

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: P198801

Luminaire Tested: **XNV2-AF-02-LED-U-T4W-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P198801  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24127)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: XNV2-AF-02-LED-U-T4W-1200  
Description: XNV2 ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13372 lumens  
Efficiency: N/A  
Efficacy: 104.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G3

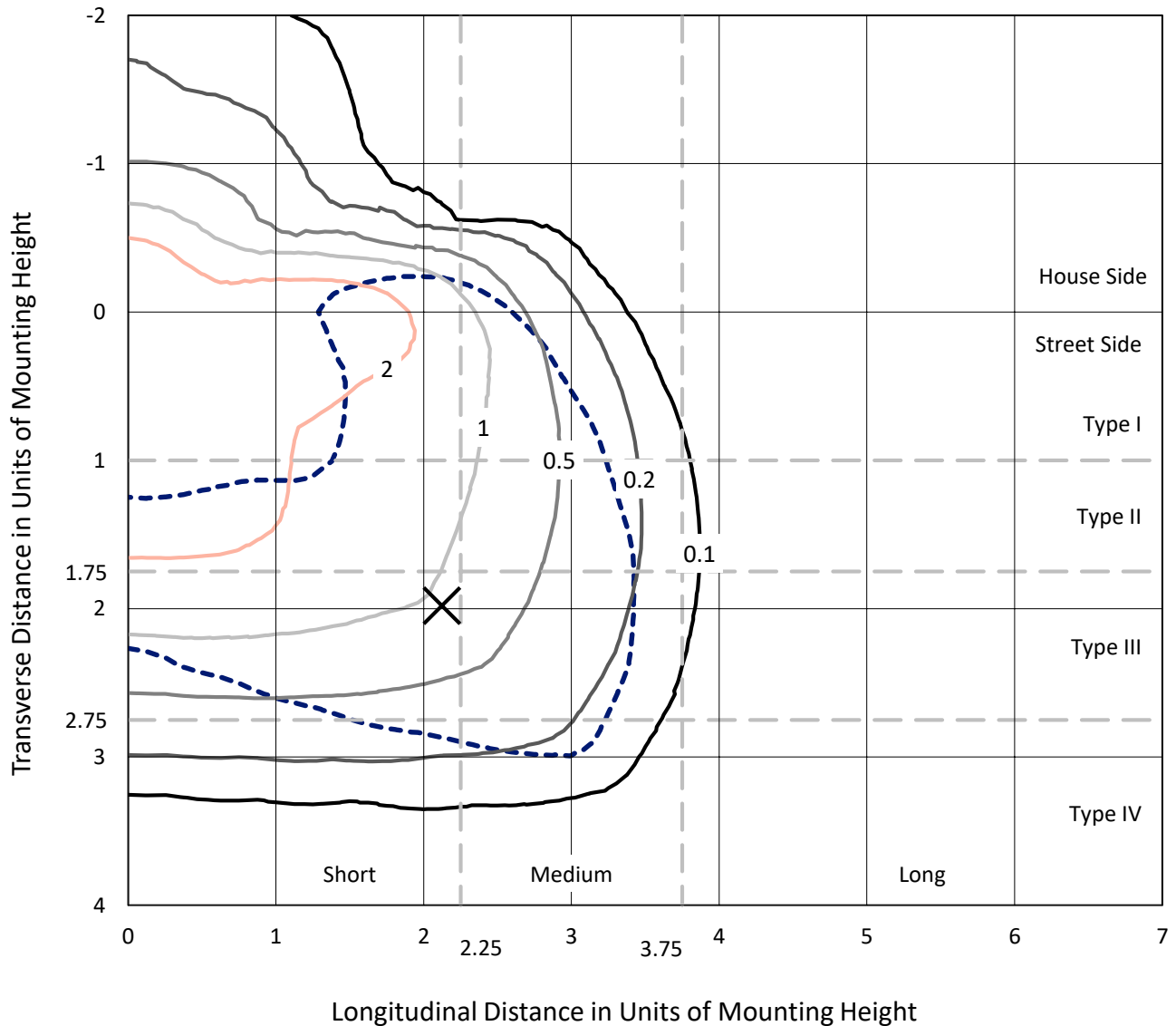
Input Watts (W): 128  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

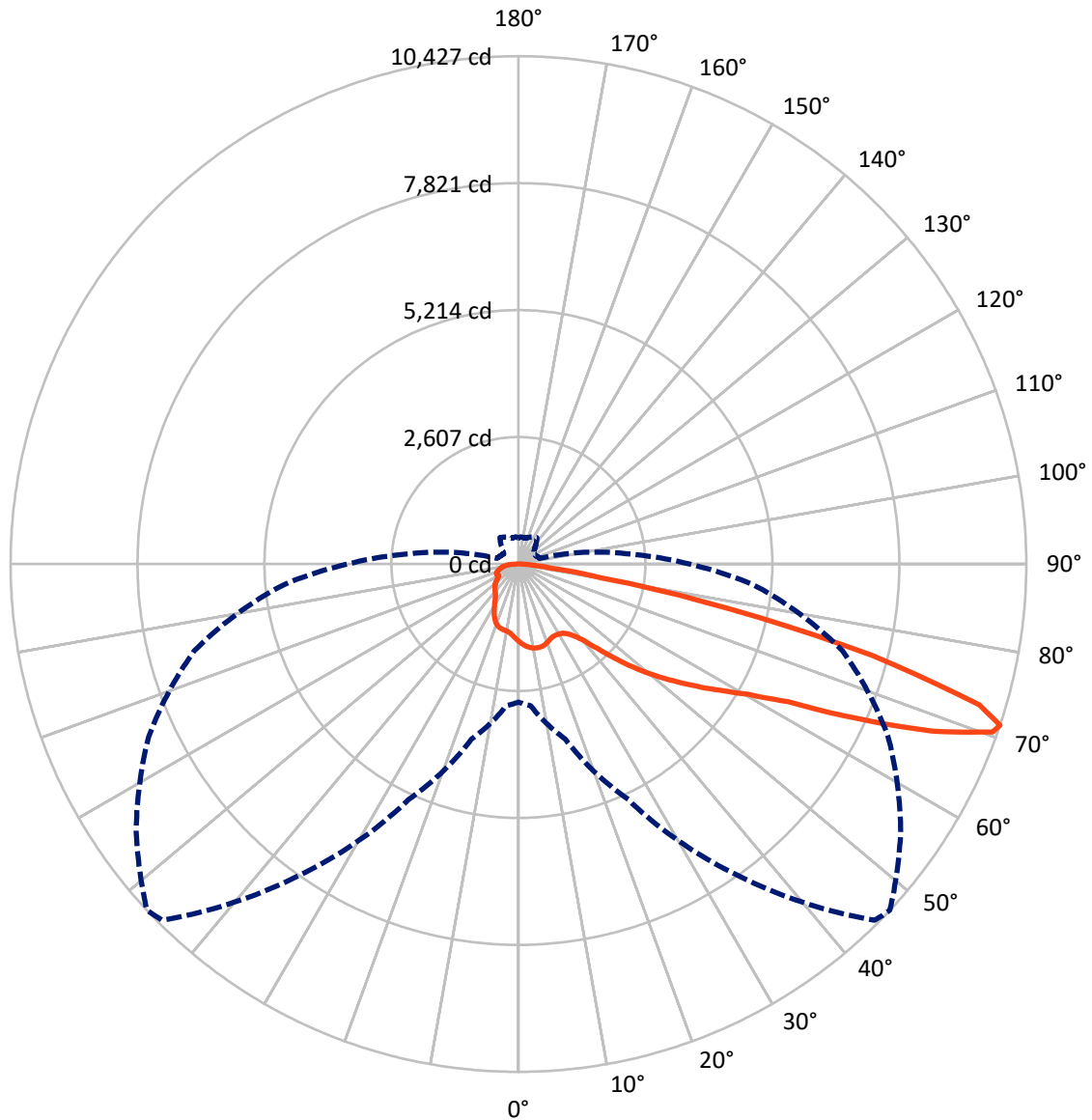


Based on 20 foot mounting height. Maximum calculated value = 4.6 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral    - - - Horizontal Cone Through 71-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 2865.8   | 0.0    | 2865.8  |
|                    | % Fixture | 21.4     | 0.0    | 21.4    |
| <b>Street Side</b> | Lumens    | 10506.2  | 0.0    | 10506.2 |
|                    | % Fixture | 78.6     | 0.0    | 78.6    |
| <b>Total</b>       | Lumens    | 13372.0  | 0.0    | 13372.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 151.8   | 1.1       |
| 10°-20°   | 444.2   | 3.3       |
| 20°-30°   | 660.0   | 4.9       |
| 30°-40°   | 947.7   | 7.1       |
| 40°-50°   | 1680.3  | 12.6      |
| 50°-60°   | 2875.3  | 21.5      |
| 60°-70°   | 4081.9  | 30.5      |
| 70°-80°   | 2235.6  | 16.7      |
| 80°-90°   | 295.1   | 2.2       |
| 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°    | 13372.0 | 100.0     |
| 0°-180°   | 13372.0 | 100.0     |

**Coefficient of Utilization**



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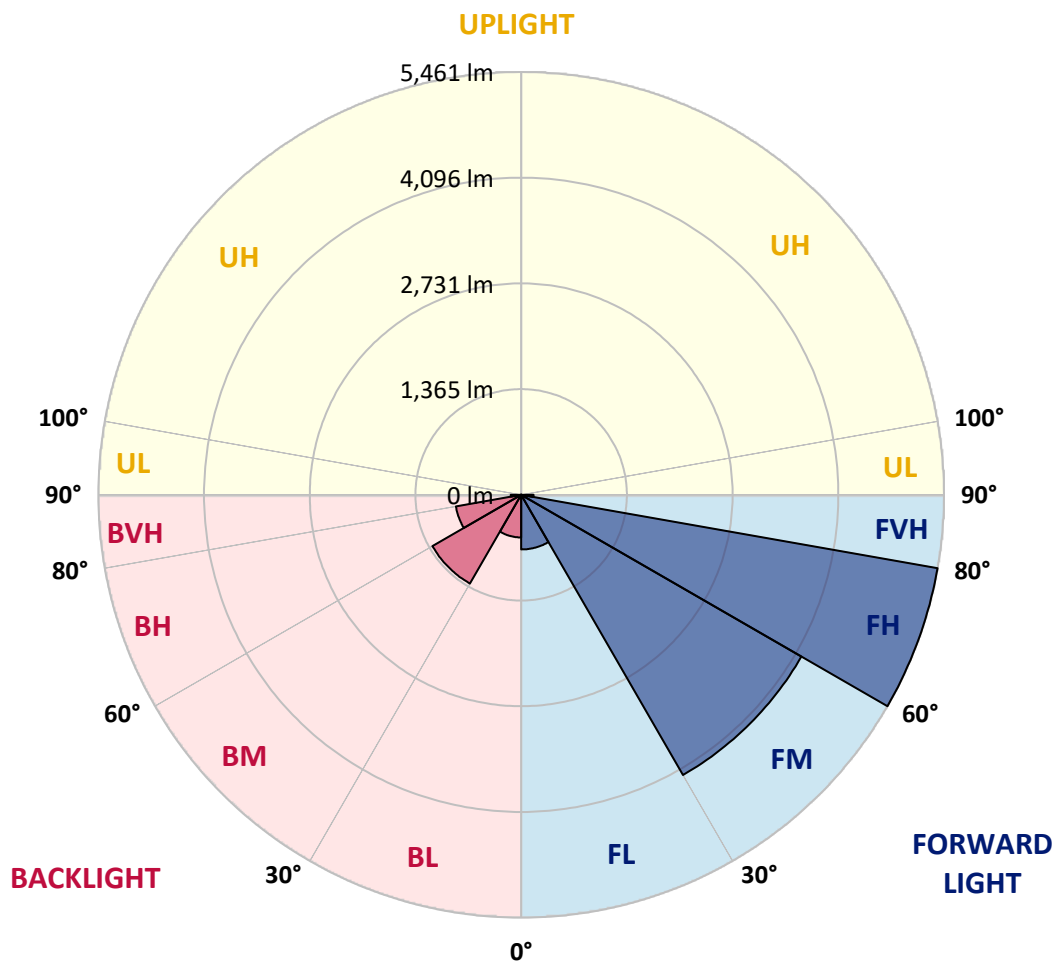
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 705.7  | 5.3       |                         |      |         |
| FM   | (30°-60°)   | 4179.2 | 31.3      |                         |      |         |
| FH   | (60°-80°)   | 5461.3 | 40.8      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 160.1  | 1.2       |                         |      | G2/225  |
| BL   | (0°-30°)    | 550.3  | 4.1       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 1324.2 | 9.9       | B2/2500                 |      |         |
| BH   | (60°-80°)   | 856.3  | 6.4       | B2/1000                 |      | G2/1000 |
| BVH  | (80°-90°)   | 135.0  | 1.0       |                         |      | G2/225  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B2-U0-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°     | 47°     | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|---------|---------|--------|--------|--------|--------|
| 0°    | 1590.2 | 1590.2 | 1590.2 | 1590.2 | 1590.2 | 1590.2  | 1590.2  | 1590.2 | 1590.2 | 1590.2 | 1590.2 |
| 2.5°  | 1687.3 | 1683.8 | 1685.5 | 1679.4 | 1664.6 | 1649.1  | 1649.1  | 1632.6 | 1615.2 | 1598.0 | 1578.9 |
| 5°    | 1792.1 | 1786.9 | 1782.5 | 1763.5 | 1734.9 | 1702.8  | 1697.6  | 1664.6 | 1629.2 | 1593.7 | 1559.0 |
| 7.5°  | 1879.6 | 1874.4 | 1861.4 | 1826.7 | 1785.2 | 1737.5  | 1731.4  | 1688.1 | 1641.3 | 1591.9 | 1543.3 |
| 10°   | 1942.0 | 1938.5 | 1913.4 | 1869.2 | 1820.6 | 1764.4  | 1754.0  | 1709.8 | 1654.3 | 1592.7 | 1531.3 |
| 12.5° | 1976.6 | 1971.4 | 1941.2 | 1889.1 | 1831.9 | 1774.7  | 1764.4  | 1721.8 | 1658.6 | 1591.0 | 1519.1 |
| 15°   | 1962.7 | 1960.2 | 1931.5 | 1878.8 | 1821.6 | 1772.2  | 1763.5  | 1720.1 | 1656.1 | 1585.0 | 1507.8 |
| 17.5° | 1903.8 | 1910.0 | 1887.3 | 1835.4 | 1788.6 | 1754.0  | 1744.4  | 1703.7 | 1643.1 | 1570.2 | 1490.5 |
| 20°   | 1822.4 | 1829.3 | 1818.1 | 1765.2 | 1738.3 | 1715.8  | 1710.6  | 1677.6 | 1621.4 | 1548.5 | 1469.7 |
| 22.5° | 1735.7 | 1741.8 | 1742.7 | 1693.3 | 1684.6 | 1675.9  | 1671.6  | 1648.2 | 1602.2 | 1535.6 | 1455.9 |
| 25°   | 1675.9 | 1682.9 | 1684.6 | 1641.3 | 1646.4 | 1649.1  | 1648.2  | 1631.7 | 1598.9 | 1535.6 | 1457.6 |
| 27.5° | 1660.4 | 1663.8 | 1662.1 | 1622.2 | 1631.7 | 1646.4  | 1647.4  | 1643.9 | 1612.7 | 1552.9 | 1481.8 |
| 30°   | 1714.1 | 1715.8 | 1694.1 | 1634.4 | 1643.9 | 1662.9  | 1663.8  | 1662.1 | 1642.1 | 1598.0 | 1536.5 |
| 32.5° | 1946.3 | 1944.6 | 1870.1 | 1715.8 | 1682.9 | 1689.8  | 1692.4  | 1708.0 | 1709.8 | 1672.5 | 1615.2 |
| 35°   | 2299.9 | 2299.0 | 2212.3 | 1948.9 | 1793.8 | 1757.4  | 1760.9  | 1785.2 | 1806.8 | 1781.7 | 1748.7 |
| 37.5° | 2688.9 | 2691.6 | 2638.7 | 2281.7 | 2033.0 | 1881.3  | 1877.8  | 1896.0 | 1935.0 | 1943.7 | 1948.0 |
| 40°   | 3120.5 | 3133.5 | 3130.9 | 2663.9 | 2368.3 | 2092.8  | 2058.1  | 2037.3 | 2112.7 | 2160.4 | 2221.8 |
| 42.5° | 3613.6 | 3610.1 | 3611.8 | 3083.3 | 2751.3 | 2425.5  | 2361.4  | 2264.3 | 2351.9 | 2434.2 | 2569.3 |
| 45°   | 4037.4 | 4051.2 | 4061.6 | 3529.6 | 3180.4 | 2806.0  | 2741.0  | 2564.2 | 2643.0 | 2766.1 | 2972.3 |
| 47.5° | 4463.7 | 4439.4 | 4458.5 | 4026.1 | 3657.8 | 3240.1  | 3156.0  | 2917.8 | 2991.4 | 3164.7 | 3478.4 |
| 50°   | 4960.3 | 4948.9 | 4862.3 | 4674.3 | 4234.9 | 3680.4  | 3570.3  | 3286.9 | 3394.4 | 3625.7 | 4103.3 |
| 52.5° | 5405.7 | 5345.0 | 5277.4 | 5183.8 | 4802.5 | 4125.8  | 3986.2  | 3670.8 | 3868.4 | 4155.2 | 4878.8 |
| 55°   | 5568.5 | 5527.8 | 5609.4 | 5730.7 | 5403.0 | 4579.9  | 4423.9  | 4118.8 | 4403.1 | 4760.9 | 5791.3 |
| 57.5° | 5741.9 | 5755.7 | 5939.5 | 6184.8 | 5971.6 | 5064.2  | 4895.2  | 4649.1 | 4989.7 | 5438.6 | 6811.2 |
| 60°   | 5828.6 | 5884.0 | 6250.5 | 6710.8 | 6512.3 | 5595.4  | 5433.4  | 5258.4 | 5640.6 | 6187.3 | 7828.6 |
| 62.5° | 5843.3 | 5917.8 | 6436.9 | 6895.3 | 7256.6 | 6409.2  | 6222.0  | 6032.2 | 6453.4 | 7014.9 | 8565.2 |
| 65°   | 5572.9 | 5687.3 | 6420.4 | 7122.3 | 7935.2 | 7768.8  | 7650.0  | 7319.0 | 7541.8 | 7743.6 | 8690.8 |
| 67.5° | 4778.3 | 4903.0 | 5785.2 | 7028.8 | 8479.3 | 9179.6  | 9157.0  | 8668.3 | 8382.4 | 8025.4 | 7759.3 |
| 70°   | 3507.0 | 3607.5 | 4455.1 | 6008.8 | 8241.9 | 10287.1 | 10326.9 | 9542.7 | 8617.1 | 7427.3 | 5769.6 |
| 71°   | 2836.2 | 2923.0 | 3721.9 | 5334.6 | 7779.2 | 10344.3 | 10427.4 | 9581.7 | 8372.9 | 6887.5 | 4830.3 |
| 72.5° | 1765.2 | 1813.7 | 2471.4 | 4026.1 | 6698.6 | 9755.0  | 9895.4  | 9082.5 | 7603.3 | 5821.6 | 3414.3 |
| 75°   | 666.4  | 685.5  | 916.9  | 1775.6 | 3998.3 | 7328.6  | 7498.4  | 6864.1 | 5341.5 | 3323.3 | 1429.0 |
| 77.5° | 357.9  | 367.4  | 454.9  | 738.4  | 1602.2 | 4201.2  | 4419.6  | 3915.1 | 2562.5 | 1162.9 | 584.1  |
| 80°   | 240.1  | 246.1  | 314.6  | 437.6  | 736.6  | 1599.7  | 1781.7  | 1572.0 | 959.3  | 663.8  | 415.9  |
| 82.5° | 155.1  | 158.6  | 214.0  | 287.7  | 475.8  | 562.4   | 642.1   | 670.7  | 598.8  | 475.8  | 251.3  |
| 85°   | 102.3  | 104.9  | 141.3  | 183.7  | 294.6  | 277.3   | 284.3   | 371.7  | 408.2  | 313.7  | 128.3  |
| 87.5° | 58.9   | 60.7   | 84.9   | 94.4   | 132.6  | 104.0   | 112.6   | 176.8  | 242.6  | 204.5  | 73.7   |
| 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°    | 1590.2 | 1590.2 | 1590.2 | 1590.2 | 1590.2 | 1590.2 | 1590.2 | 1590.2 | 1590.2 | 1590.2 | 1590.2 |
| 2.5°  | 1570.2 | 1563.3 | 1547.7 | 1538.2 | 1533.8 | 1532.1 | 1530.3 | 1533.8 | 1533.8 | 1532.1 | 1528.6 |
| 5°    | 1541.6 | 1528.6 | 1502.6 | 1484.4 | 1474.9 | 1472.3 | 1475.8 | 1480.1 | 1482.7 | 1482.7 | 1480.1 |
| 7.5°  | 1520.8 | 1501.8 | 1467.1 | 1442.0 | 1427.2 | 1422.9 | 1432.4 | 1448.1 | 1458.4 | 1463.6 | 1464.5 |
| 10°   | 1503.5 | 1477.6 | 1439.4 | 1413.4 | 1401.2 | 1399.5 | 1411.7 | 1431.6 | 1453.2 | 1462.8 | 1464.5 |
| 12.5° | 1487.9 | 1458.4 | 1416.9 | 1392.5 | 1384.0 | 1388.2 | 1404.7 | 1422.9 | 1448.1 | 1461.9 | 1462.8 |
| 15°   | 1473.2 | 1442.9 | 1398.7 | 1373.5 | 1371.8 | 1378.7 | 1394.3 | 1409.0 | 1428.1 | 1445.4 | 1445.4 |
| 17.5° | 1455.9 | 1422.9 | 1377.0 | 1353.6 | 1353.6 | 1359.6 | 1370.0 | 1377.8 | 1390.0 | 1406.5 | 1405.5 |
| 20°   | 1435.0 | 1401.2 | 1354.5 | 1330.1 | 1325.0 | 1321.6 | 1321.6 | 1323.3 | 1333.6 | 1348.4 | 1351.0 |
| 22.5° | 1419.4 | 1384.8 | 1335.4 | 1305.9 | 1282.5 | 1260.0 | 1250.5 | 1247.0 | 1256.5 | 1270.4 | 1273.9 |
| 25°   | 1419.4 | 1384.8 | 1329.3 | 1279.9 | 1222.7 | 1179.4 | 1161.3 | 1156.0 | 1165.6 | 1178.5 | 1183.8 |
| 27.5° | 1442.9 | 1408.2 | 1343.1 | 1256.5 | 1151.6 | 1082.4 | 1060.7 | 1056.3 | 1065.0 | 1075.4 | 1080.6 |
| 30°   | 1497.4 | 1463.6 | 1383.0 | 1229.7 | 1072.8 | 981.8  | 957.6  | 953.2  | 957.6  | 961.9  | 967.9  |
| 32.5° | 1588.4 | 1559.8 | 1448.1 | 1205.4 | 993.1  | 890.8  | 861.3  | 854.5  | 856.2  | 857.0  | 862.2  |
| 35°   | 1736.6 | 1723.6 | 1534.7 | 1176.8 | 917.7  | 816.3  | 785.9  | 772.1  | 771.2  | 775.6  | 781.6  |
| 37.5° | 1963.7 | 1971.4 | 1646.4 | 1135.2 | 855.3  | 763.4  | 733.1  | 719.2  | 712.3  | 721.0  | 727.9  |
| 40°   | 2284.2 | 2302.5 | 1775.6 | 1078.9 | 804.1  | 732.2  | 700.2  | 687.2  | 677.7  | 675.0  | 678.5  |
| 42.5° | 2701.1 | 2695.9 | 1907.3 | 1007.0 | 748.7  | 711.5  | 677.7  | 663.8  | 648.2  | 628.3  | 623.9  |
| 45°   | 3195.1 | 3120.5 | 2017.4 | 918.6  | 685.5  | 691.5  | 656.8  | 637.8  | 613.6  | 584.1  | 580.6  |
| 47.5° | 3778.3 | 3572.9 | 2085.0 | 824.1  | 626.6  | 665.5  | 633.5  | 604.0  | 568.5  | 549.4  | 546.8  |
| 50°   | 4481.0 | 4102.3 | 2132.6 | 727.9  | 573.7  | 632.6  | 600.6  | 561.5  | 526.9  | 521.7  | 520.8  |
| 52.5° | 5312.9 | 4727.2 | 2191.6 | 641.3  | 532.0  | 590.1  | 567.6  | 527.7  | 500.0  | 502.6  | 502.6  |
| 55°   | 6197.8 | 5373.6 | 2193.3 | 572.9  | 495.7  | 540.7  | 543.3  | 511.3  | 489.6  | 498.3  | 500.8  |
| 57.5° | 7004.5 | 5938.6 | 2020.8 | 524.3  | 461.0  | 501.8  | 535.5  | 517.3  | 500.8  | 531.2  | 533.8  |
| 60°   | 7708.1 | 6373.6 | 1649.9 | 484.4  | 432.4  | 487.0  | 552.9  | 554.6  | 551.2  | 633.5  | 639.5  |
| 62.5° | 7965.5 | 6378.0 | 1171.6 | 450.6  | 416.9  | 495.7  | 589.2  | 591.9  | 591.9  | 668.1  | 679.3  |
| 65°   | 7605.0 | 5846.8 | 779.9  | 430.7  | 406.4  | 514.7  | 618.7  | 607.4  | 580.6  | 633.5  | 621.3  |
| 67.5° | 6334.6 | 4551.2 | 570.2  | 417.7  | 391.7  | 515.6  | 644.8  | 616.1  | 570.2  | 615.3  | 594.4  |
| 70°   | 4353.7 | 2896.1 | 477.5  | 405.6  | 374.4  | 493.1  | 658.6  | 613.6  | 554.6  | 573.7  | 545.9  |
| 71°   | 3504.4 | 2311.2 | 453.2  | 401.2  | 367.4  | 480.1  | 660.3  | 610.1  | 546.8  | 558.9  | 533.8  |
| 72.5° | 2308.5 | 1423.7 | 423.7  | 391.7  | 357.0  | 457.6  | 656.0  | 602.3  | 536.4  | 537.3  | 520.8  |
| 75°   | 910.7  | 590.1  | 381.3  | 370.0  | 327.5  | 421.1  | 636.9  | 585.8  | 516.5  | 499.1  | 492.2  |
| 77.5° | 460.1  | 385.7  | 335.3  | 339.7  | 292.9  | 383.9  | 610.1  | 558.9  | 488.8  | 465.3  | 460.1  |
| 80°   | 336.2  | 292.9  | 286.8  | 294.6  | 253.9  | 347.5  | 576.2  | 522.5  | 453.2  | 477.5  | 467.1  |
| 82.5° | 204.5  | 178.5  | 224.4  | 243.5  | 212.3  | 310.3  | 536.4  | 480.1  | 408.2  | 376.1  | 364.0  |
| 85°   | 97.1   | 104.9  | 162.0  | 179.4  | 156.8  | 247.9  | 490.5  | 433.3  | 356.2  | 307.6  | 312.8  |
| 87.5° | 47.7   | 58.1   | 92.7   | 107.4  | 103.1  | 182.0  | 370.0  | 336.2  | 280.8  | 231.4  | 226.2  |
| 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)