

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: P963174

Luminaire Tested: **NVN-SB2D-835-U-T2R**

Issue Date: 1/21/2025

#### Test Information

Test Method: LM-79-08  
Report Number: P963174  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: NVN-SB2D-835-U-T2R  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(2) 80 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: -

#### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 19706.6 lumens  
Efficiency: N/A  
Efficacy: 133.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B3 - U0 - G3  
  
Input Watts (W): 147.6  
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



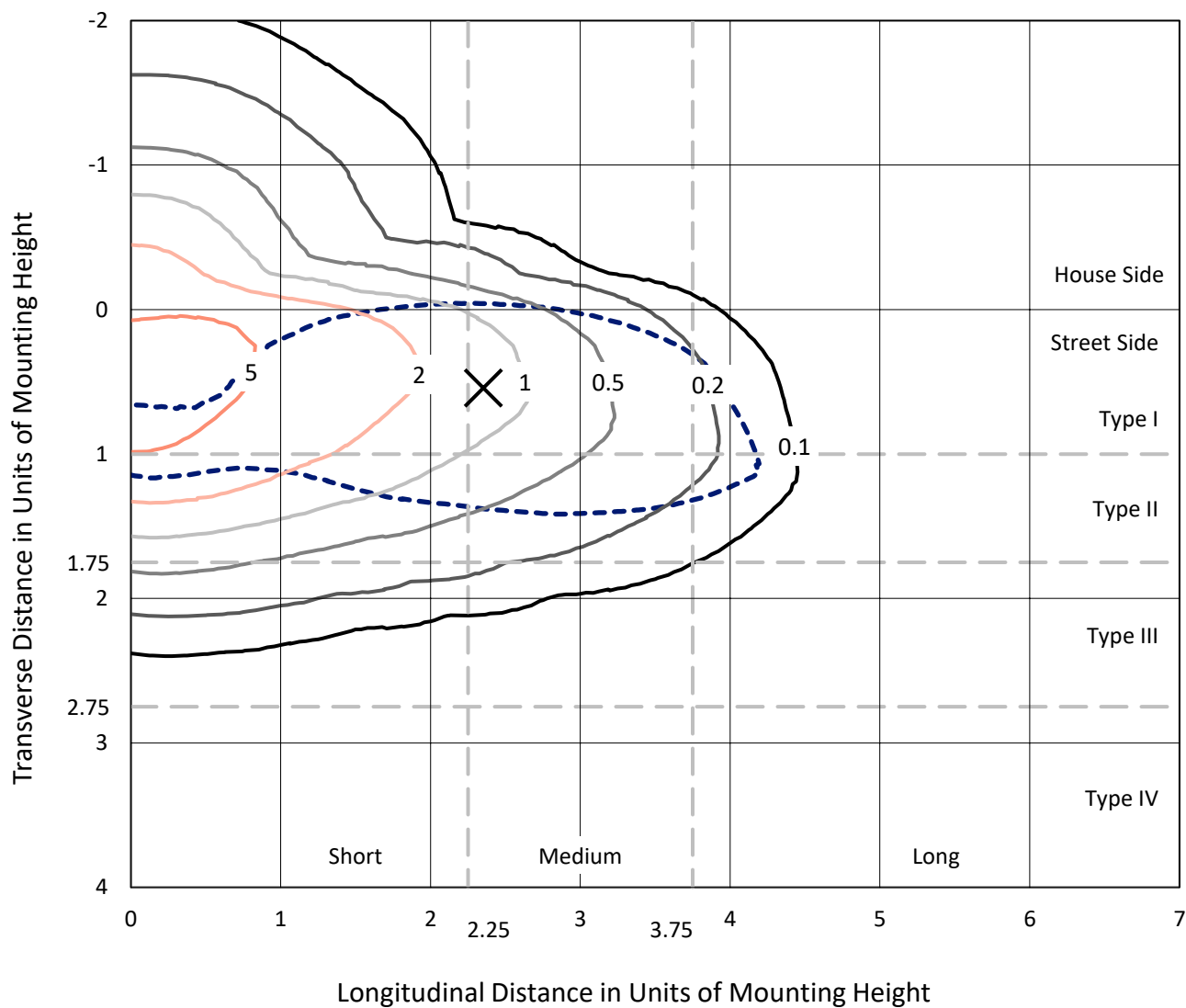
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## Iso-Footcandle Lines of Horizontal Illumination

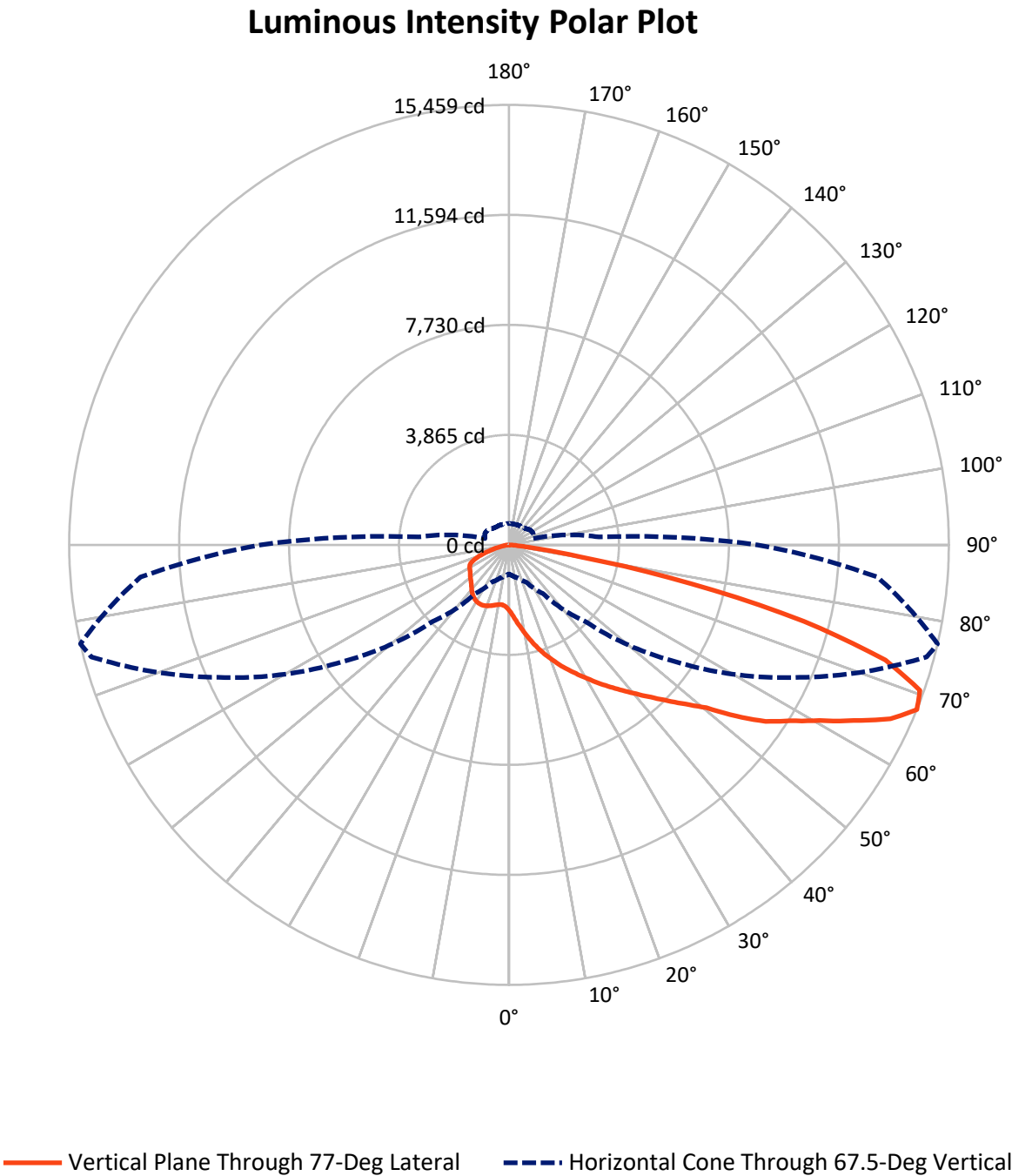
✕ Max cd

--- 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.2 fc  
 Type II - Medium - N/A

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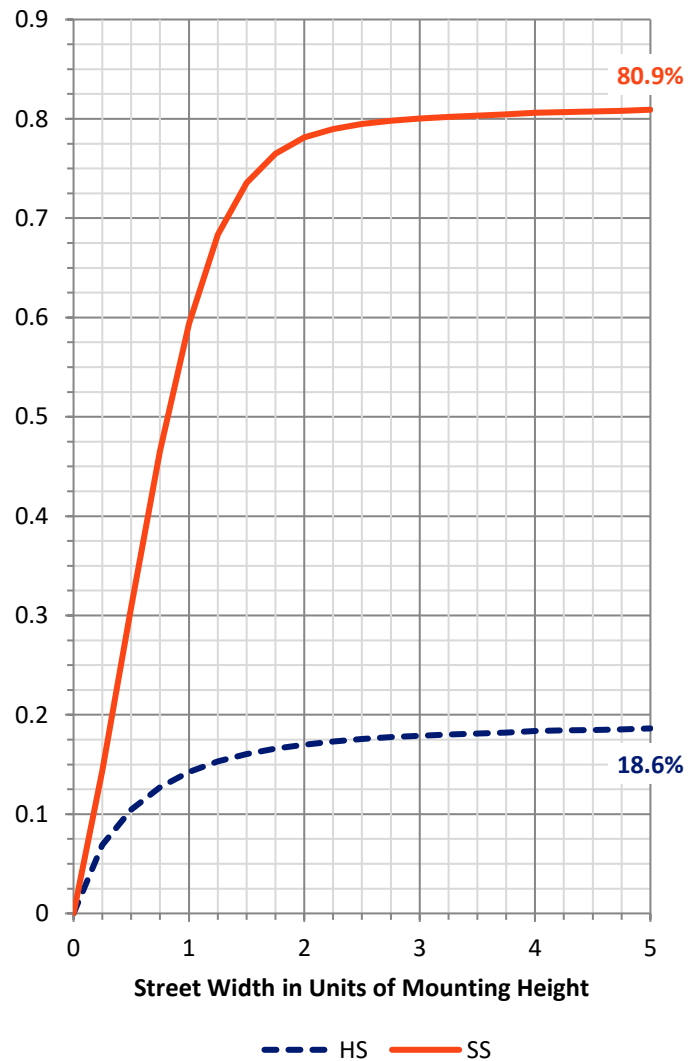
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 3727.7   | 0.0    | 3727.7  |
|                    | % Fixture | 18.9     | 0.0    | 18.9    |
| <b>Street Side</b> | Lumens    | 15979.0  | 0.0    | 15979.0 |
|                    | % Fixture | 81.1     | 0.0    | 81.1    |
| <b>Total</b>       | Lumens    | 19706.6  | 0.0    | 19706.6 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 247.8   | 1.3       |
| 10°-20°   | 890.4   | 4.5       |
| 20°-30°   | 1681.1  | 8.5       |
| 30°-40°   | 2708.3  | 13.7      |
| 40°-50°   | 3704.4  | 18.8      |
| 50°-60°   | 4178.6  | 21.2      |
| 60°-70°   | 3900.2  | 19.8      |
| 70°-80°   | 2138.0  | 10.8      |
| 80°-90°   | 257.9   | 1.3       |
| 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°    | 19706.6 | 100.0     |
| 0°-180°   | 19706.6 | 100.0     |

**Coefficient of Utilization**



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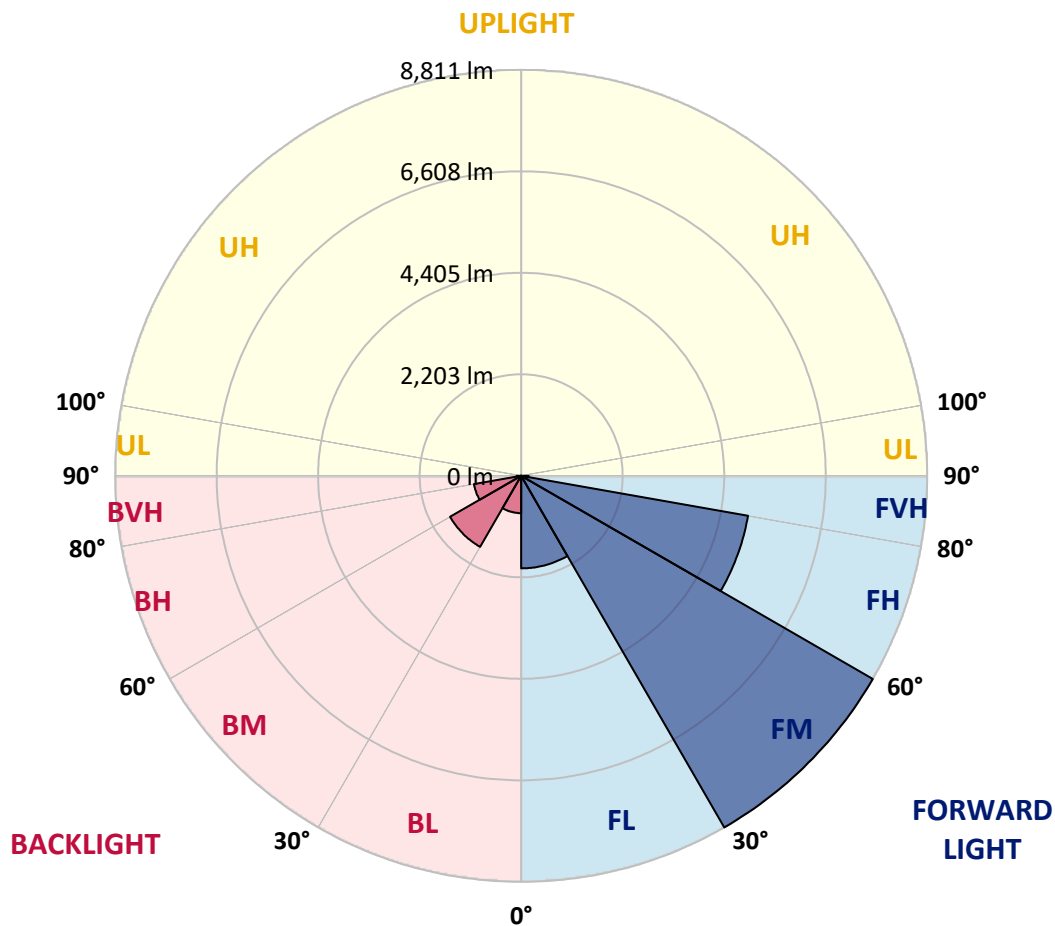
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 2008.8 | 10.2      |                         |      |         |
| FM   | (30°-60°)   | 8810.6 | 44.7      |                         |      |         |
| FH   | (60°-80°)   | 4998.2 | 25.4      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 161.3  | 0.8       |                         |      | G2/225  |
| BL   | (0°-30°)    | 810.5  | 4.1       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 1780.6 | 9.0       | B2/2500                 |      |         |
| BH   | (60°-80°)   | 1040.0 | 5.3       | B3/2500                 |      | G3/2500 |
| BVH  | (80°-90°)   | 96.6   | 0.5       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B3-U0-G3**

Type II Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°     | 75°     | 77°     | 85°     |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|
| 0°    | 2312.2 | 2312.2 | 2312.2 | 2312.2 | 2312.2 | 2312.2 | 2312.2 | 2312.2  | 2312.2  | 2312.2  | 2312.2  |
| 2.5°  | 2895.1 | 2915.4 | 2890.0 | 2890.0 | 2804.5 | 2759.8 | 2674.3 | 2609.2  | 2492.3  | 2471.9  | 2394.6  |
| 5°    | 3422.1 | 3447.5 | 3411.8 | 3396.5 | 3295.9 | 3203.3 | 3059.8 | 2918.5  | 2709.9  | 2688.6  | 2506.5  |
| 7.5°  | 3829.9 | 3862.5 | 3830.9 | 3814.6 | 3725.2 | 3621.4 | 3453.5 | 3256.2  | 2962.2  | 2920.5  | 2657.0  |
| 10°   | 4162.5 | 4167.6 | 4157.5 | 4163.5 | 4093.4 | 4008.0 | 3836.1 | 3606.2  | 3238.9  | 3181.9  | 2839.1  |
| 12.5° | 4350.7 | 4374.2 | 4394.5 | 4431.2 | 4418.9 | 4366.0 | 4211.4 | 3936.7  | 3531.8  | 3458.7  | 3037.5  |
| 15°   | 4439.3 | 4480.0 | 4525.7 | 4610.1 | 4678.3 | 4691.5 | 4573.5 | 4291.8  | 3829.9  | 3741.5  | 3237.9  |
| 17.5° | 4470.8 | 4509.5 | 4581.6 | 4703.7 | 4850.2 | 4948.9 | 4896.0 | 4636.6  | 4124.9  | 4023.2  | 3448.5  |
| 20°   | 4630.5 | 4641.7 | 4685.5 | 4801.4 | 4960.1 | 5123.9 | 5163.5 | 4968.3  | 4416.9  | 4301.9  | 3666.1  |
| 22.5° | 4972.3 | 4949.9 | 4962.1 | 5015.0 | 5129.0 | 5287.7 | 5378.2 | 5261.2  | 4716.9  | 4584.7  | 3885.9  |
| 25°   | 5536.8 | 5471.8 | 5406.7 | 5345.7 | 5403.6 | 5493.2 | 5595.9 | 5554.2  | 5031.3  | 4863.4  | 4107.7  |
| 27.5° | 6249.9 | 6170.6 | 6027.2 | 5826.8 | 5756.6 | 5788.2 | 5833.9 | 5825.8  | 5322.2  | 5152.4  | 4336.6  |
| 30°   | 6951.9 | 6859.3 | 6688.4 | 6398.5 | 6213.3 | 6129.9 | 6095.4 | 6072.0  | 5638.6  | 5457.5  | 4567.4  |
| 32.5° | 7512.3 | 7439.1 | 7271.2 | 6946.7 | 6678.2 | 6535.8 | 6420.9 | 6337.5  | 5969.2  | 5788.2  | 4811.6  |
| 35°   | 8002.7 | 7934.5 | 7742.2 | 7388.3 | 7096.3 | 6944.8 | 6794.2 | 6616.2  | 6313.1  | 6129.9  | 5074.1  |
| 37.5° | 8450.3 | 8382.1 | 8118.6 | 7750.4 | 7456.5 | 7351.6 | 7217.3 | 6915.3  | 6657.9  | 6485.0  | 5351.7  |
| 40°   | 8733.1 | 8717.8 | 8471.6 | 8054.6 | 7749.4 | 7697.5 | 7652.8 | 7262.1  | 7040.3  | 6879.6  | 5656.9  |
| 42.5° | 8805.3 | 8838.9 | 8643.5 | 8300.8 | 8009.8 | 7968.1 | 8072.9 | 7654.8  | 7469.7  | 7316.0  | 6002.8  |
| 45°   | 8631.3 | 8728.0 | 8599.9 | 8366.9 | 8195.0 | 8172.5 | 8445.2 | 8084.1  | 7944.7  | 7804.4  | 6419.9  |
| 47.5° | 8190.9 | 8354.7 | 8301.8 | 8269.2 | 8244.8 | 8341.4 | 8772.8 | 8539.8  | 8482.8  | 8360.7  | 6895.9  |
| 50°   | 7301.8 | 7612.1 | 7704.6 | 7910.1 | 8146.1 | 8472.6 | 9070.8 | 9037.2  | 9111.4  | 8988.4  | 7475.7  |
| 52.5° | 5764.7 | 6192.0 | 6729.1 | 7243.8 | 7843.0 | 8428.9 | 9398.3 | 9751.3  | 10064.7 | 9997.5  | 8397.4  |
| 55°   | 4758.7 | 4951.0 | 5363.9 | 6308.0 | 7255.1 | 8244.8 | 9545.8 | 10328.1 | 11010.7 | 10950.7 | 9096.3  |
| 57.5° | 3985.6 | 4157.5 | 4411.8 | 5200.1 | 6366.0 | 7826.7 | 9637.4 | 10680.1 | 11658.7 | 11652.6 | 9785.9  |
| 60°   | 3156.5 | 3338.6 | 3599.0 | 4157.5 | 5327.3 | 7104.5 | 9617.1 | 11080.9 | 12485.7 | 12536.6 | 10627.2 |
| 62.5° | 2220.7 | 2421.0 | 2709.9 | 3230.8 | 4266.4 | 6168.6 | 9202.0 | 11370.7 | 13459.2 | 13597.5 | 11639.4 |
| 65°   | 1459.7 | 1592.0 | 1809.6 | 2259.3 | 3178.9 | 4965.2 | 8409.6 | 11408.5 | 14500.9 | 14734.8 | 12589.5 |
| 67.5° | 1023.4 | 1074.2 | 1202.4 | 1446.5 | 2095.5 | 3807.6 | 7147.2 | 11018.9 | 15195.6 | 15459.2 | 13001.4 |
| 70°   | 798.6  | 824.0  | 889.1  | 986.8  | 1316.3 | 2560.4 | 5476.9 | 10005.6 | 15047.1 | 15321.8 | 12571.1 |
| 72.5° | 689.7  | 714.1  | 738.5  | 750.7  | 882.9  | 1580.8 | 3709.9 | 8365.8  | 13648.4 | 13834.5 | 10930.3 |
| 75°   | 625.6  | 631.7  | 652.1  | 648.0  | 673.4  | 1025.4 | 2141.3 | 6095.4  | 10768.5 | 10704.5 | 8068.8  |
| 77.5° | 525.9  | 534.0  | 567.6  | 562.5  | 598.2  | 700.9  | 1111.8 | 3933.7  | 6981.4  | 6546.0  | 4491.1  |
| 80°   | 445.6  | 449.7  | 486.3  | 480.1  | 519.8  | 507.6  | 567.6  | 2005.0  | 2961.2  | 2508.5  | 1295.0  |
| 82.5° | 154.7  | 191.3  | 371.3  | 382.5  | 396.8  | 307.2  | 327.6  | 817.8   | 904.4   | 692.7   | 271.6   |
| 85°   | 75.2   | 80.4   | 189.2  | 268.5  | 267.5  | 154.7  | 159.7  | 291.9   | 284.8   | 223.8   | 90.5    |
| 87.5° | 12.2   | 15.3   | 22.3   | 104.8  | 83.4   | 40.7   | 54.9   | 57.0    | 59.0    | 50.8    | 20.3    |
| 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°    | 2312.2 | 2312.2 | 2312.2 | 2312.2 | 2312.2 | 2312.2 | 2312.2 | 2312.2 | 2312.2 | 2312.2 | 2312.2 |
| 2.5°  | 2337.6 | 2286.8 | 2180.0 | 2081.3 | 2004.0 | 1929.8 | 1888.0 | 1852.4 | 1832.1 | 1828.0 | 1828.0 |
| 5°    | 2400.7 | 2295.9 | 2101.7 | 1937.9 | 1831.1 | 1751.7 | 1710.0 | 1683.6 | 1670.3 | 1662.1 | 1661.1 |
| 7.5°  | 2491.3 | 2337.6 | 2061.0 | 1874.8 | 1762.9 | 1705.9 | 1684.6 | 1680.5 | 1679.5 | 1680.5 | 1683.6 |
| 10°   | 2616.3 | 2405.8 | 2056.9 | 1859.6 | 1766.0 | 1734.4 | 1733.4 | 1734.4 | 1738.5 | 1739.5 | 1740.6 |
| 12.5° | 2751.6 | 2476.0 | 2073.2 | 1872.8 | 1804.6 | 1787.3 | 1784.2 | 1783.2 | 1786.3 | 1788.3 | 1789.3 |
| 15°   | 2899.1 | 2568.5 | 2100.6 | 1901.3 | 1847.4 | 1829.0 | 1825.9 | 1819.9 | 1818.9 | 1817.8 | 1816.8 |
| 17.5° | 3050.7 | 2660.1 | 2131.2 | 1931.7 | 1874.8 | 1849.3 | 1838.1 | 1823.9 | 1812.7 | 1809.6 | 1812.7 |
| 20°   | 3204.4 | 2750.6 | 2152.5 | 1947.0 | 1876.8 | 1841.2 | 1818.9 | 1794.5 | 1775.1 | 1763.9 | 1768.0 |
| 22.5° | 3368.2 | 2845.2 | 2165.7 | 1943.0 | 1858.5 | 1809.6 | 1768.9 | 1740.6 | 1711.0 | 1691.7 | 1692.7 |
| 25°   | 3527.8 | 2927.6 | 2164.7 | 1921.6 | 1822.9 | 1760.8 | 1709.0 | 1672.4 | 1631.7 | 1611.3 | 1611.3 |
| 27.5° | 3681.4 | 3001.9 | 2139.3 | 1884.0 | 1772.0 | 1702.8 | 1640.8 | 1597.1 | 1557.4 | 1538.1 | 1537.1 |
| 30°   | 3840.1 | 3063.9 | 2099.6 | 1829.0 | 1712.1 | 1635.7 | 1567.5 | 1529.9 | 1494.3 | 1476.0 | 1475.0 |
| 32.5° | 3997.8 | 3120.9 | 2043.6 | 1760.8 | 1642.9 | 1569.6 | 1502.4 | 1467.9 | 1446.5 | 1446.5 | 1447.5 |
| 35°   | 4164.6 | 3160.6 | 1969.4 | 1681.5 | 1569.6 | 1499.5 | 1446.5 | 1426.2 | 1424.1 | 1411.9 | 1408.9 |
| 37.5° | 4340.6 | 3186.0 | 1878.8 | 1600.1 | 1497.4 | 1431.3 | 1415.0 | 1390.6 | 1370.2 | 1343.8 | 1339.7 |
| 40°   | 4525.7 | 3211.4 | 1770.0 | 1515.7 | 1421.1 | 1384.5 | 1377.4 | 1344.8 | 1286.8 | 1221.7 | 1212.6 |
| 42.5° | 4750.6 | 3228.7 | 1657.1 | 1431.3 | 1340.7 | 1328.5 | 1338.6 | 1282.8 | 1190.2 | 1141.3 | 1142.4 |
| 45°   | 5010.9 | 3257.2 | 1553.3 | 1347.9 | 1258.3 | 1258.3 | 1301.0 | 1227.8 | 1151.5 | 1121.0 | 1126.1 |
| 47.5° | 5348.7 | 3323.4 | 1456.7 | 1256.3 | 1182.0 | 1202.4 | 1217.6 | 1161.7 | 1119.0 | 1081.4 | 1080.4 |
| 50°   | 5837.0 | 3482.0 | 1357.0 | 1163.7 | 1124.0 | 1164.7 | 1143.4 | 1110.8 | 1061.0 | 1030.4 | 1027.5 |
| 52.5° | 6443.3 | 3575.6 | 1268.5 | 1080.4 | 1074.2 | 1114.9 | 1084.3 | 1053.9 | 1016.2 | 975.5  | 967.4  |
| 55°   | 6856.2 | 3592.9 | 1194.2 | 1019.3 | 1040.7 | 1036.6 | 1025.4 | 997.9  | 977.5  | 923.6  | 924.7  |
| 57.5° | 7318.1 | 3627.5 | 1133.2 | 982.7  | 1019.3 | 974.6  | 970.5  | 947.1  | 920.7  | 884.0  | 871.8  |
| 60°   | 7870.5 | 3681.4 | 1080.4 | 968.4  | 1001.0 | 933.9  | 913.5  | 904.4  | 877.9  | 859.6  | 864.7  |
| 62.5° | 8472.6 | 3730.3 | 1026.4 | 970.5  | 979.6  | 894.2  | 863.7  | 860.6  | 844.3  | 838.2  | 838.2  |
| 65°   | 8883.6 | 3597.0 | 959.3  | 968.4  | 946.1  | 853.5  | 814.8  | 813.7  | 800.5  | 798.6  | 797.6  |
| 67.5° | 8740.2 | 3174.8 | 868.7  | 939.9  | 911.4  | 812.8  | 770.1  | 766.0  | 748.7  | 749.7  | 749.7  |
| 70°   | 8022.1 | 2572.6 | 743.6  | 869.7  | 868.7  | 776.1  | 723.2  | 710.0  | 686.6  | 690.7  | 694.7  |
| 72.5° | 6675.2 | 1906.3 | 575.7  | 752.8  | 800.5  | 742.6  | 669.3  | 648.0  | 618.5  | 622.6  | 621.6  |
| 75°   | 4820.8 | 1296.0 | 419.1  | 572.7  | 696.8  | 702.9  | 616.4  | 579.8  | 544.3  | 550.3  | 552.4  |
| 77.5° | 2466.9 | 734.4  | 308.2  | 394.7  | 547.2  | 638.8  | 568.7  | 519.8  | 511.7  | 568.7  | 560.5  |
| 80°   | 804.6  | 368.3  | 213.6  | 276.6  | 359.1  | 522.9  | 498.5  | 442.5  | 440.4  | 453.7  | 389.6  |
| 82.5° | 240.1  | 155.6  | 137.4  | 182.0  | 198.3  | 400.8  | 430.3  | 334.7  | 287.9  | 303.1  | 313.3  |
| 85°   | 82.4   | 75.2   | 78.3   | 90.5   | 94.6   | 235.0  | 301.1  | 221.8  | 209.5  | 230.9  | 227.9  |
| 87.5° | 19.4   | 26.4   | 22.3   | 20.3   | 20.3   | 57.0   | 117.0  | 92.6   | 128.1  | 85.5   | 82.4   |
| 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)