1 | 2556.6 | 2128.9 |
| 42.5° | 2903.8 | 2875.6 | 2789.7 | 2650.4 | 2553.8 | 2385.2 | 2197.7 | 2188.8 | 2246.5 | 2750.2 | 2305.8 |
| 45°   | 3448.6 | 3388.1 | 3165.3 | 2898.3 | 2774.8 | 2640.7 | 2430.2 | 2402.0 | 2438.6 | 2982.8 | 2524.1 |
| 47.5° | 3917.0 | 3854.3 | 3539.1 | 3156.4 | 3009.3 | 2883.0 | 2702.8 | 2651.8 | 2663.9 | 3243.3 | 2800.8 |
| 50°   | 4076.3 | 4045.6 | 3770.4 | 3381.2 | 3236.3 | 3188.1 | 3019.1 | 2956.8 | 2939.7 | 3544.6 | 3121.6 |
| 52.5° | 4021.0 | 4018.8 | 3835.3 | 3527.0 | 3444.4 | 3503.8 | 3416.9 | 3345.0 | 3281.8 | 3862.3 | 3448.0 |
| 55°   | 3932.3 | 3944.0 | 3861.7 | 3654.7 | 3651.9 | 3792.2 | 3961.1 | 3901.2 | 3718.3 | 4207.3 | 3729.5 |
| 57.5° | 3687.7 | 3737.3 | 3847.0 | 3896.2 | 4010.3 | 4153.9 | 4414.4 | 4449.6 | 4233.3 | 4471.4 | 3963.0 |
| 60°   | 2992.1 | 3101.2 | 3459.7 | 3930.9 | 4472.4 | 4829.9 | 4961.4 | 4991.4 | 4655.7 | 4691.0 | 4278.3 |
| 62.5° | 2123.9 | 2235.2 | 2689.9 | 3487.1 | 4479.3 | 5718.1 | 5776.2 | 5657.8 | 5121.1 | 5016.6 | 4822.0 |
| 65°   | 1127.3 | 1213.3 | 1584.8 | 2517.1 | 3883.7 | 5924.3 | 7201.2 | 6848.4 | 5941.9 | 5656.8 | 5524.5 |
| 67.5° | 576.7  | 602.7  | 750.4  | 1231.9 | 2669.9 | 5262.2 | 8478.5 | 8726.9 | 7356.7 | 6292.1 | 5490.6 |
| 69°   | 510.3  | 525.6  | 623.6  | 890.6  | 1709.6 | 4457.1 | 8540.8 | 9371.9 | 8097.4 | 6239.1 | 4989.6 |
| 70°   | 494.0  | 507.5  | 596.6  | 806.1  | 1336.4 | 3737.7 | 8302.5 | 9315.3 | 8286.8 | 6037.6 | 4615.4 |
| 72.5° | 419.4  | 430.9  | 531.3  | 712.3  | 1086.1 | 1855.4 | 6744.3 | 7893.6 | 7436.1 | 5029.5 | 3340.7 |
| 75°   | 280.5  | 318.6  | 509.9  | 667.8  | 1010.4 | 1054.1 | 4446.4 | 5704.2 | 5298.9 | 3392.3 | 1740.2 |
| 77.5° | 67.3   | 72.4   | 144.0  | 531.3  | 924.0  | 927.7  | 2286.8 | 3546.0 | 2892.3 | 1209.1 | 411.3  |
| 80°   | 36.3   | 34.9   | 40.3   | 105.4  | 860.4  | 870.6  | 1029.5 | 1721.3 | 1032.7 | 200.6  | 135.5  |
| 82.5° | 25.6   | 24.2   | 26.0   | 44.1   | 270.8  | 793.0  | 744.8  | 779.1  | 428.1  | 77.0   | 60.9   |
| 85°   | 9.3    | 8.9    | 14.3   | 39.9   | 84.9   | 455.9  | 765.2  | 642.6  | 346.8  | 35.3   | 44.6   |
| 87.5° | 3.2    | 2.8    | 5.6    | 21.8   | 26.0   | 194.1  | 472.2  | 485.7  | 136.5  | 21.4   | 20.9   |
| 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°    | 2137.2 | 2137.2 | 2137.2 | 2137.2 | 2137.2 | 2137.2 | 2137.2 | 2137.2 | 2137.2 | 2137.2 | 2137.2 |
| 2.5°  | 2118.3 | 2089.4 | 2036.6 | 1982.2 | 1932.0 | 1871.7 | 1841.5 | 1811.8 | 1799.3 | 1794.6 | 1772.9 |
| 5°    | 2057.0 | 2008.2 | 1895.9 | 1783.0 | 1679.0 | 1568.5 | 1495.6 | 1437.2 | 1402.7 | 1386.0 | 1359.6 |
| 7.5°  | 1978.5 | 1898.7 | 1728.2 | 1554.1 | 1392.0 | 1232.3 | 1114.0 | 1022.9 | 960.2  | 930.1  | 902.7  |
| 10°   | 1902.3 | 1796.1 | 1553.7 | 1316.4 | 1096.2 | 884.5  | 721.0  | 602.7  | 527.0  | 492.2  | 470.0  |
| 12.5° | 1834.2 | 1696.2 | 1385.1 | 1084.7 | 808.3  | 560.5  | 394.2  | 300.0  | 253.0  | 236.7  | 228.9  |
| 15°   | 1773.3 | 1604.3 | 1225.9 | 864.6  | 547.4  | 320.4  | 215.5  | 183.5  | 176.0  | 176.0  | 175.0  |
| 17.5° | 1715.6 | 1514.2 | 1072.1 | 657.9  | 343.6  | 196.0  | 163.9  | 159.7  | 159.7  | 161.5  | 161.5  |
| 20°   | 1660.4 | 1428.3 | 923.5  | 472.2  | 216.4  | 155.5  | 148.2  | 147.2  | 148.2  | 150.4  | 150.4  |
| 22.5° | 1613.0 | 1350.3 | 784.7  | 324.0  | 160.7  | 140.2  | 136.5  | 135.1  | 135.5  | 136.9  | 137.9  |
| 25°   | 1577.7 | 1284.3 | 653.8  | 219.6  | 138.3  | 127.6  | 123.6  | 121.2  | 119.4  | 119.4  | 120.2  |
| 27.5° | 1555.5 | 1228.7 | 527.0  | 159.7  | 124.4  | 116.1  | 109.5  | 105.9  | 101.6  | 99.4   | 100.2  |
| 30°   | 1539.2 | 1175.7 | 408.1  | 130.5  | 111.5  | 103.0  | 94.8   | 88.7   | 82.7   | 79.8   | 80.8   |
| 32.5° | 1533.2 | 1132.9 | 305.1  | 115.1  | 99.8   | 90.5   | 80.3   | 72.4   | 65.9   | 63.5   | 64.1   |
| 35°   | 1549.5 | 1099.1 | 223.4  | 104.0  | 90.5   | 78.9   | 67.3   | 58.5   | 53.4   | 52.0   | 52.4   |
| 37.5° | 1592.2 | 1080.9 | 167.1  | 94.8   | 82.2   | 69.2   | 56.2   | 47.8   | 44.6   | 44.6   | 45.0   |
| 40°   | 1672.9 | 1080.5 | 134.3  | 88.3   | 74.8   | 59.9   | 46.4   | 40.3   | 38.5   | 39.5   | 39.9   |
| 42.5° | 1790.9 | 1105.1 | 117.0  | 82.2   | 68.3   | 51.0   | 38.5   | 34.3   | 33.9   | 34.9   | 35.3   |
| 45°   | 1952.0 | 1150.1 | 107.7  | 77.0   | 61.3   | 42.7   | 32.5   | 29.7   | 29.7   | 31.1   | 31.6   |
| 47.5° | 2149.3 | 1216.0 | 99.8   | 72.0   | 54.3   | 35.7   | 27.8   | 26.0   | 26.4   | 27.8   | 28.3   |
| 50°   | 2387.1 | 1299.2 | 91.9   | 66.4   | 49.2   | 29.7   | 24.2   | 22.8   | 23.2   | 25.0   | 25.6   |
| 52.5° | 2657.8 | 1411.1 | 85.5   | 61.3   | 42.7   | 24.6   | 20.4   | 19.5   | 20.4   | 22.4   | 22.8   |
| 55°   | 2889.9 | 1511.4 | 77.6   | 57.1   | 34.3   | 20.4   | 16.7   | 16.7   | 17.7   | 20.0   | 20.4   |
| 57.5° | 3113.3 | 1616.3 | 70.6   | 49.2   | 27.0   | 16.3   | 13.9   | 14.3   | 15.7   | 18.1   | 18.6   |
| 60°   | 3441.1 | 1794.1 | 62.3   | 41.3   | 20.4   | 12.9   | 11.7   | 12.1   | 13.9   | 16.3   | 16.7   |
| 62.5° | 3997.8 | 2064.8 | 53.8   | 34.3   | 15.7   | 10.3   | 9.3    | 10.3   | 12.5   | 15.3   | 15.7   |
| 65°   | 4500.3 | 2174.9 | 44.1   | 28.8   | 12.1   | 7.9    | 7.9    | 9.3    | 12.1   | 14.9   | 15.3   |
| 67.5° | 4220.2 | 1830.8 | 34.3   | 22.8   | 9.3    | 6.0    | 6.5    | 8.9    | 11.7   | 14.9   | 15.3   |
| 69°   | 3732.3 | 1497.0 | 29.2   | 18.1   | 7.9    | 5.6    | 6.0    | 8.9    | 11.7   | 14.3   | 14.9   |
| 70°   | 3352.0 | 1264.0 | 26.0   | 15.3   | 7.0    | 5.6    | 6.0    | 8.3    | 11.7   | 14.3   | 14.9   |
| 72.5° | 2245.1 | 682.5  | 20.9   | 11.1   | 6.5    | 5.1    | 5.1    | 8.3    | 11.1   | 13.9   | 14.3   |
| 75°   | 964.8  | 188.5  | 16.7   | 7.9    | 5.6    | 4.6    | 4.6    | 7.9    | 10.7   | 13.5   | 14.3   |
| 77.5° | 176.4  | 47.8   | 13.5   | 7.0    | 5.6    | 4.6    | 4.2    | 7.5    | 10.3   | 12.9   | 13.5   |
| 80°   | 70.1   | 23.6   | 10.7   | 6.0    | 5.1    | 4.2    | 3.7    | 7.0    | 9.7    | 12.5   | 12.9   |
| 82.5° | 42.3   | 13.5   | 8.9    | 5.6    | 5.1    | 3.7    | 3.2    | 6.0    | 9.3    | 12.1   | 12.5   |
| 85°   | 34.3   | 9.3    | 7.0    | 5.6    | 4.6    | 3.7    | 2.8    | 5.6    | 8.3    | 11.7   | 12.1   |
| 87.5° | 16.7   | 6.5    | 6.5    | 5.1    | 4.6    | 3.7    | 2.8    | 5.1    | 7.9    | 11.1   | 11.7   |
| 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)