

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: P239778

Luminaire Tested: **UTLD-AF24-40-D-U-SL3-HSS**

Issue Date: 5/28/2020

### Test Information

Test Method: LM-79-08  
Report Number: P239778  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1710-388-41-U0)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 5/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: UTLD-AF24-40-D-U-SL3-HSS  
Description: TRADITIONAIRE LED DOWNLIGHT LUMINAIRE  
(1) 70 CRI, 4000K, 500mA LIGHT ENGINE WITH 24 LEDS AND TYPE III SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
PHOTOMETRIC DATA REPORTED FOR LOWER HEMISPHERE ONLY. MINIMAL LIGHT IN  
UPPER HEMISPHERE NOT REPORTED.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 3625.3 lumens  
Efficiency: N/A  
Efficacy: 90.6 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 1.21' x L: 1.21' x H: 0.96')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B0 - U0 - G1

Input Watts (W): 40  
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

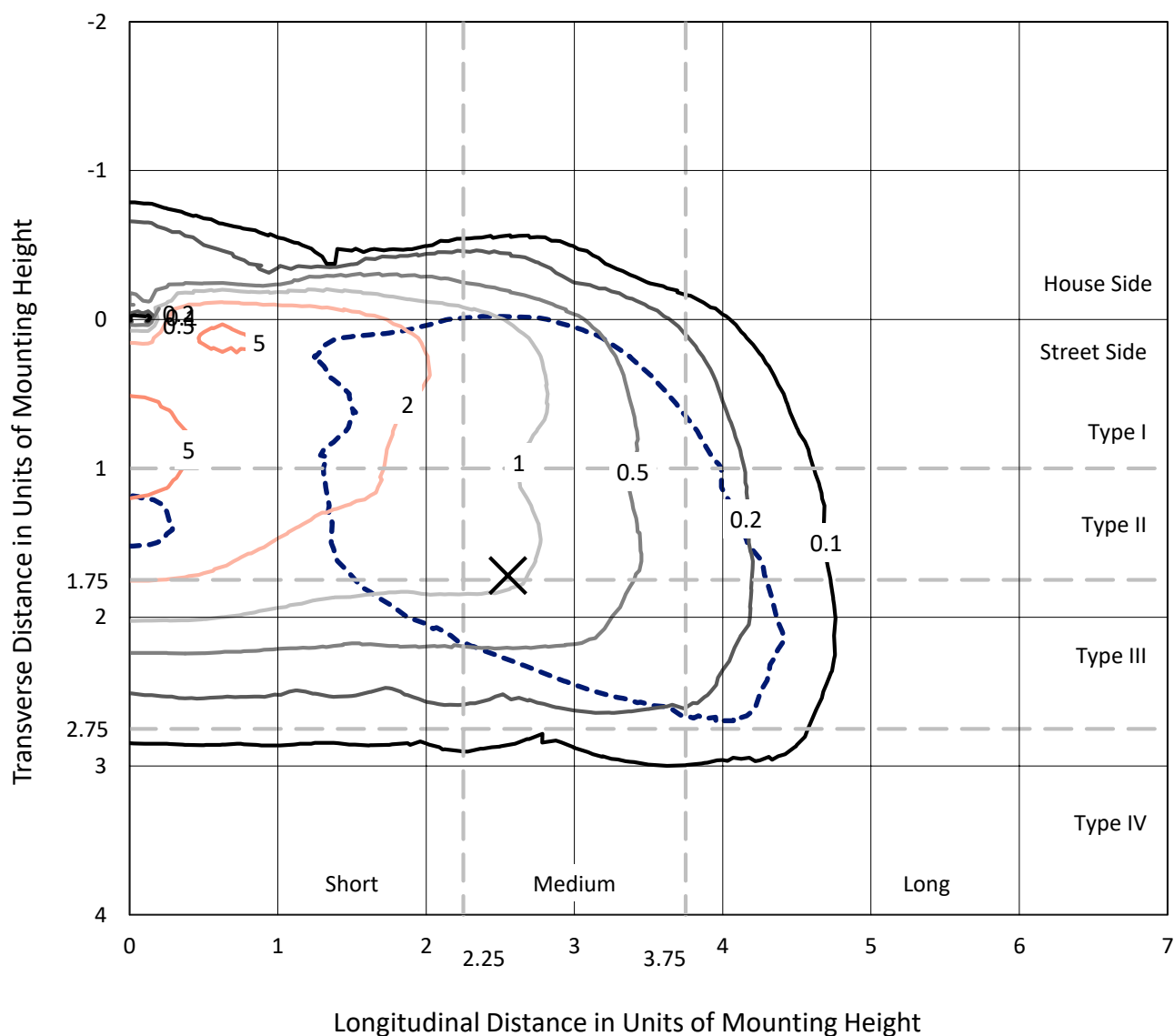


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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
- - - 1/2 Max cd

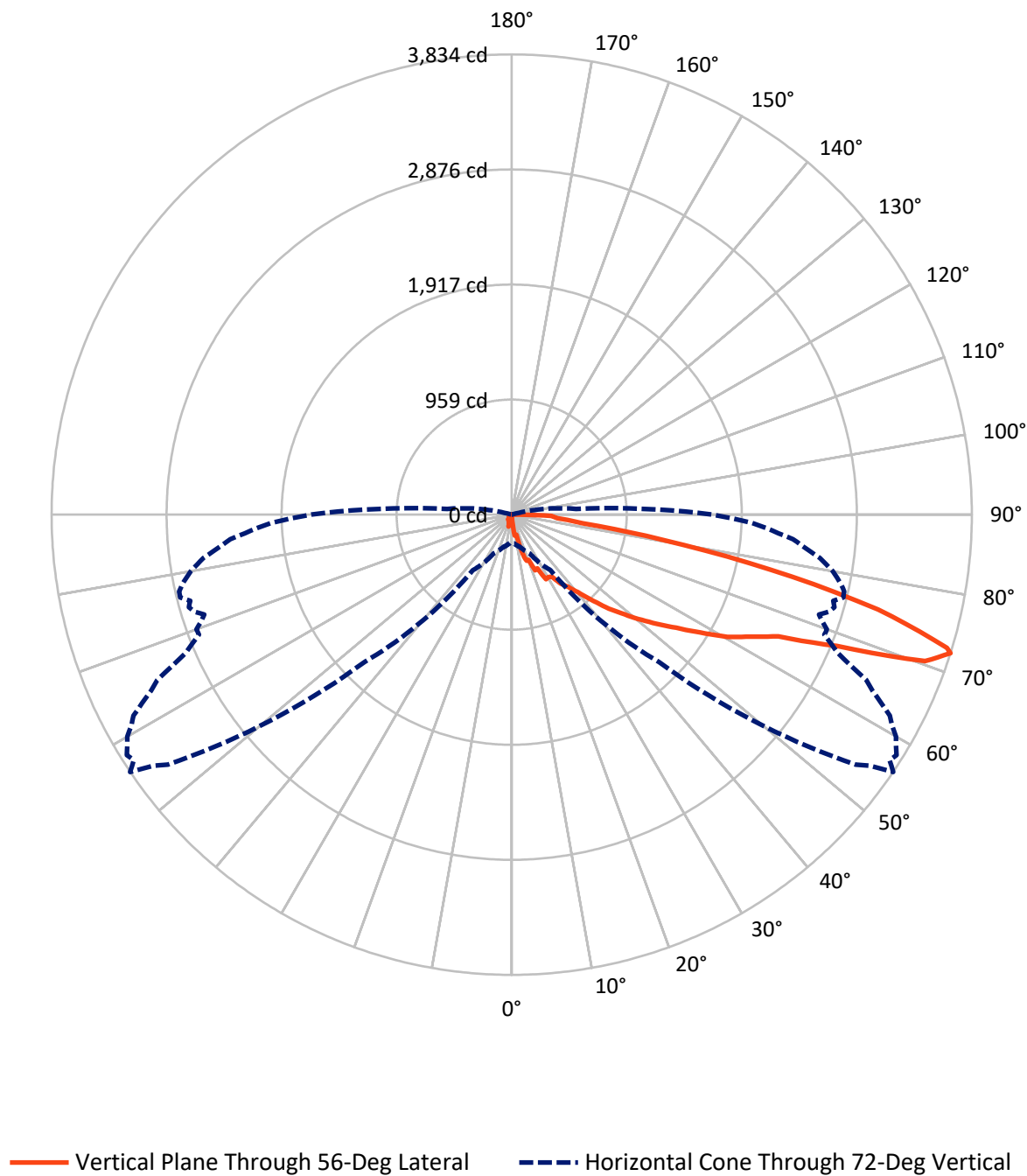


Based on 10 foot mounting height. Maximum calculated value = 6.6 fc  
Type III - Medium - Non-Cutoff

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## Luminous Intensity Polar Plot



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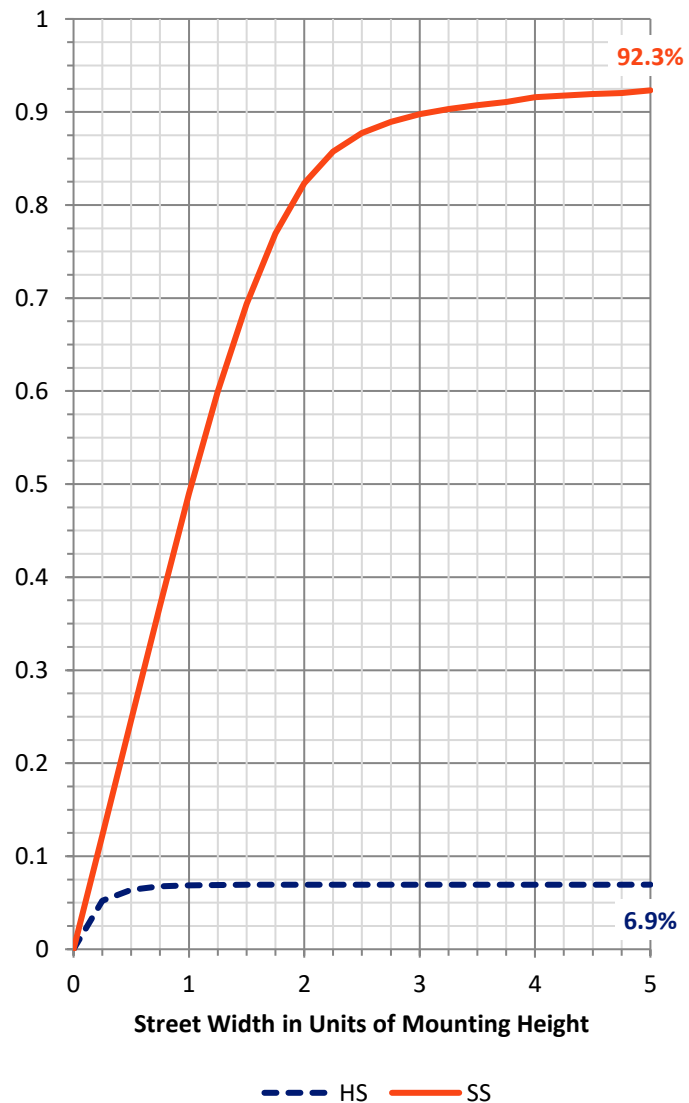
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 253.8    | 0.0    | 253.8  |
|                    | % Fixture | 7.0      | 0.0    | 7.0    |
| <b>Street Side</b> | Lumens    | 3371.6   | 0.0    | 3371.6 |
|                    | % Fixture | 93.0     | 0.0    | 93.0   |
| <b>Total</b>       | Lumens    | 3625.3   | 0.0    | 3625.3 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 5.9    | 0.2       |
| 10°-20°   | 58.5   | 1.6       |
| 20°-30°   | 161.9  | 4.5       |
| 30°-40°   | 314.2  | 8.7       |
| 40°-50°   | 537.5  | 14.8      |
| 50°-60°   | 829.7  | 22.9      |
| 60°-70°   | 957.9  | 26.4      |
| 70°-80°   | 674.3  | 18.6      |
| 80°-90°   | 85.5   | 2.4       |
| 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°    | 3625.3 | 100.0     |
| 0°-180°   | 3625.3 | 100.0     |

**Coefficient of Utilization**



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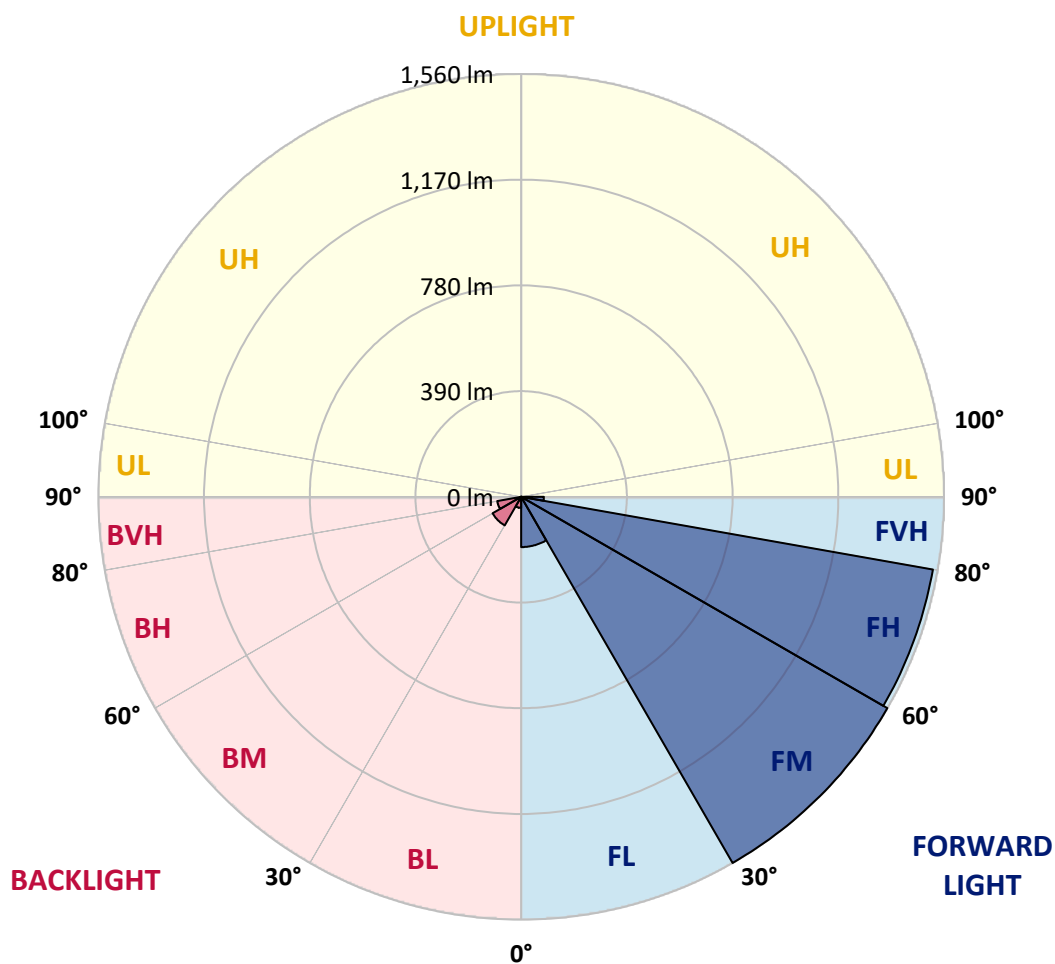
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 185.5  | 5.1       |                         |      |         |
| FM   | (30°-60°)   | 1559.8 | 43.0      |                         |      |         |
| FH   | (60°-80°)   | 1542.4 | 42.5      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 83.9   | 2.3       |                         |      | G1/100  |
| BL   | (0°-30°)    | 40.9   | 1.1       | B0/110                  |      |         |
| BM   | (30°-60°)   | 121.6  | 3.4       | B0/220                  |      |         |
| BH   | (60°-80°)   | 89.8   | 2.5       | B0/110                  |      | G0/110  |
| BVH  | (80°-90°)   | 1.6    | 0.0       |                         |      | G0/10   |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B0-U0-G1**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 54°    | 55°    | 56°    | 57°    | 58°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 2.5°  | 16.1   | 16.1   | 15.5   | 12.5   | 6.2    | 1.5    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 5°    | 179.1  | 179.1  | 178.6  | 180.7  | 180.1  | 176.6  | 22.3   | 20.3   | 19.2   | 18.2   | 17.1   |
| 7.5°  | 169.8  | 169.8  | 170.3  | 170.3  | 172.9  | 174.4  | 177.1  | 176.6  | 176.6  | 175.9  | 175.4  |
| 10°   | 327.0  | 328.1  | 327.5  | 185.9  | 173.4  | 168.7  | 170.8  | 171.9  | 172.4  | 172.4  | 172.4  |
| 12.5° | 311.5  | 311.5  | 313.0  | 318.2  | 323.5  | 180.7  | 169.8  | 170.3  | 172.9  | 173.4  | 175.4  |
| 15°   | 321.3  | 318.8  | 311.0  | 305.2  | 311.0  | 285.5  | 336.4  | 337.5  | 336.4  | 333.3  | 329.7  |
| 17.5° | 421.6  | 423.1  | 428.8  | 420.5  | 311.5  | 416.9  | 434.5  | 413.8  | 403.3  | 397.1  | 343.7  |
| 20°   | 411.1  | 411.1  | 412.8  | 417.9  | 489.6  | 403.3  | 415.8  | 400.3  | 401.8  | 387.8  | 395.6  |
| 22.5° | 542.5  | 542.0  | 540.9  | 421.6  | 474.5  | 457.4  | 506.2  | 497.9  | 502.6  | 507.2  | 511.4  |
| 25°   | 558.1  | 555.5  | 547.2  | 507.2  | 468.8  | 526.9  | 498.9  | 491.1  | 496.8  | 495.8  | 511.4  |
| 27.5° | 748.6  | 741.3  | 666.0  | 549.2  | 527.9  | 516.1  | 519.7  | 599.1  | 609.5  | 617.8  | 624.0  |
| 30°   | 851.4  | 828.1  | 762.6  | 693.0  | 572.6  | 558.1  | 591.4  | 602.2  | 603.2  | 619.4  | 644.8  |
| 32.5° | 1139.1 | 1101.1 | 948.5  | 758.0  | 666.6  | 626.1  | 598.1  | 606.4  | 615.7  | 670.7  | 700.3  |
| 35°   | 1211.7 | 1173.8 | 1060.6 | 921.5  | 733.0  | 667.7  | 698.8  | 700.8  | 706.0  | 735.6  | 718.0  |
| 37.5° | 1215.4 | 1207.1 | 1153.6 | 1021.7 | 862.3  | 761.1  | 753.8  | 751.3  | 763.1  | 776.1  | 759.0  |
| 40°   | 1236.6 | 1240.8 | 1275.0 | 1144.8 | 966.7  | 857.6  | 833.8  | 822.9  | 849.9  | 836.9  | 836.9  |
| 42.5° | 1330.6 | 1336.3 | 1396.0 | 1268.3 | 1085.6 | 970.8  | 949.0  | 939.7  | 964.0  | 927.7  | 955.2  |
| 45°   | 1533.1 | 1530.9 | 1551.7 | 1378.3 | 1213.8 | 1082.0 | 1085.0 | 1085.0 | 1101.1 | 1063.8 | 1093.8 |
| 47.5° | 1770.3 | 1755.3 | 1700.2 | 1471.3 | 1336.3 | 1190.9 | 1214.3 | 1228.9 | 1225.7 | 1208.1 | 1229.4 |
| 50°   | 1940.1 | 1916.7 | 1809.8 | 1573.1 | 1435.0 | 1304.2 | 1355.5 | 1386.7 | 1365.4 | 1380.0 | 1367.0 |
| 52.5° | 1978.0 | 1956.7 | 1859.6 | 1637.9 | 1518.6 | 1430.3 | 1515.4 | 1559.6 | 1509.7 | 1551.7 | 1503.5 |
| 55°   | 1945.2 | 1937.0 | 1871.1 | 1662.3 | 1577.2 | 1540.9 | 1674.3 | 1731.3 | 1664.4 | 1721.0 | 1647.8 |
| 57.5° | 1875.2 | 1871.6 | 1856.6 | 1690.4 | 1625.0 | 1642.7 | 1840.4 | 1900.1 | 1853.4 | 1892.9 | 1838.3 |
| 60°   | 1692.0 | 1709.6 | 1762.0 | 1694.0 | 1689.8 | 1748.0 | 2019.0 | 2071.0 | 2066.8 | 2068.8 | 2034.0 |
| 62.5° | 1360.7 | 1371.6 | 1520.1 | 1597.4 | 1726.7 | 1877.3 | 2178.9 | 2193.4 | 2237.6 | 2199.1 | 2202.3 |
| 65°   | 918.4  | 913.7  | 1125.0 | 1361.2 | 1666.0 | 2054.8 | 2417.7 | 2392.8 | 2443.1 | 2356.0 | 2343.0 |
| 67.5° | 440.3  | 472.4  | 619.4  | 937.6  | 1466.1 | 2163.3 | 2928.1 | 2860.1 | 2920.2 | 2735.5 | 2674.2 |
| 70°   | 293.9  | 298.5  | 334.8  | 486.4  | 1004.0 | 2092.2 | 3462.3 | 3488.8 | 3653.9 | 3453.5 | 3405.2 |
| 72°   | 232.1  | 241.4  | 280.9  | 357.7  | 564.9  | 1736.6 | 3541.7 | 3645.5 | 3834.0 | 3754.0 | 3781.5 |
| 72.5° | 206.1  | 221.2  | 268.9  | 345.8  | 511.9  | 1620.3 | 3494.5 | 3618.5 | 3793.5 | 3732.7 | 3767.0 |
| 75°   | 110.1  | 123.6  | 193.1  | 296.5  | 422.6  | 769.9  | 2802.9 | 3060.0 | 3153.9 | 3177.8 | 3193.3 |
| 77.5° | 32.7   | 34.3   | 54.0   | 227.4  | 367.0  | 424.6  | 1759.5 | 2080.3 | 2204.4 | 2264.6 | 2294.2 |
| 80°   | 23.8   | 24.4   | 30.6   | 74.8   | 318.2  | 405.0  | 831.1  | 1108.9 | 1271.4 | 1336.8 | 1407.0 |
| 82.5° | 16.1   | 15.5   | 20.3   | 39.0   | 122.5  | 395.1  | 414.8  | 513.4  | 593.9  | 682.7  | 707.1  |
| 85°   | 9.3    | 8.3    | 12.5   | 29.1   | 43.1   | 327.5  | 388.8  | 388.8  | 381.0  | 384.7  | 375.8  |
| 87.5° | 6.2    | 6.2    | 7.8    | 20.8   | 21.8   | 217.5  | 288.2  | 321.9  | 334.3  | 319.8  | 300.5  |
| 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):**

|       | 59°    | 60°    | 61°    | 62°    | 64°    | 65°    | 66°    | 67°    | 68°    | 69°    | 70°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 2.5°  | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 5°    | 16.1   | 15.5   | 13.0   | 11.5   | 7.3    | 6.2    | 4.7    | 3.1    | 2.0    | 1.0    | 0.5    |
| 7.5°  | 175.4  | 175.4  | 175.4  | 172.9  | 109.0  | 67.5   | 31.2   | 19.7   | 17.7   | 16.6   | 14.5   |
| 10°   | 172.4  | 172.4  | 172.4  | 169.2  | 139.6  | 134.4  | 133.4  | 133.4  | 132.4  | 130.8  | 120.4  |
| 12.5° | 177.1  | 169.8  | 152.6  | 142.8  | 173.4  | 214.4  | 308.4  | 310.5  | 335.4  | 336.4  | 336.4  |
| 15°   | 312.5  | 298.0  | 298.0  | 302.7  | 336.4  | 335.9  | 336.4  | 337.0  | 339.0  | 341.1  | 343.2  |
| 17.5° | 302.7  | 302.7  | 315.7  | 333.3  | 332.8  | 333.3  | 336.4  | 340.0  | 342.1  | 344.2  | 346.8  |
| 20°   | 432.5  | 536.3  | 553.4  | 542.5  | 496.8  | 500.4  | 503.1  | 504.6  | 506.7  | 510.9  | 505.6  |
| 22.5° | 533.7  | 555.5  | 559.7  | 563.9  | 549.8  | 540.9  | 528.5  | 511.9  | 512.4  | 492.1  | 504.6  |
| 25°   | 543.6  | 549.8  | 556.0  | 562.7  | 543.6  | 596.5  | 676.0  | 690.5  | 680.6  | 679.5  | 685.8  |
| 27.5° | 633.9  | 639.7  | 645.3  | 640.7  | 672.3  | 679.0  | 682.2  | 672.3  | 700.3  | 703.0  | 685.3  |
| 30°   | 624.5  | 628.2  | 631.3  | 616.7  | 664.5  | 671.8  | 666.0  | 701.9  | 759.5  | 803.1  | 841.6  |
| 32.5° | 699.8  | 733.6  | 722.1  | 742.9  | 772.5  | 767.8  | 787.1  | 799.5  | 805.8  | 830.1  | 846.2  |
| 35°   | 742.9  | 749.1  | 736.7  | 771.0  | 779.8  | 776.1  | 801.1  | 797.9  | 826.5  | 841.6  | 861.8  |
| 37.5° | 790.6  | 774.6  | 790.6  | 805.8  | 795.9  | 820.3  | 819.3  | 840.6  | 854.6  | 872.2  | 902.9  |
| 40°   | 855.6  | 828.6  | 862.9  | 865.4  | 859.2  | 875.3  | 875.3  | 892.9  | 905.4  | 925.2  | 981.7  |
| 42.5° | 941.7  | 930.9  | 952.7  | 950.6  | 951.7  | 946.4  | 964.6  | 975.0  | 987.5  | 1030.0 | 1073.1 |
| 45°   | 1057.0 | 1073.1 | 1070.0 | 1066.8 | 1063.8 | 1054.5 | 1070.5 | 1082.5 | 1099.1 | 1167.1 | 1174.3 |
| 47.5° | 1181.1 | 1222.1 | 1218.9 | 1196.1 | 1195.6 | 1204.9 | 1208.6 | 1211.7 | 1260.5 | 1291.2 | 1302.5 |
| 50°   | 1346.7 | 1371.6 | 1361.8 | 1327.0 | 1334.7 | 1348.8 | 1347.2 | 1356.0 | 1422.0 | 1427.1 | 1442.3 |
| 52.5° | 1525.8 | 1528.4 | 1507.1 | 1484.8 | 1486.3 | 1494.6 | 1490.0 | 1541.9 | 1567.9 | 1564.2 | 1579.2 |
| 55°   | 1706.5 | 1684.2 | 1652.0 | 1663.4 | 1647.8 | 1637.9 | 1637.4 | 1714.3 | 1696.6 | 1702.3 | 1711.2 |
| 57.5° | 1884.1 | 1871.6 | 1819.1 | 1834.2 | 1817.1 | 1794.8 | 1827.4 | 1851.3 | 1833.1 | 1829.0 | 1836.3 |
| 60°   | 2065.2 | 2038.7 | 1996.2 | 1999.8 | 1965.0 | 1939.6 | 1985.2 | 1962.9 | 1936.4 | 1916.7 | 1938.5 |
| 62.5° | 2197.1 | 2149.3 | 2140.0 | 2094.8 | 2062.6 | 2046.0 | 2097.4 | 2044.5 | 2009.7 | 1983.2 | 2019.5 |
| 65°   | 2317.5 | 2249.5 | 2266.7 | 2200.2 | 2158.6 | 2170.1 | 2178.4 | 2124.9 | 2077.7 | 2069.8 | 2067.8 |
| 67.5° | 2611.9 | 2545.4 | 2540.8 | 2475.3 | 2391.2 | 2427.1 | 2388.1 | 2326.4 | 2291.0 | 2310.7 | 2287.9 |
| 70°   | 3307.5 | 3206.3 | 3148.1 | 3054.2 | 2871.4 | 2891.2 | 2784.8 | 2662.7 | 2603.1 | 2592.2 | 2597.4 |
| 72°   | 3736.9 | 3698.5 | 3623.2 | 3568.2 | 3343.9 | 3259.3 | 3091.6 | 2950.4 | 2870.9 | 2790.5 | 2794.6 |
| 72.5° | 3732.2 | 3724.5 | 3658.5 | 3619.6 | 3430.6 | 3344.4 | 3168.9 | 2997.1 | 2930.1 | 2832.0 | 2813.8 |
| 75°   | 3189.2 | 3244.2 | 3190.8 | 3216.2 | 3228.6 | 3175.6 | 3054.7 | 2892.2 | 2808.6 | 2672.7 | 2576.6 |
| 77.5° | 2247.4 | 2290.0 | 2271.9 | 2234.4 | 2314.4 | 2196.1 | 2151.9 | 2075.6 | 2013.3 | 1962.4 | 1844.1 |
| 80°   | 1386.7 | 1341.5 | 1353.0 | 1314.5 | 1261.0 | 1215.9 | 1120.8 | 1090.8 | 1010.3 | 884.6  | 835.3  |
| 82.5° | 695.2  | 658.8  | 651.0  | 627.7  | 546.2  | 515.1  | 442.3  | 384.2  | 330.2  | 267.9  | 204.1  |
| 85°   | 365.5  | 352.0  | 338.5  | 325.5  | 288.2  | 250.2  | 220.7  | 184.3  | 140.7  | 97.1   | 66.0   |
| 87.5° | 277.2  | 244.0  | 203.0  | 205.6  | 174.9  | 158.4  | 141.2  | 128.8  | 97.6   | 64.9   | 39.5   |
| 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):**

|       | 71°    | 72°    | 73°    | 74°    | 75°    | 76°    | 77°    | 78°    | 79°    | 80°    | 81°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 2.5°  | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 5°    | 0.5    | 0.5    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 7.5°  | 12.5   | 8.8    | 6.2    | 3.7    | 2.0    | 1.0    | 0.5    | 0.5    | 0.5    | 0.0    | 0.0    |
| 10°   | 91.9   | 46.7   | 21.8   | 14.0   | 12.0   | 9.3    | 6.8    | 3.7    | 2.0    | 1.5    | 1.0    |
| 12.5° | 337.0  | 337.0  | 337.0  | 333.3  | 284.0  | 240.9  | 228.4  | 225.4  | 220.7  | 217.5  | 214.4  |
| 15°   | 343.7  | 345.2  | 344.7  | 342.1  | 325.0  | 307.9  | 293.3  | 255.9  | 231.0  | 227.4  | 221.7  |
| 17.5° | 348.3  | 341.6  | 321.9  | 315.7  | 316.2  | 316.2  | 315.2  | 329.2  | 329.7  | 314.7  | 361.3  |
| 20°   | 493.2  | 516.1  | 523.9  | 526.9  | 529.1  | 530.1  | 529.1  | 526.9  | 534.2  | 536.8  | 492.1  |
| 22.5° | 520.7  | 524.4  | 529.1  | 533.2  | 534.2  | 537.4  | 553.4  | 550.9  | 534.7  | 530.6  | 525.4  |
| 25°   | 693.6  | 701.3  | 708.1  | 713.3  | 726.3  | 751.3  | 755.3  | 749.1  | 745.0  | 739.3  | 729.5  |
| 27.5° | 693.0  | 701.3  | 710.2  | 737.8  | 763.1  | 761.1  | 761.6  | 761.1  | 757.0  | 750.2  | 722.1  |
| 30°   | 856.6  | 874.2  | 909.6  | 941.2  | 945.4  | 949.5  | 951.7  | 949.0  | 962.0  | 944.9  | 949.5  |
| 32.5° | 865.4  | 904.9  | 938.1  | 949.0  | 961.5  | 968.7  | 974.0  | 989.5  | 982.2  | 990.5  | 974.0  |
| 35°   | 902.3  | 942.8  | 956.8  | 975.5  | 991.0  | 1002.0 | 1024.3 | 1022.7 | 1036.2 | 1021.7 | 1002.5 |
| 37.5° | 955.7  | 970.8  | 994.7  | 1018.6 | 1039.3 | 1069.5 | 1077.3 | 1097.0 | 1087.6 | 1074.1 | 1056.5 |
| 40°   | 1003.0 | 1027.5 | 1051.8 | 1082.5 | 1127.1 | 1138.0 | 1173.8 | 1168.1 | 1162.4 | 1144.8 | 1149.4 |
| 42.5° | 1084.0 | 1114.6 | 1142.1 | 1193.6 | 1218.4 | 1263.1 | 1276.1 | 1266.7 | 1265.2 | 1269.9 | 1267.7 |
| 45°   | 1195.1 | 1224.2 | 1265.2 | 1318.7 | 1369.5 | 1392.3 | 1400.2 | 1399.6 | 1407.0 | 1428.2 | 1397.0 |
| 47.5° | 1326.5 | 1353.0 | 1415.3 | 1458.3 | 1512.3 | 1536.7 | 1549.2 | 1562.1 | 1596.4 | 1585.0 | 1558.0 |
| 50°   | 1461.4 | 1512.8 | 1548.6 | 1630.7 | 1661.3 | 1691.4 | 1708.0 | 1759.5 | 1771.3 | 1748.5 | 1756.8 |
| 52.5° | 1603.2 | 1670.7 | 1706.5 | 1772.4 | 1813.9 | 1838.3 | 1896.4 | 1945.8 | 1938.0 | 1943.7 | 1971.7 |
| 55°   | 1763.6 | 1781.8 | 1863.3 | 1906.4 | 1946.9 | 1985.2 | 2066.8 | 2078.2 | 2076.6 | 2115.1 | 2094.8 |
| 57.5° | 1890.2 | 1925.0 | 1971.2 | 2002.9 | 2036.7 | 2111.4 | 2157.1 | 2157.6 | 2194.4 | 2207.4 | 2175.3 |
| 60°   | 1943.2 | 2008.2 | 2027.3 | 2053.3 | 2098.5 | 2187.7 | 2196.1 | 2214.2 | 2275.5 | 2254.7 | 2224.6 |
| 62.5° | 2024.2 | 2057.5 | 2069.8 | 2094.8 | 2189.3 | 2226.1 | 2232.9 | 2302.5 | 2320.2 | 2305.0 | 2281.2 |
| 65°   | 2122.3 | 2123.3 | 2148.3 | 2193.9 | 2301.9 | 2323.2 | 2371.0 | 2448.3 | 2441.1 | 2441.6 | 2424.0 |
| 67.5° | 2324.8 | 2332.5 | 2354.9 | 2457.1 | 2512.2 | 2525.2 | 2626.9 | 2659.7 | 2653.4 | 2653.4 | 2645.7 |
| 70°   | 2579.7 | 2578.7 | 2596.4 | 2725.0 | 2726.1 | 2766.6 | 2843.4 | 2845.0 | 2842.9 | 2820.1 | 2795.1 |
| 72°   | 2737.0 | 2692.9 | 2764.0 | 2797.8 | 2773.3 | 2847.6 | 2843.9 | 2806.6 | 2762.5 | 2715.7 | 2652.9 |
| 72.5° | 2736.5 | 2694.5 | 2753.1 | 2766.6 | 2741.7 | 2806.1 | 2772.8 | 2739.6 | 2690.3 | 2622.7 | 2549.1 |
| 75°   | 2465.5 | 2381.9 | 2423.5 | 2337.2 | 2315.4 | 2337.7 | 2243.3 | 2192.4 | 2097.4 | 1999.8 | 1914.7 |
| 77.5° | 1739.7 | 1713.2 | 1654.0 | 1565.8 | 1565.2 | 1500.9 | 1359.2 | 1312.4 | 1236.6 | 1122.9 | 1042.0 |
| 80°   | 753.3  | 690.0  | 628.7  | 587.7  | 540.9  | 505.6  | 395.6  | 380.0  | 337.0  | 278.8  | 239.4  |
| 82.5° | 161.4  | 128.3  | 104.3  | 92.9   | 84.6   | 80.5   | 67.5   | 66.0   | 65.4   | 61.8   | 60.3   |
| 85°   | 45.7   | 36.3   | 33.2   | 32.2   | 32.2   | 31.2   | 32.7   | 34.3   | 34.8   | 35.3   | 35.8   |
| 87.5° | 25.0   | 19.7   | 17.1   | 17.1   | 18.2   | 19.2   | 21.3   | 23.3   | 25.0   | 25.0   | 25.5   |
| 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):**

|       | 82°    | 83°    | 84°    | 85°    | 86°    | 87°    | 88°    | 89°    | 90°    | 95°   | 105°  |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|
| 0°    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0   | 0.0   |
| 2.5°  | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.5   | 0.5   |
| 5°    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.5   | 0.5   |
| 7.5°  | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.5   | 0.5   |
| 10°   | 1.0    | 1.5    | 1.5    | 2.0    | 1.5    | 1.0    | 2.0    | 2.0    | 1.0    | 1.0   | 1.0   |
| 12.5° | 210.7  | 209.2  | 208.2  | 204.6  | 203.0  | 200.4  | 197.3  | 194.7  | 193.1  | 206.6 | 164.1 |
| 15°   | 216.5  | 212.4  | 209.7  | 208.7  | 221.7  | 229.4  | 227.4  | 224.8  | 220.7  | 202.4 | 158.9 |
| 17.5° | 355.6  | 373.3  | 383.1  | 417.4  | 398.2  | 405.5  | 398.2  | 390.4  | 389.3  | 319.3 | 156.3 |
| 20°   | 471.9  | 462.1  | 452.1  | 443.3  | 435.1  | 425.8  | 416.9  | 422.1  | 424.6  | 369.6 | 227.9 |
| 22.5° | 499.9  | 475.6  | 465.6  | 454.3  | 463.1  | 460.5  | 449.6  | 438.1  | 426.8  | 364.5 | 202.4 |
| 25°   | 712.8  | 675.5  | 674.4  | 669.2  | 650.5  | 632.3  | 613.2  | 596.0  | 589.7  | 500.4 | 251.7 |
| 27.5° | 707.6  | 709.7  | 693.6  | 674.9  | 657.2  | 639.7  | 635.5  | 623.5  | 602.2  | 483.3 | 200.9 |
| 30°   | 937.1  | 915.2  | 893.4  | 867.6  | 855.6  | 841.6  | 810.4  | 780.8  | 760.1  | 601.7 | 195.2 |
| 32.5° | 954.2  | 932.4  | 911.1  | 903.4  | 877.4  | 844.1  | 815.1  | 801.6  | 769.9  | 574.2 | 143.8 |
| 35°   | 982.2  | 970.3  | 969.8  | 938.1  | 904.4  | 883.6  | 857.6  | 819.3  | 779.3  | 555.5 | 103.3 |
| 37.5° | 1055.5 | 1047.1 | 1015.5 | 982.2  | 966.7  | 932.9  | 890.4  | 844.1  | 800.0  | 539.9 | 80.5  |
| 40°   | 1142.1 | 1114.1 | 1083.0 | 1074.6 | 1035.2 | 990.5  | 938.7  | 888.3  | 833.3  | 533.7 | 69.0  |
| 42.5° | 1239.7 | 1210.7 | 1210.7 | 1169.1 | 1125.6 | 1065.8 | 1008.2 | 951.7  | 889.9  | 535.2 | 62.3  |
| 45°   | 1370.5 | 1377.8 | 1344.1 | 1293.2 | 1239.7 | 1184.2 | 1111.5 | 1046.1 | 970.8  | 552.9 | 58.6  |
| 47.5° | 1566.9 | 1543.9 | 1496.8 | 1444.3 | 1385.6 | 1322.8 | 1236.6 | 1159.8 | 1080.3 | 588.2 | 56.1  |
| 50°   | 1760.0 | 1715.3 | 1676.9 | 1619.2 | 1552.3 | 1472.8 | 1383.0 | 1300.0 | 1209.1 | 631.8 | 54.5  |
| 52.5° | 1934.4 | 1889.2 | 1841.9 | 1781.3 | 1711.2 | 1637.9 | 1547.1 | 1448.5 | 1345.2 | 683.7 | 52.5  |
| 55°   | 2059.5 | 2012.2 | 1960.4 | 1899.6 | 1827.4 | 1746.0 | 1653.0 | 1555.4 | 1442.3 | 717.5 | 48.8  |
| 57.5° | 2136.8 | 2091.2 | 2042.9 | 1981.7 | 1913.6 | 1833.1 | 1738.1 | 1632.7 | 1518.1 | 740.3 | 45.7  |
| 60°   | 2189.8 | 2146.2 | 2098.5 | 2041.8 | 1977.5 | 1901.2 | 1810.3 | 1709.6 | 1592.2 | 761.1 | 40.5  |
| 62.5° | 2254.2 | 2223.6 | 2185.6 | 2142.6 | 2092.8 | 2025.7 | 1930.2 | 1830.6 | 1705.0 | 797.9 | 33.2  |
| 65°   | 2407.3 | 2386.0 | 2362.2 | 2334.2 | 2278.1 | 2217.3 | 2134.3 | 2026.3 | 1890.8 | 860.8 | 24.4  |
| 67.5° | 2631.6 | 2609.9 | 2580.2 | 2537.6 | 2483.1 | 2412.5 | 2308.7 | 2176.3 | 2021.6 | 864.9 | 17.7  |
| 70°   | 2757.3 | 2715.7 | 2671.5 | 2606.2 | 2522.6 | 2421.8 | 2281.7 | 2128.0 | 1952.0 | 742.9 | 12.0  |
| 72°   | 2592.7 | 2504.4 | 2425.5 | 2353.3 | 2227.7 | 2122.8 | 2004.5 | 1843.6 | 1669.7 | 538.4 | 9.3   |
| 72.5° | 2467.1 | 2417.7 | 2339.3 | 2247.4 | 2143.1 | 2036.2 | 1875.7 | 1724.1 | 1557.4 | 495.3 | 8.8   |
| 75°   | 1840.9 | 1741.3 | 1671.2 | 1573.1 | 1469.3 | 1384.6 | 1240.8 | 1134.9 | 997.8  | 209.2 | 7.3   |
| 77.5° | 957.3  | 903.9  | 848.3  | 762.1  | 674.9  | 616.2  | 507.2  | 465.6  | 384.2  | 56.1  | 9.3   |
| 80°   | 212.9  | 202.4  | 184.3  | 145.9  | 123.1  | 107.5  | 80.5   | 69.0   | 59.7   | 18.7  | 10.9  |
| 82.5° | 60.3   | 60.3   | 56.6   | 51.4   | 47.8   | 42.6   | 38.5   | 34.8   | 29.6   | 8.8   | 8.3   |
| 85°   | 35.3   | 35.3   | 35.3   | 34.8   | 33.8   | 32.2   | 30.1   | 27.5   | 22.3   | 6.8   | 4.2   |
| 87.5° | 26.0   | 26.0   | 26.5   | 26.5   | 25.0   | 25.0   | 23.8   | 22.3   | 18.7   | 4.7   | 3.1   |
| 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):**

|       | 115°  | 125°  | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|-------|-------|------|------|------|------|------|------|
| 0°    | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 2.5°  | 0.5   | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 5°    | 0.5   | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 7.5°  | 0.5   | 0.0   | 0.0  | 0.0  | 9.8  | 73.2 | 76.3 | 76.8 |
| 10°   | 0.5   | 0.0   | 46.7 | 78.4 | 71.6 | 65.4 | 60.8 | 60.3 |
| 12.5° | 67.5  | 53.5  | 66.0 | 53.0 | 39.0 | 32.2 | 27.5 | 27.0 |
| 15°   | 92.4  | 104.3 | 48.8 | 26.0 | 23.3 | 37.8 | 39.0 | 39.0 |
| 17.5° | 104.9 | 73.2  | 40.5 | 34.8 | 37.3 | 37.3 | 37.3 | 36.8 |
| 20°   | 134.4 | 54.5  | 46.2 | 40.5 | 35.3 | 36.8 | 49.3 | 50.8 |
| 22.5° | 101.3 | 56.1  | 47.8 | 44.6 | 46.2 | 51.4 | 52.0 | 52.0 |
| 25°   | 82.6  | 57.1  | 51.4 | 52.0 | 47.8 | 47.3 | 49.8 | 50.8 |
| 27.5° | 71.6  | 55.0  | 52.5 | 48.8 | 51.4 | 53.5 | 54.0 | 54.5 |
| 30°   | 63.8  | 53.0  | 46.7 | 45.7 | 46.2 | 43.1 | 43.1 | 43.6 |
| 32.5° | 64.9  | 46.7  | 43.1 | 39.5 | 34.8 | 37.3 | 37.3 | 36.3 |
| 35°   | 58.1  | 46.7  | 37.3 | 31.7 | 28.5 | 26.5 | 28.5 | 28.5 |
| 37.5° | 53.5  | 42.0  | 32.7 | 27.0 | 21.8 | 22.3 | 21.8 | 21.3 |
| 40°   | 49.8  | 37.8  | 28.5 | 20.8 | 17.1 | 16.1 | 15.5 | 15.0 |
| 42.5° | 46.2  | 34.3  | 23.3 | 15.5 | 12.5 | 11.5 | 10.9 | 10.4 |
| 45°   | 43.1  | 31.2  | 18.7 | 11.5 | 8.8  | 7.8  | 7.3  | 7.3  |
| 47.5° | 41.0  | 27.5  | 14.0 | 8.3  | 6.2  | 5.2  | 4.7  | 4.7  |
| 50°   | 40.0  | 23.8  | 10.9 | 6.2  | 3.7  | 3.1  | 2.6  | 2.6  |
| 52.5° | 39.5  | 19.2  | 8.3  | 4.2  | 2.0  | 1.5  | 1.0  | 1.0  |
| 55°   | 41.0  | 15.0  | 6.2  | 2.6  | 0.5  | 0.0  | 0.0  | 0.0  |
| 57.5° | 36.8  | 12.0  | 3.7  | 1.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 60°   | 28.5  | 8.8   | 2.0  | 0.5  | 0.0  | 0.0  | 0.0  | 0.0  |
| 62.5° | 21.3  | 6.2   | 0.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 65°   | 15.0  | 4.2   | 0.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 67.5° | 10.4  | 3.1   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 70°   | 7.3   | 2.0   | 0.0  | 0.5  | 0.0  | 0.0  | 0.0  | 0.0  |
| 72°   | 5.2   | 1.5   | 0.0  | 0.5  | 0.0  | 0.0  | 0.0  | 0.0  |
| 72.5° | 5.2   | 1.5   | 0.0  | 0.5  | 0.0  | 0.0  | 0.0  | 0.0  |
| 75°   | 3.7   | 2.0   | 0.0  | 1.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 77.5° | 2.6   | 2.0   | 0.0  | 1.0  | 0.5  | 0.0  | 0.0  | 0.0  |
| 80°   | 2.0   | 2.6   | 0.0  | 1.5  | 0.5  | 0.0  | 0.0  | 0.0  |
| 82.5° | 2.0   | 3.7   | 0.0  | 2.0  | 1.0  | 0.0  | 0.0  | 0.0  |
| 85°   | 2.0   | 3.7   | 0.0  | 2.6  | 1.5  | 0.5  | 0.0  | 0.0  |
| 87.5° | 2.6   | 4.2   | 0.0  | 3.1  | 1.5  | 0.5  | 0.5  | 0.0  |
| 90°   | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |

(END OF REPORT)