

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: P195699

Luminaire Tested: **NVN-AF-03-LED-U-SL4-7050-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195699  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: NVN-AF-03-LED-U-SL4-7050-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 5000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL  
LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11386 lumens  
Efficiency: N/A  
Efficacy: 118.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G3

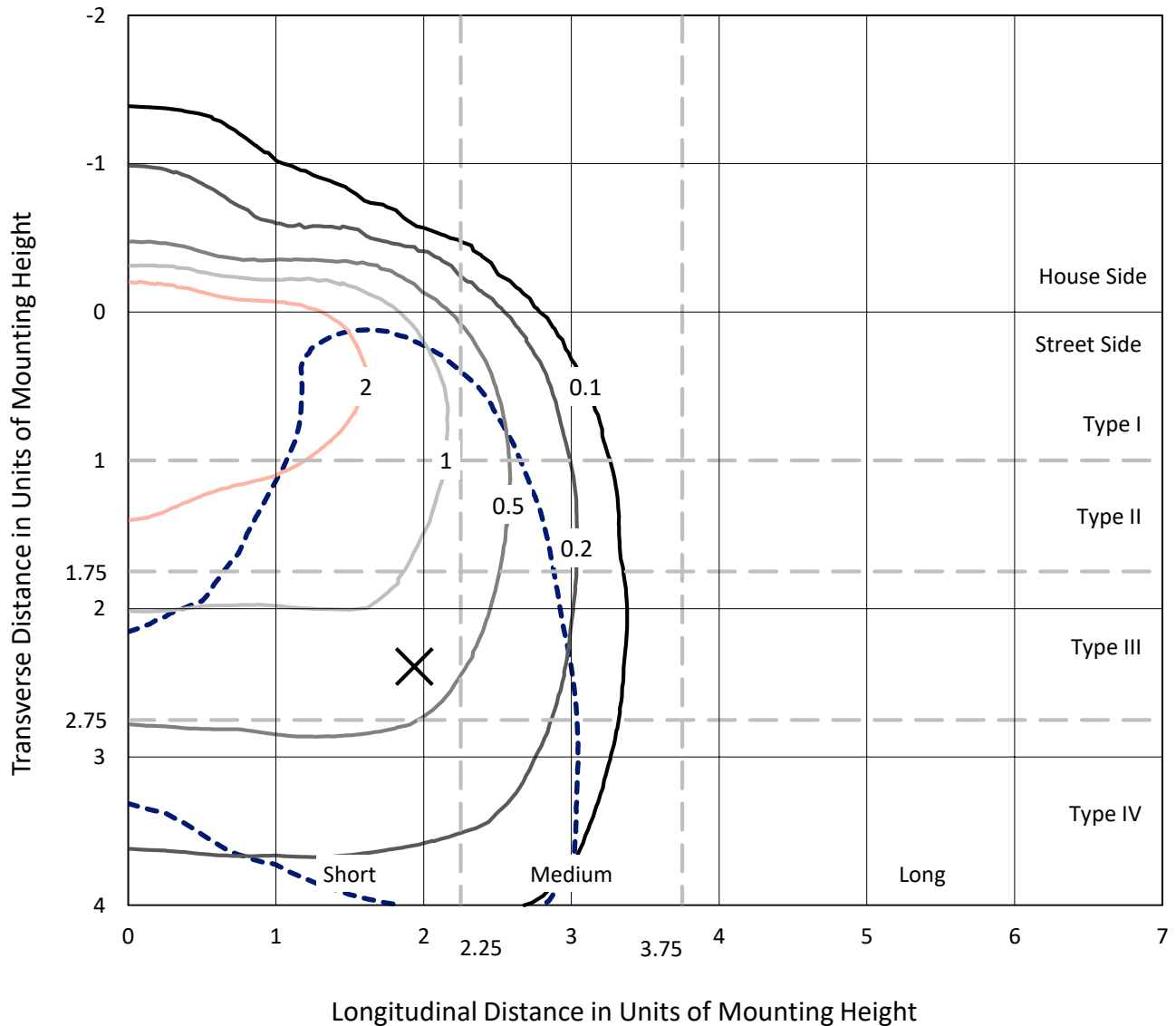
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

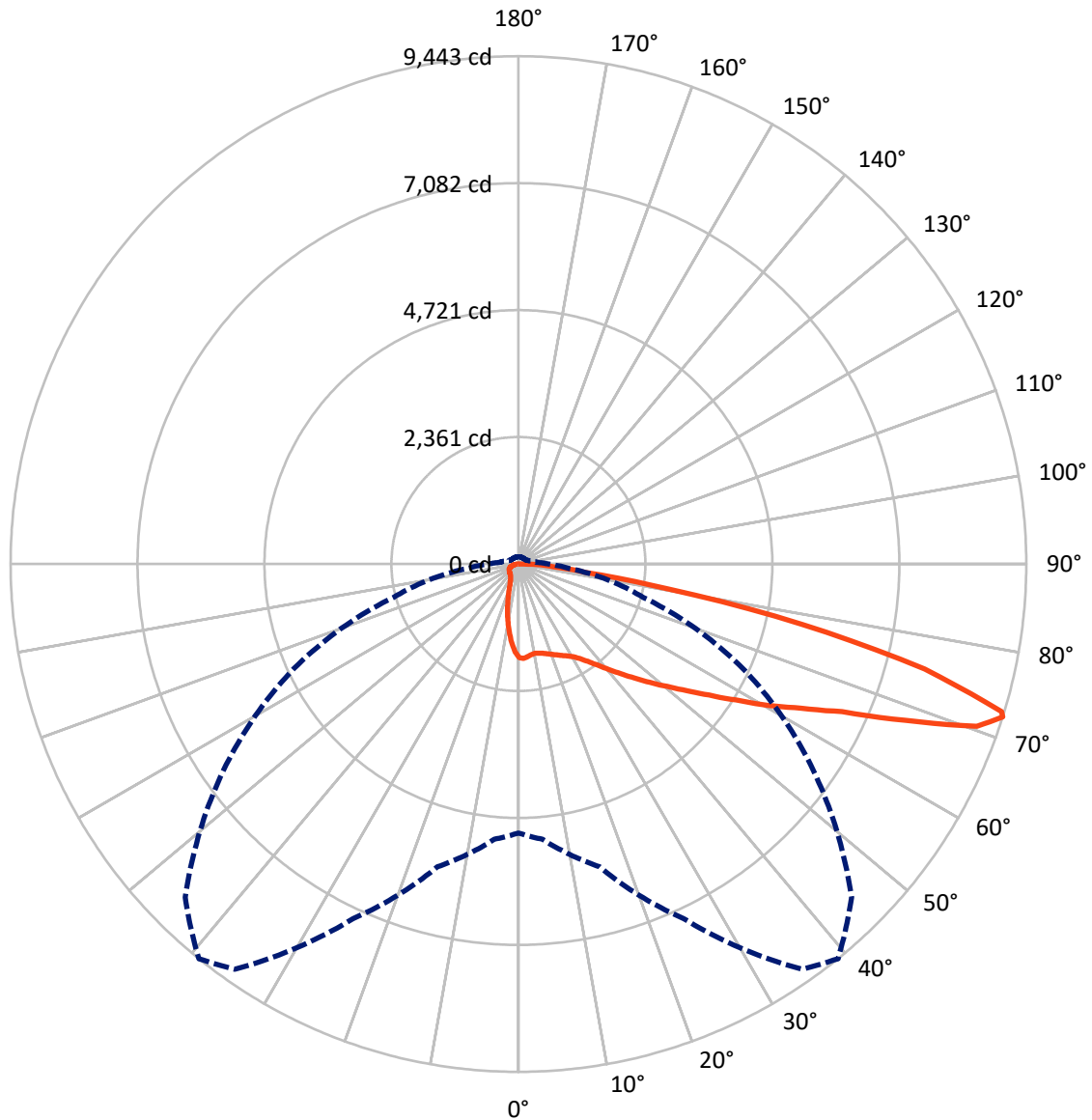
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.3 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral      - - - Horizontal Cone Through 72-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 1305.6   | 0.0    | 1305.6  |
|                    | % Fixture | 11.5     | 0.0    | 11.5    |
| <b>Street Side</b> | Lumens    | 10080.5  | 0.0    | 10080.5 |
|                    | % Fixture | 88.5     | 0.0    | 88.5    |
| <b>Total</b>       | Lumens    | 11386.0  | 0.0    | 11386.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 149.4   | 1.3       |
| 10°-20°   | 375.5   | 3.3       |
| 20°-30°   | 585.1   | 5.1       |
| 30°-40°   | 901.0   | 7.9       |
| 40°-50°   | 1468.8  | 12.9      |
| 50°-60°   | 2282.3  | 20.0      |
| 60°-70°   | 3054.7  | 26.8      |
| 70°-80°   | 2196.8  | 19.3      |
| 80°-90°   | 372.4   | 3.3       |
| 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°    | 11386.0 | 100.0     |
| 0°-180°   | 11386.0 | 100.0     |



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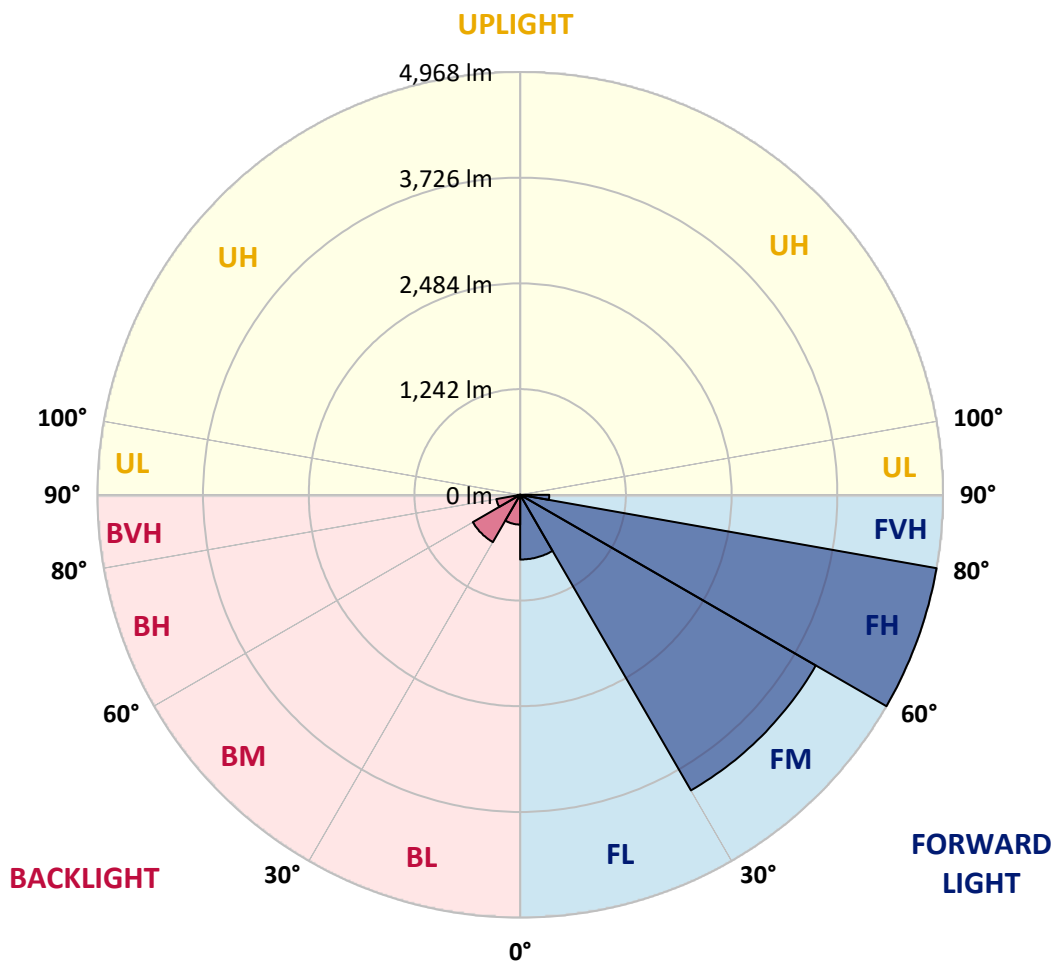
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 760.6  | 6.7       |                         |      |         |
| FM   | (30°-60°)   | 4010.4 | 35.2      |                         |      |         |
| FH   | (60°-80°)   | 4967.9 | 43.6      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 341.6  | 3.0       |                         |      | G3/500  |
| BL   | (0°-30°)    | 349.5  | 3.1       | B1/500                  |      |         |
| BM   | (30°-60°)   | 641.6  | 5.6       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 283.7  | 2.5       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 30.8   | 0.3       |                         |      | G1/100  |
| 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°    | 35°    | 39°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1738.8 | 1738.8 | 1738.8 | 1738.8 | 1738.8 | 1738.8 | 1738.8 | 1738.8 | 1738.8 | 1738.8 | 1738.8 |
| 2.5°  | 1776.3 | 1777.1 | 1774.8 | 1767.9 | 1761.8 | 1758.7 | 1753.4 | 1744.2 | 1732.0 | 1723.6 | 1716.7 |
| 5°    | 1759.5 | 1761.8 | 1760.2 | 1748.8 | 1738.1 | 1732.0 | 1723.6 | 1710.6 | 1694.5 | 1687.6 | 1671.6 |
| 7.5°  | 1746.5 | 1748.0 | 1743.4 | 1730.4 | 1709.8 | 1702.2 | 1686.9 | 1670.1 | 1655.5 | 1645.6 | 1626.5 |
| 10°   | 1737.3 | 1738.8 | 1735.0 | 1722.0 | 1699.1 | 1689.9 | 1671.6 | 1653.2 | 1634.1 | 1621.9 | 1600.5 |
| 12.5° | 1724.3 | 1727.4 | 1727.4 | 1721.3 | 1706.0 | 1699.9 | 1681.5 | 1661.6 | 1644.1 | 1631.1 | 1604.3 |
| 15°   | 1722.0 | 1725.9 | 1732.7 | 1732.0 | 1727.4 | 1722.8 | 1708.3 | 1688.4 | 1673.1 | 1657.8 | 1625.0 |
| 17.5° | 1741.1 | 1749.5 | 1763.3 | 1767.9 | 1764.8 | 1754.9 | 1738.1 | 1719.7 | 1702.9 | 1688.4 | 1647.9 |
| 20°   | 1789.3 | 1793.9 | 1814.5 | 1823.7 | 1808.4 | 1793.9 | 1771.7 | 1748.0 | 1732.7 | 1721.3 | 1669.3 |
| 22.5° | 1861.9 | 1868.0 | 1884.8 | 1885.6 | 1853.5 | 1835.9 | 1807.6 | 1778.6 | 1764.1 | 1759.5 | 1698.3 |
| 25°   | 1978.1 | 1976.6 | 1981.1 | 1962.0 | 1903.9 | 1883.3 | 1848.9 | 1815.3 | 1805.3 | 1814.5 | 1741.1 |
| 27.5° | 2117.2 | 2113.4 | 2098.8 | 2049.2 | 1961.3 | 1934.5 | 1893.2 | 1863.4 | 1863.4 | 1884.8 | 1799.2 |
| 30°   | 2277.7 | 2273.9 | 2226.5 | 2143.2 | 2029.3 | 1998.7 | 1955.2 | 1923.8 | 1939.9 | 1981.1 | 1878.0 |
| 32.5° | 2447.4 | 2433.6 | 2367.1 | 2255.5 | 2126.4 | 2092.7 | 2050.7 | 2018.6 | 2049.2 | 2119.5 | 1991.1 |
| 35°   | 2607.1 | 2599.5 | 2517.7 | 2385.5 | 2251.7 | 2223.4 | 2194.4 | 2154.6 | 2203.6 | 2312.9 | 2150.8 |
| 37.5° | 2772.2 | 2766.1 | 2666.0 | 2525.3 | 2404.6 | 2385.5 | 2361.0 | 2333.5 | 2412.2 | 2555.9 | 2367.1 |
| 40°   | 2956.4 | 2944.2 | 2818.1 | 2677.4 | 2582.7 | 2573.5 | 2560.5 | 2552.9 | 2679.7 | 2893.7 | 2640.8 |
| 42.5° | 3165.1 | 3141.4 | 2978.6 | 2844.8 | 2776.8 | 2784.4 | 2777.6 | 2808.1 | 3002.3 | 3283.6 | 2966.4 |
| 45°   | 3403.6 | 3356.2 | 3138.3 | 3022.9 | 2991.6 | 3022.2 | 3036.7 | 3114.6 | 3383.7 | 3733.7 | 3330.2 |
| 47.5° | 3626.7 | 3565.6 | 3313.4 | 3216.3 | 3233.9 | 3286.6 | 3327.9 | 3465.5 | 3801.8 | 4178.6 | 3701.6 |
| 50°   | 3832.3 | 3763.6 | 3500.6 | 3416.5 | 3502.2 | 3577.1 | 3662.7 | 3856.8 | 4246.6 | 4636.4 | 4042.5 |
| 52.5° | 3984.4 | 3934.8 | 3687.9 | 3635.1 | 3810.2 | 3909.5 | 4046.4 | 4291.7 | 4696.0 | 5072.8 | 4346.7 |
| 55°   | 4102.1 | 4075.4 | 3870.6 | 3885.8 | 4158.7 | 4300.9 | 4466.7 | 4748.8 | 5171.4 | 5464.2 | 4591.3 |
| 57.5° | 4238.2 | 4218.3 | 4079.2 | 4188.5 | 4591.3 | 4770.2 | 4965.8 | 5279.2 | 5623.9 | 5808.9 | 4783.2 |
| 60°   | 4381.9 | 4381.9 | 4311.6 | 4553.1 | 5132.5 | 5337.3 | 5532.2 | 5776.0 | 6074.9 | 6119.2 | 4861.1 |
| 62.5° | 4490.4 | 4518.7 | 4543.9 | 4941.4 | 5646.1 | 5900.6 | 6114.6 | 6348.5 | 6541.9 | 6272.1 | 4677.7 |
| 65°   | 4647.9 | 4708.3 | 4850.4 | 5390.0 | 6282.0 | 6615.3 | 6904.2 | 7100.6 | 6920.2 | 6150.5 | 4079.2 |
| 67.5° | 4918.5 | 5007.9 | 5310.6 | 6058.1 | 7255.8 | 7754.9 | 8035.4 | 7696.0 | 6846.1 | 5385.5 | 3124.6 |
| 70°   | 5162.3 | 5288.4 | 5805.8 | 6905.7 | 8521.5 | 9039.7 | 8910.5 | 7557.7 | 5962.5 | 3947.8 | 1922.3 |
| 72°   | 5000.2 | 5137.8 | 5828.8 | 7274.9 | 9197.9 | 9442.5 | 8761.5 | 6697.8 | 4607.4 | 2409.2 | 947.8  |
| 72.5° | 4894.0 | 5036.9 | 5754.6 | 7265.7 | 9216.3 | 9391.3 | 8554.4 | 6356.2 | 4182.4 | 2108.0 | 766.6  |
| 75°   | 4088.4 | 4210.7 | 4948.3 | 6439.5 | 8121.8 | 7800.7 | 6675.6 | 4113.6 | 1922.3 | 681.0  | 394.4  |
| 77.5° | 2669.8 | 2763.0 | 3412.0 | 4461.4 | 5688.9 | 5380.1 | 4063.2 | 1926.1 | 720.8  | 413.5  | 296.6  |
| 80°   | 1341.4 | 1407.9 | 1826.0 | 2345.7 | 3070.3 | 2825.0 | 1875.7 | 931.7  | 482.3  | 298.9  | 233.1  |
| 82.5° | 933.2  | 994.4  | 1257.3 | 1197.7 | 1283.3 | 1242.0 | 882.0  | 777.3  | 360.8  | 188.8  | 122.3  |
| 85°   | 782.7  | 846.1  | 1040.3 | 853.8  | 698.6  | 636.7  | 632.1  | 734.5  | 238.5  | 93.2   | 103.2  |
| 87.5° | 682.5  | 778.9  | 858.3  | 623.7  | 479.2  | 422.7  | 465.5  | 673.4  | 75.7   | 51.2   | 31.3   |
| 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°    | 1738.8 | 1738.8 | 1738.8 | 1738.8 | 1738.8 | 1738.8 | 1738.8 | 1738.8 | 1738.8 | 1738.8 | 1738.8 |
| 2.5°  | 1705.2 | 1702.9 | 1691.5 | 1673.9 | 1660.9 | 1652.5 | 1636.4 | 1635.7 | 1637.2 | 1623.4 | 1628.8 |
| 5°    | 1657.1 | 1647.9 | 1618.1 | 1577.6 | 1544.7 | 1513.4 | 1479.0 | 1467.5 | 1457.6 | 1436.9 | 1439.2 |
| 7.5°  | 1606.6 | 1590.6 | 1538.6 | 1472.1 | 1408.7 | 1350.6 | 1293.2 | 1265.0 | 1243.6 | 1216.8 | 1216.8 |
| 10°   | 1576.8 | 1551.6 | 1472.1 | 1375.0 | 1274.1 | 1189.3 | 1103.7 | 1052.5 | 1015.0 | 980.6  | 978.3  |
| 12.5° | 1575.3 | 1537.1 | 1426.2 | 1292.5 | 1154.1 | 1034.9 | 918.0  | 839.2  | 783.4  | 742.9  | 739.1  |
| 15°   | 1587.5 | 1534.0 | 1388.0 | 1215.3 | 1041.0 | 885.9  | 741.4  | 641.3  | 570.2  | 525.1  | 520.5  |
| 17.5° | 1598.2 | 1530.2 | 1346.7 | 1134.3 | 931.0  | 742.2  | 581.7  | 477.7  | 410.4  | 373.8  | 369.9  |
| 20°   | 1608.1 | 1521.8 | 1294.0 | 1048.7 | 809.4  | 607.6  | 454.8  | 370.7  | 326.4  | 305.7  | 303.4  |
| 22.5° | 1622.7 | 1514.1 | 1239.0 | 952.4  | 690.2  | 494.5  | 375.3  | 314.9  | 291.2  | 281.3  | 279.7  |
| 25°   | 1646.4 | 1514.9 | 1185.5 | 853.8  | 580.9  | 412.0  | 324.8  | 287.4  | 274.4  | 267.5  | 267.5  |
| 27.5° | 1680.8 | 1524.1 | 1132.7 | 753.6  | 488.4  | 355.4  | 295.0  | 272.9  | 264.5  | 259.1  | 257.6  |
| 30°   | 1731.2 | 1540.9 | 1076.9 | 658.9  | 415.0  | 316.4  | 277.5  | 263.7  | 256.8  | 252.2  | 251.5  |
| 32.5° | 1804.6 | 1570.7 | 1018.1 | 572.5  | 359.2  | 288.9  | 264.5  | 256.0  | 250.7  | 246.9  | 246.1  |
| 35°   | 1913.9 | 1623.4 | 960.8  | 499.1  | 319.5  | 269.0  | 253.8  | 246.9  | 243.8  | 242.3  | 241.5  |
| 37.5° | 2074.4 | 1708.3 | 906.5  | 441.8  | 293.5  | 256.0  | 243.1  | 239.2  | 237.7  | 237.7  | 237.7  |
| 40°   | 2276.2 | 1819.9 | 857.6  | 401.3  | 279.0  | 246.1  | 235.4  | 232.4  | 232.4  | 233.1  | 233.1  |
| 42.5° | 2521.5 | 1959.7 | 815.5  | 373.8  | 270.6  | 239.2  | 230.1  | 228.5  | 227.8  | 227.8  | 228.5  |
| 45°   | 2806.6 | 2124.8 | 789.6  | 352.4  | 264.5  | 235.4  | 226.2  | 225.5  | 222.4  | 220.9  | 220.9  |
| 47.5° | 3093.2 | 2301.4 | 788.0  | 340.1  | 256.8  | 230.8  | 222.4  | 222.4  | 216.3  | 213.2  | 214.0  |
| 50°   | 3360.8 | 2459.6 | 804.8  | 337.1  | 252.2  | 223.9  | 218.6  | 219.4  | 211.0  | 207.1  | 206.4  |
| 52.5° | 3576.3 | 2580.4 | 825.5  | 340.9  | 252.2  | 217.8  | 211.7  | 215.5  | 206.4  | 201.8  | 201.0  |
| 55°   | 3742.9 | 2664.4 | 833.1  | 349.3  | 255.3  | 212.5  | 205.6  | 211.7  | 204.8  | 198.7  | 198.7  |
| 57.5° | 3862.2 | 2691.2 | 800.3  | 353.1  | 259.9  | 211.7  | 199.5  | 211.0  | 207.1  | 199.5  | 199.5  |
| 60°   | 3818.6 | 2536.0 | 678.0  | 338.6  | 259.1  | 210.2  | 194.9  | 212.5  | 214.8  | 206.4  | 206.4  |
| 62.5° | 3478.5 | 2121.8 | 544.2  | 305.7  | 246.1  | 204.8  | 189.6  | 211.0  | 220.1  | 217.1  | 215.5  |
| 65°   | 2831.8 | 1556.2 | 421.9  | 266.8  | 223.9  | 193.4  | 178.1  | 197.2  | 207.9  | 211.0  | 211.7  |
| 67.5° | 1995.7 | 985.2  | 327.9  | 227.0  | 196.4  | 176.6  | 165.1  | 174.3  | 178.1  | 179.6  | 182.7  |
| 70°   | 1091.5 | 533.5  | 260.6  | 191.1  | 168.2  | 159.7  | 151.3  | 152.1  | 150.6  | 149.0  | 150.6  |
| 72°   | 548.0  | 348.5  | 220.1  | 165.9  | 149.0  | 143.7  | 139.9  | 137.6  | 137.6  | 135.3  | 136.1  |
| 72.5° | 471.6  | 324.1  | 212.5  | 159.7  | 144.5  | 139.9  | 136.8  | 134.5  | 133.8  | 132.2  | 133.0  |
| 75°   | 314.1  | 256.8  | 177.3  | 133.8  | 123.1  | 120.0  | 121.5  | 119.2  | 120.0  | 118.5  | 119.2  |
| 77.5° | 253.8  | 220.9  | 150.6  | 113.1  | 105.5  | 100.9  | 103.9  | 104.7  | 106.2  | 104.7  | 103.9  |
| 80°   | 212.5  | 188.0  | 126.1  | 93.2   | 87.9   | 84.1   | 85.6   | 91.0   | 91.7   | 87.1   | 86.4   |
| 82.5° | 137.6  | 151.3  | 99.4   | 72.6   | 67.3   | 65.7   | 69.6   | 74.9   | 76.4   | 70.3   | 68.8   |
| 85°   | 115.4  | 121.5  | 71.8   | 49.7   | 44.3   | 42.8   | 50.4   | 55.8   | 59.6   | 53.5   | 52.0   |
| 87.5° | 32.1   | 59.6   | 35.2   | 23.7   | 19.9   | 19.9   | 24.5   | 29.0   | 34.4   | 35.2   | 35.2   |
| 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)