

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: P159331

Luminaire Tested: **VST-E05-LED-E-U-T2-7050**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P159331  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33705)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: VST-E05-LED-E-U-T2-7050  
Description: VENTUS LED SITE/ROADWAY LUMINAIRE  
(5) LIGHTBARS WITH AccuLED OPTICS - TYPE 2 AREA  
Light Source: (105) 5000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15836.5 lumens  
Efficiency: N/A  
Efficacy: 124.4 lumens/watt  
Luminous Opening: Rectangular (W 0.83' x L: 1' x H: 0')  
IES Classification: Type II - Short - Semi-Cutoff  
BUG Rating: B3 - U0 - G3

Input Watts (W): 127.3  
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



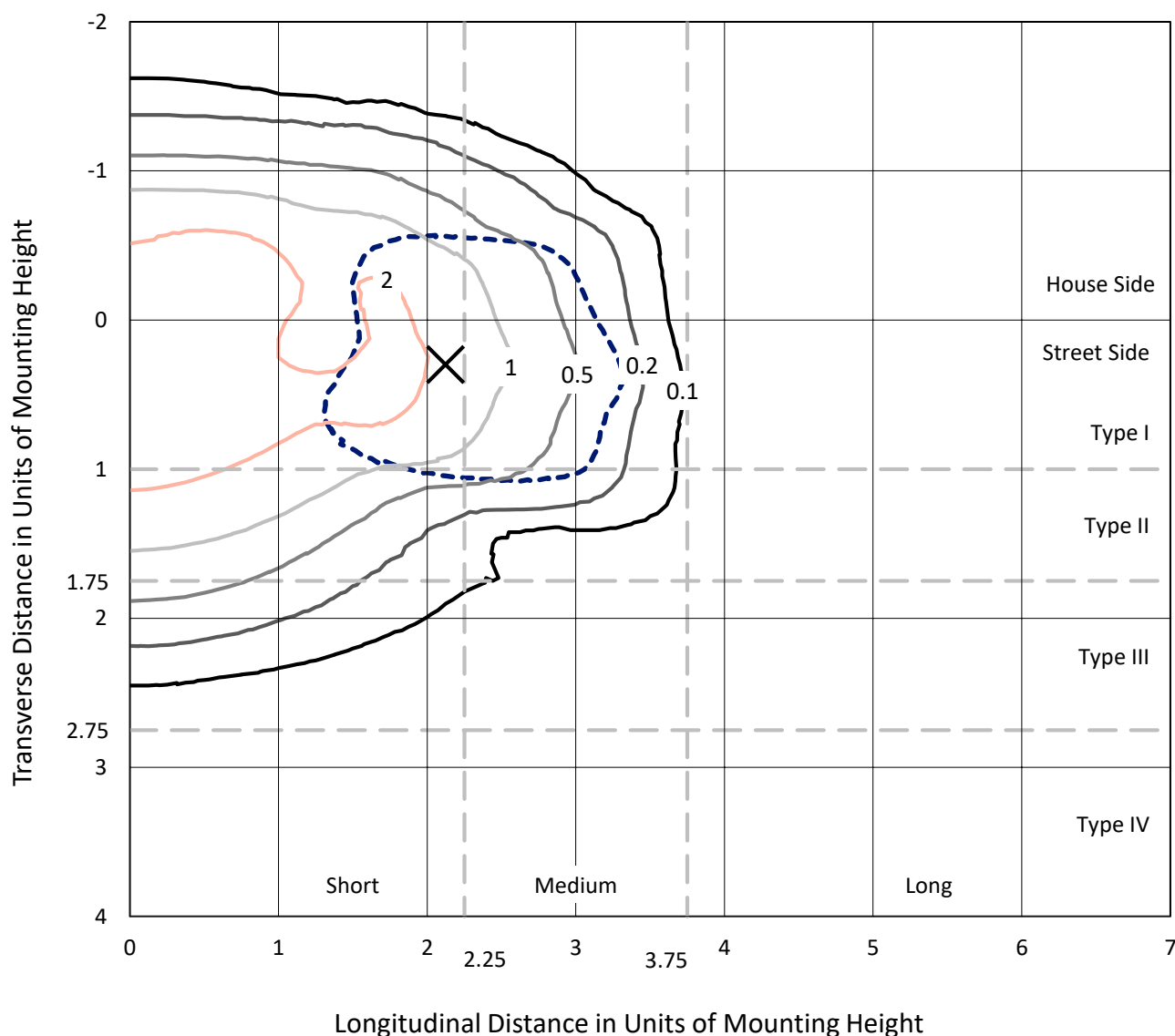
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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

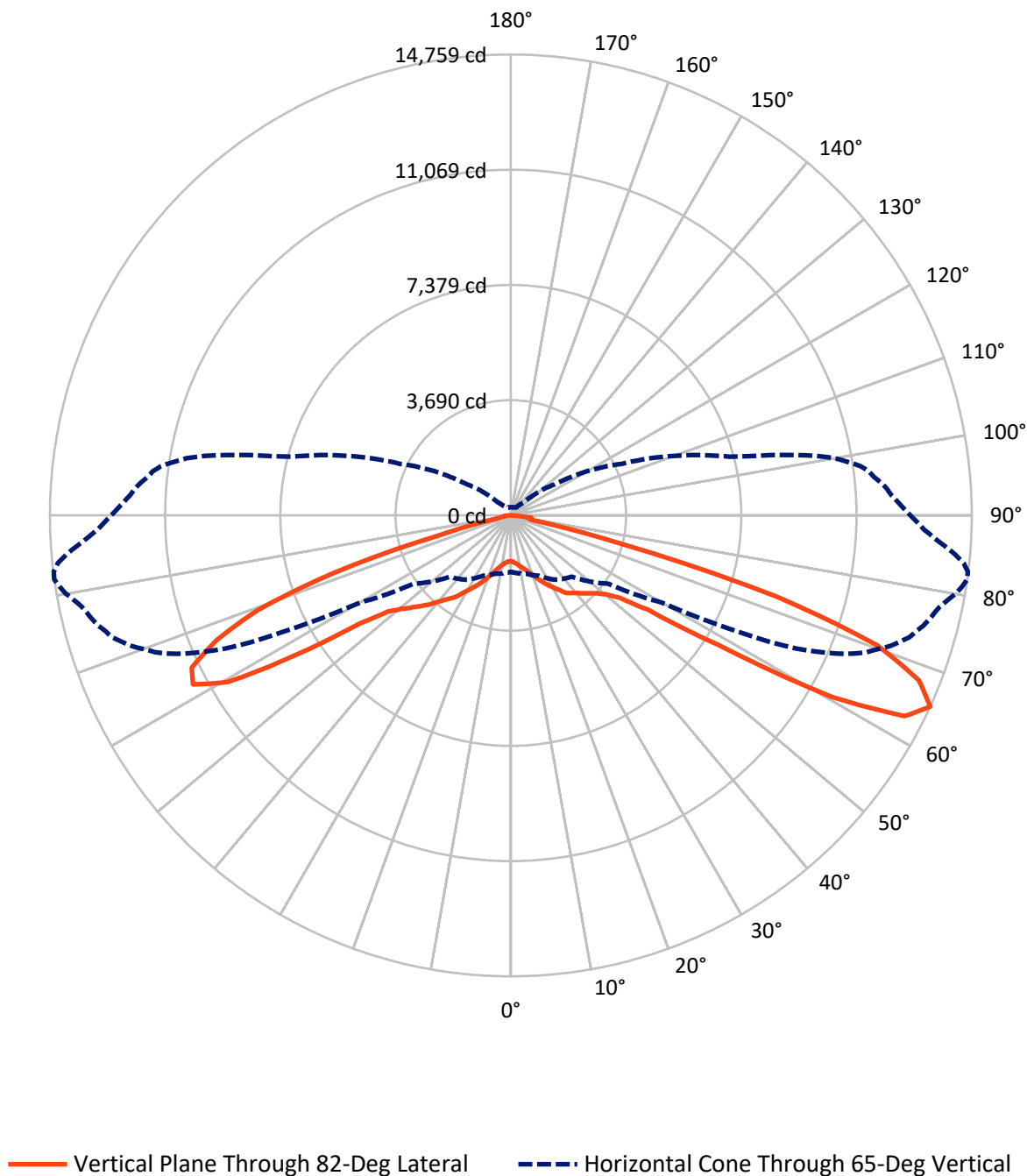


Based on 25 foot mounting height. Maximum calculated value = 3 fc  
 Type II - Short - Semi-Cutoff

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## Luminous Intensity Polar Plot



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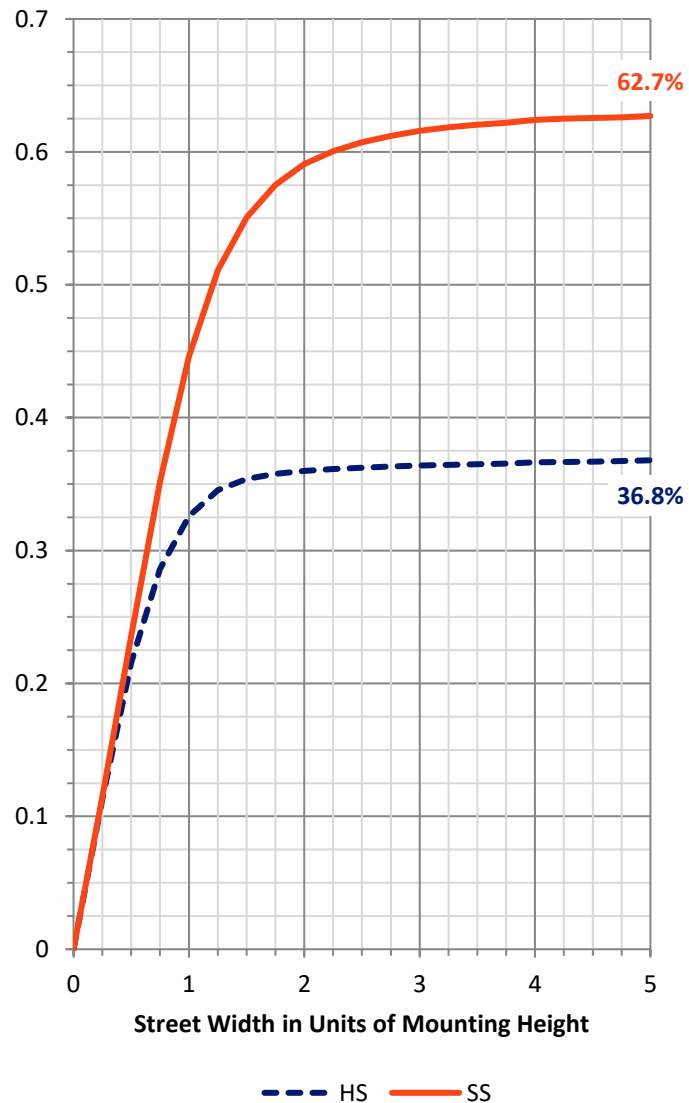
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 5896.4   | 0.0    | 5896.4  |
|                    | % Fixture | 37.2     | 0.0    | 37.2    |
| <b>Street Side</b> | Lumens    | 9940.0   | 0.0    | 9940.0  |
|                    | % Fixture | 62.8     | 0.0    | 62.8    |
| <b>Total</b>       | Lumens    | 15836.5  | 0.0    | 15836.5 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 149.2   | 0.9       |
| 10°-20°   | 524.1   | 3.3       |
| 20°-30°   | 1038.6  | 6.6       |
| 30°-40°   | 1780.3  | 11.2      |
| 40°-50°   | 2674.5  | 16.9      |
| 50°-60°   | 3715.8  | 23.5      |
| 60°-70°   | 4239.1  | 26.8      |
| 70°-80°   | 1460.3  | 9.2       |
| 80°-90°   | 254.5   | 1.6       |
| 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°    | 15836.5 | 100.0     |
| 0°-180°   | 15836.5 | 100.0     |

**Coefficient of Utilization**



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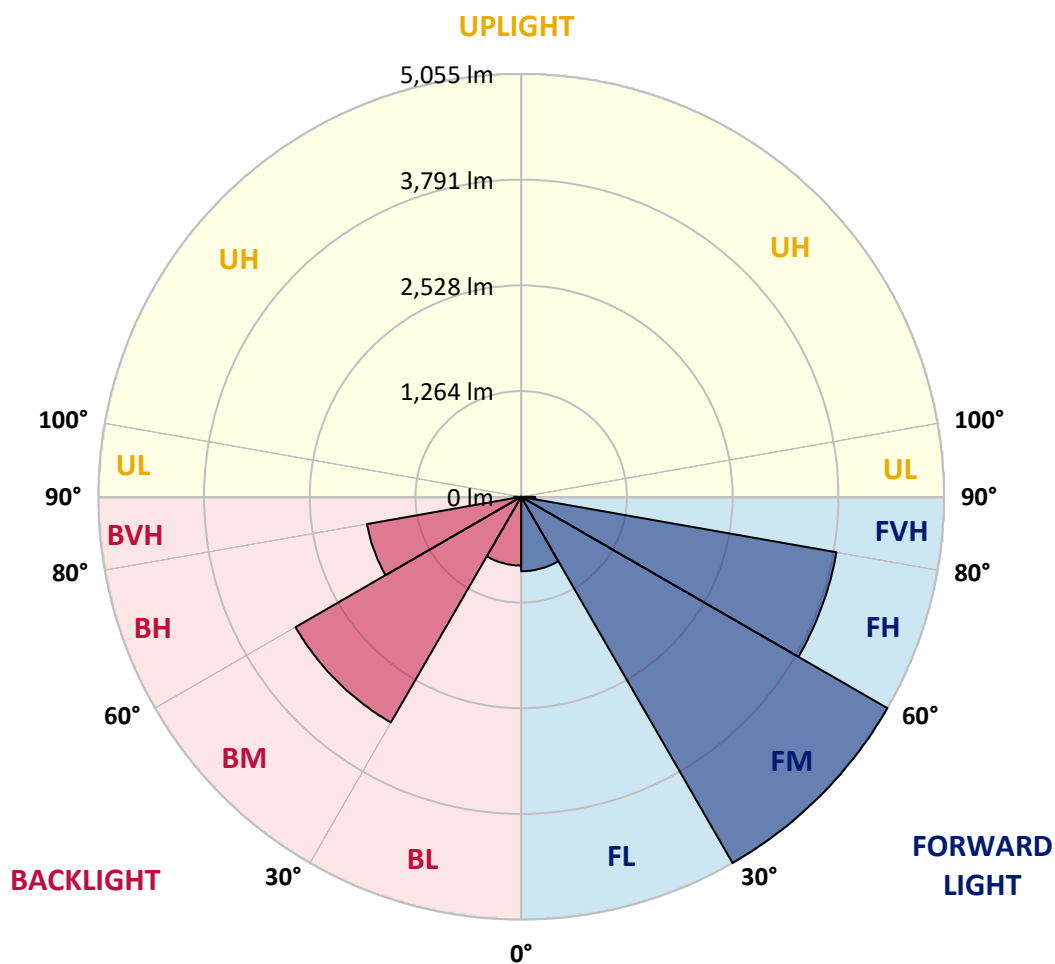
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 889.7  | 5.6       |                         |      |         |
| FM   | (30°-60°)   | 5055.3 | 31.9      |                         |      |         |
| FH   | (60°-80°)   | 3827.5 | 24.2      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 167.6  | 1.1       |                         |      | G2/225  |
| BL   | (0°-30°)    | 822.2  | 5.2       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 3115.3 | 19.7      | B3/5000                 |      |         |
| BH   | (60°-80°)   | 1872.0 | 11.8      | B3/2500                 |      | G3/2500 |
| BVH  | (80°-90°)   | 87.0   | 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 Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 60°    | 61°    | 62°    | 64°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1473.5 | 1473.5 | 1473.5 | 1473.5 | 1473.5 | 1473.5 | 1473.5 | 1473.5 | 1473.5 | 1473.5 | 1473.5 |
| 2.5°  | 1553.5 | 1554.5 | 1553.5 | 1550.4 | 1549.4 | 1540.2 | 1529.9 | 1524.8 | 1523.8 | 1519.7 | 1520.7 |
| 5°    | 1650.0 | 1646.9 | 1642.8 | 1637.7 | 1632.5 | 1617.1 | 1599.7 | 1590.5 | 1587.4 | 1584.3 | 1580.2 |
| 7.5°  | 1736.2 | 1738.2 | 1736.2 | 1729.0 | 1715.6 | 1696.2 | 1673.6 | 1659.2 | 1658.2 | 1655.1 | 1652.0 |
| 10°   | 1847.0 | 1852.1 | 1839.8 | 1827.5 | 1809.0 | 1779.3 | 1753.6 | 1735.1 | 1732.1 | 1728.0 | 1725.9 |
| 12.5° | 1967.0 | 1968.1 | 1964.0 | 1936.3 | 1905.5 | 1864.4 | 1827.5 | 1809.0 | 1804.9 | 1799.8 | 1797.7 |
| 15°   | 2095.3 | 2096.3 | 2073.8 | 2047.1 | 1999.9 | 1950.6 | 1899.3 | 1878.8 | 1873.7 | 1874.7 | 1866.5 |
| 17.5° | 2196.9 | 2198.9 | 2177.4 | 2143.5 | 2087.1 | 2028.6 | 1973.2 | 1956.8 | 1953.7 | 1954.7 | 1950.6 |
| 20°   | 2241.0 | 2244.1 | 2230.8 | 2205.1 | 2151.7 | 2100.4 | 2060.4 | 2050.2 | 2049.1 | 2047.1 | 2055.3 |
| 22.5° | 2239.0 | 2240.0 | 2234.9 | 2224.6 | 2192.8 | 2163.0 | 2157.9 | 2164.1 | 2163.0 | 2165.1 | 2172.3 |
| 25°   | 2220.5 | 2223.6 | 2222.5 | 2226.6 | 2221.5 | 2232.8 | 2256.4 | 2278.0 | 2281.0 | 2285.1 | 2298.5 |
| 27.5° | 2267.7 | 2273.8 | 2266.7 | 2270.8 | 2279.0 | 2316.9 | 2365.2 | 2398.0 | 2404.2 | 2415.5 | 2426.7 |
| 30°   | 2452.4 | 2444.2 | 2434.9 | 2424.7 | 2429.8 | 2453.4 | 2507.8 | 2536.5 | 2539.6 | 2547.8 | 2563.2 |
| 32.5° | 2726.4 | 2717.1 | 2708.9 | 2692.5 | 2688.4 | 2678.1 | 2696.6 | 2703.8 | 2702.8 | 2711.0 | 2715.1 |
| 35°   | 3035.2 | 3036.2 | 3034.2 | 3046.5 | 3056.8 | 3004.4 | 2939.8 | 2922.3 | 2929.5 | 2920.3 | 2922.3 |
| 37.5° | 3298.9 | 3302.0 | 3356.4 | 3424.1 | 3443.6 | 3410.8 | 3269.2 | 3199.4 | 3175.8 | 3172.7 | 3149.1 |
| 40°   | 3591.4 | 3591.4 | 3673.5 | 3756.6 | 3811.0 | 3852.0 | 3683.7 | 3560.6 | 3510.3 | 3495.9 | 3437.5 |
| 42.5° | 3912.5 | 3896.1 | 3971.0 | 4062.4 | 4162.9 | 4256.3 | 4169.1 | 4030.5 | 3958.7 | 3933.1 | 3830.5 |
| 45°   | 4176.2 | 4166.0 | 4202.9 | 4288.1 | 4451.2 | 4633.9 | 4646.2 | 4575.4 | 4532.3 | 4479.0 | 4384.5 |
| 47.5° | 4338.4 | 4333.2 | 4354.8 | 4447.1 | 4651.3 | 4946.9 | 5112.1 | 5148.0 | 5122.3 | 5081.3 | 4990.0 |
| 50°   | 4402.0 | 4394.8 | 4410.2 | 4512.8 | 4741.6 | 5131.6 | 5496.8 | 5666.2 | 5678.5 | 5687.7 | 5659.0 |
| 52.5° | 4379.4 | 4370.2 | 4402.0 | 4488.2 | 4726.2 | 5196.2 | 5797.5 | 6122.8 | 6177.2 | 6223.3 | 6317.7 |
| 55°   | 4162.9 | 4148.5 | 4234.7 | 4396.9 | 4659.5 | 5172.6 | 6017.1 | 6561.9 | 6676.9 | 6800.0 | 7009.3 |
| 57.5° | 3831.5 | 3819.2 | 3943.3 | 4166.0 | 4541.5 | 5108.0 | 6164.8 | 7117.1 | 7375.6 | 7597.3 | 8191.4 |
| 60°   | 3512.4 | 3502.1 | 3575.0 | 3790.4 | 4158.8 | 4792.9 | 5982.2 | 7303.8 | 7737.9 | 8216.0 | 9300.6 |
| 62.5° | 2941.8 | 2914.1 | 3011.6 | 3193.2 | 3426.2 | 3964.9 | 5184.9 | 6888.2 | 7557.3 | 8260.1 | 9730.6 |
| 65°   | 1808.0 | 1848.0 | 1932.2 | 2133.3 | 2515.0 | 2771.5 | 3807.9 | 5572.8 | 6455.2 | 7336.7 | 9244.2 |
| 67.5° | 1148.2 | 1159.5 | 1222.1 | 1361.6 | 1657.2 | 1914.7 | 2307.7 | 3497.0 | 4177.3 | 5044.3 | 7257.6 |
| 70°   | 984.0  | 991.2  | 1044.6 | 1190.3 | 1394.5 | 1711.5 | 1746.4 | 1826.5 | 2070.7 | 2622.7 | 4266.5 |
| 72.5° | 775.7  | 788.0  | 830.1  | 956.3  | 1202.6 | 1543.3 | 2155.8 | 1443.7 | 1394.5 | 1440.7 | 2082.0 |
| 75°   | 461.7  | 476.1  | 511.0  | 579.7  | 772.7  | 1180.0 | 2258.5 | 1679.7 | 1565.8 | 1476.6 | 1436.5 |
| 77.5° | 244.2  | 234.0  | 257.6  | 297.6  | 397.1  | 629.0  | 1697.2 | 2058.4 | 1978.3 | 1871.6 | 1644.8 |
| 80°   | 121.1  | 125.2  | 132.4  | 140.6  | 177.5  | 255.5  | 848.6  | 2129.2 | 2360.0 | 2462.7 | 2261.5 |
| 82.5° | 48.2   | 54.4   | 77.0   | 82.1   | 97.5   | 108.8  | 272.9  | 1180.0 | 1690.0 | 2292.3 | 2993.1 |
| 85°   | 24.6   | 23.6   | 41.0   | 49.3   | 57.5   | 51.3   | 96.5   | 440.2  | 792.2  | 1234.4 | 1999.9 |
| 87.5° | 3.1    | 4.1    | 9.2    | 12.3   | 17.4   | 16.4   | 27.7   | 95.4   | 151.9  | 215.5  | 302.7  |
| 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):**

|       | 65°     | 66°     | 67°     | 68°     | 69°     | 70°     | 71°     | 72°     | 73°     | 74°     | 75°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 1473.5  | 1473.5  | 1473.5  | 1473.5  | 1473.5  | 1473.5  | 1473.5  | 1473.5  | 1473.5  | 1473.5  | 1473.5  |
| 2.5°  | 1515.6  | 1514.5  | 1514.5  | 1510.4  | 1510.4  | 1511.5  | 1508.4  | 1506.3  | 1506.3  | 1507.3  | 1503.2  |
| 5°    | 1577.1  | 1574.0  | 1574.0  | 1569.9  | 1564.8  | 1564.8  | 1560.7  | 1559.7  | 1557.6  | 1553.5  | 1550.4  |
| 7.5°  | 1649.0  | 1645.9  | 1640.7  | 1637.7  | 1635.6  | 1632.5  | 1627.4  | 1625.4  | 1621.2  | 1617.1  | 1613.0  |
| 10°   | 1722.8  | 1718.7  | 1716.7  | 1711.5  | 1709.5  | 1703.3  | 1700.3  | 1701.3  | 1693.1  | 1690.0  | 1691.0  |
| 12.5° | 1796.7  | 1792.6  | 1785.4  | 1783.4  | 1782.3  | 1776.2  | 1773.1  | 1771.1  | 1764.9  | 1763.9  | 1760.8  |
| 15°   | 1862.4  | 1864.4  | 1861.4  | 1856.2  | 1852.1  | 1851.1  | 1848.0  | 1846.0  | 1841.9  | 1837.8  | 1833.7  |
| 17.5° | 1947.5  | 1950.6  | 1946.5  | 1939.3  | 1939.3  | 1938.3  | 1939.3  | 1938.3  | 1931.1  | 1934.2  | 1932.2  |
| 20°   | 2056.3  | 2058.4  | 2048.1  | 2051.2  | 2053.2  | 2052.2  | 2055.3  | 2058.4  | 2056.3  | 2056.3  | 2059.4  |
| 22.5° | 2181.5  | 2184.6  | 2178.4  | 2182.5  | 2188.7  | 2183.6  | 2192.8  | 2191.8  | 2193.8  | 2196.9  | 2197.9  |
| 25°   | 2309.8  | 2315.9  | 2310.8  | 2322.1  | 2318.0  | 2322.1  | 2333.4  | 2330.3  | 2335.4  | 2343.6  | 2346.7  |
| 27.5° | 2438.0  | 2442.1  | 2443.2  | 2450.3  | 2457.5  | 2463.7  | 2478.0  | 2478.0  | 2482.1  | 2496.5  | 2496.5  |
| 30°   | 2572.4  | 2576.6  | 2580.7  | 2590.9  | 2595.0  | 2606.3  | 2620.7  | 2624.8  | 2622.7  | 2643.2  | 2649.4  |
| 32.5° | 2727.4  | 2731.5  | 2738.7  | 2751.0  | 2756.1  | 2767.4  | 2767.4  | 2778.7  | 2786.9  | 2804.3  | 2805.4  |
| 35°   | 2933.6  | 2936.7  | 2933.6  | 2932.6  | 2939.8  | 2955.2  | 2956.2  | 2972.6  | 2979.8  | 2997.3  | 3002.4  |
| 37.5° | 3139.9  | 3138.9  | 3125.5  | 3111.2  | 3112.2  | 3106.0  | 3101.9  | 3109.1  | 3112.2  | 3113.2  | 3124.5  |
| 40°   | 3418.0  | 3391.3  | 3370.8  | 3334.8  | 3318.4  | 3292.8  | 3277.4  | 3276.4  | 3259.9  | 3257.9  | 3261.0  |
| 42.5° | 3782.2  | 3751.4  | 3703.2  | 3642.7  | 3596.5  | 3549.3  | 3514.4  | 3493.9  | 3458.0  | 3439.5  | 3424.1  |
| 45°   | 4291.2  | 4215.2  | 4157.8  | 4086.0  | 3996.7  | 3914.6  | 3828.4  | 3789.4  | 3720.7  | 3678.6  | 3631.4  |
| 47.5° | 4913.0  | 4838.1  | 4749.8  | 4676.0  | 4559.0  | 4445.1  | 4327.1  | 4223.4  | 4103.4  | 4008.0  | 3930.0  |
| 50°   | 5588.2  | 5544.0  | 5480.4  | 5411.7  | 5260.8  | 5185.9  | 5037.2  | 4896.6  | 4767.3  | 4597.0  | 4448.2  |
| 52.5° | 6280.8  | 6306.4  | 6292.1  | 6267.5  | 6172.0  | 6143.3  | 6015.0  | 5843.7  | 5713.4  | 5596.4  | 5337.8  |
| 55°   | 7134.5  | 7165.3  | 7226.9  | 7262.8  | 7251.5  | 7324.3  | 7292.5  | 7159.1  | 7106.8  | 7052.4  | 6868.7  |
| 57.5° | 8440.7  | 8660.3  | 8895.3  | 9101.6  | 9149.8  | 9408.4  | 9353.0  | 9486.3  | 9580.7  | 9513.0  | 9453.5  |
| 60°   | 9833.2  | 10276.4 | 10675.6 | 11093.2 | 11432.9 | 11687.3 | 12023.9 | 12250.7 | 12393.3 | 12649.8 | 12670.4 |
| 62.5° | 10394.4 | 10996.8 | 11503.7 | 11988.0 | 12391.2 | 12744.2 | 13048.0 | 13360.9 | 13617.4 | 13849.3 | 14016.6 |
| 65°   | 10086.6 | 10715.6 | 11330.3 | 11821.8 | 12209.6 | 12513.4 | 12843.8 | 13092.1 | 13344.5 | 13493.3 | 13668.8 |
| 67.5° | 8385.3  | 9218.5  | 9974.8  | 10528.9 | 11059.4 | 11368.2 | 11759.2 | 12003.4 | 12271.2 | 12428.2 | 12541.1 |
| 70°   | 5467.1  | 6551.7  | 7585.0  | 8425.4  | 9141.6  | 9501.7  | 9973.7  | 10307.2 | 10629.4 | 10637.6 | 10825.4 |
| 72.5° | 2950.1  | 3857.1  | 4722.1  | 5581.0  | 6397.8  | 6877.0  | 7342.8  | 7748.1  | 8068.3  | 7931.8  | 8118.5  |
| 75°   | 1642.8  | 2067.6  | 2540.6  | 3056.8  | 3554.4  | 3828.4  | 4176.2  | 4178.3  | 4343.5  | 4083.9  | 4149.6  |
| 77.5° | 1580.2  | 1560.7  | 1567.9  | 1582.3  | 1606.9  | 1554.5  | 1553.5  | 1521.7  | 1472.5  | 1383.2  | 1398.6  |
| 80°   | 2075.8  | 1827.5  | 1649.0  | 1368.8  | 1102.0  | 898.9   | 842.4   | 855.8   | 895.8   | 975.8   | 1077.4  |
| 82.5° | 3001.4  | 2792.0  | 2492.4  | 2051.2  | 1610.0  | 1241.6  | 1019.9  | 905.0   | 899.9   | 979.9   | 1133.8  |
| 85°   | 2185.6  | 2311.8  | 2292.3  | 1913.7  | 1578.2  | 1281.6  | 932.7   | 788.0   | 652.6   | 620.8   | 675.2   |
| 87.5° | 322.2   | 266.8   | 300.6   | 251.4   | 182.6   | 141.6   | 124.2   | 99.5    | 95.4    | 97.5    | 106.7   |
| 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):**

|       | 76°     | 77°     | 78°     | 79°     | 80°     | 81°     | 82°     | 83°     | 84°     | 85°     | 86°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 1473.5  | 1473.5  | 1473.5  | 1473.5  | 1473.5  | 1473.5  | 1473.5  | 1473.5  | 1473.5  | 1473.5  | 1473.5  |
| 2.5°  | 1504.3  | 1500.2  | 1496.1  | 1499.1  | 1496.1  | 1495.0  | 1492.0  | 1489.9  | 1488.9  | 1488.9  | 1488.9  |
| 5°    | 1550.4  | 1545.3  | 1542.2  | 1541.2  | 1538.1  | 1535.1  | 1534.0  | 1528.9  | 1527.9  | 1527.9  | 1524.8  |
| 7.5°  | 1613.0  | 1608.9  | 1603.8  | 1600.7  | 1598.7  | 1593.5  | 1588.4  | 1587.4  | 1586.4  | 1582.3  | 1579.2  |
| 10°   | 1685.9  | 1679.7  | 1673.6  | 1673.6  | 1669.5  | 1668.4  | 1663.3  | 1656.1  | 1655.1  | 1649.0  | 1646.9  |
| 12.5° | 1754.6  | 1752.6  | 1745.4  | 1743.4  | 1740.3  | 1737.2  | 1734.1  | 1731.0  | 1728.0  | 1722.8  | 1724.9  |
| 15°   | 1836.7  | 1831.6  | 1825.4  | 1826.5  | 1825.4  | 1821.3  | 1817.2  | 1814.2  | 1812.1  | 1810.0  | 1810.0  |
| 17.5° | 1935.2  | 1933.2  | 1932.2  | 1927.0  | 1922.9  | 1926.0  | 1926.0  | 1926.0  | 1920.9  | 1921.9  | 1922.9  |
| 20°   | 2060.4  | 2062.5  | 2060.4  | 2056.3  | 2055.3  | 2058.4  | 2051.2  | 2062.5  | 2056.3  | 2052.2  | 2054.3  |
| 22.5° | 2198.9  | 2206.1  | 2197.9  | 2198.9  | 2204.1  | 2206.1  | 2198.9  | 2208.2  | 2205.1  | 2198.9  | 2204.1  |
| 25°   | 2349.8  | 2354.9  | 2350.8  | 2349.8  | 2352.9  | 2360.0  | 2359.0  | 2358.0  | 2365.2  | 2359.0  | 2362.1  |
| 27.5° | 2504.7  | 2507.8  | 2509.9  | 2512.9  | 2515.0  | 2514.0  | 2518.1  | 2518.1  | 2522.2  | 2515.0  | 2518.1  |
| 30°   | 2658.6  | 2658.6  | 2662.7  | 2666.8  | 2666.8  | 2666.8  | 2675.1  | 2676.1  | 2669.9  | 2672.0  | 2664.8  |
| 32.5° | 2822.8  | 2823.8  | 2827.9  | 2827.9  | 2836.2  | 2837.2  | 2846.4  | 2834.1  | 2846.4  | 2836.2  | 2838.2  |
| 35°   | 3015.7  | 3029.1  | 3031.1  | 3041.4  | 3049.6  | 3052.7  | 3052.7  | 3053.7  | 3065.0  | 3056.8  | 3059.8  |
| 37.5° | 3128.6  | 3131.7  | 3139.9  | 3145.0  | 3145.0  | 3149.1  | 3152.2  | 3149.1  | 3152.2  | 3151.2  | 3154.2  |
| 40°   | 3262.0  | 3258.9  | 3268.1  | 3270.2  | 3266.1  | 3271.2  | 3270.2  | 3267.1  | 3275.3  | 3269.2  | 3273.3  |
| 42.5° | 3424.1  | 3406.7  | 3405.6  | 3413.9  | 3405.6  | 3409.7  | 3408.7  | 3401.5  | 3411.8  | 3414.9  | 3411.8  |
| 45°   | 3597.5  | 3588.3  | 3569.8  | 3569.8  | 3561.6  | 3558.5  | 3559.6  | 3558.5  | 3559.6  | 3571.9  | 3576.0  |
| 47.5° | 3879.7  | 3823.3  | 3791.5  | 3761.7  | 3737.1  | 3736.0  | 3724.8  | 3730.9  | 3739.1  | 3759.7  | 3778.1  |
| 50°   | 4352.7  | 4222.4  | 4142.4  | 4068.5  | 4015.2  | 3996.7  | 3975.1  | 3973.1  | 3980.3  | 4003.9  | 4035.7  |
| 52.5° | 5196.2  | 5015.6  | 4845.3  | 4687.2  | 4549.8  | 4444.1  | 4391.7  | 4364.0  | 4353.8  | 4377.4  | 4408.1  |
| 55°   | 6739.5  | 6398.8  | 6158.7  | 5998.6  | 5656.9  | 5512.2  | 5326.5  | 5241.3  | 5158.2  | 5166.4  | 5218.8  |
| 57.5° | 9376.6  | 9192.9  | 8991.8  | 8711.6  | 8502.3  | 8249.9  | 7786.1  | 7527.5  | 7538.8  | 7599.3  | 7410.5  |
| 60°   | 12832.5 | 12646.7 | 12563.6 | 12309.2 | 12163.5 | 12061.9 | 11815.6 | 11386.7 | 11234.8 | 11206.1 | 10859.3 |
| 62.5° | 14144.9 | 14189.0 | 14254.7 | 14326.5 | 14322.4 | 14366.5 | 14151.0 | 14011.5 | 13836.0 | 13608.2 | 13265.5 |
| 65°   | 13802.1 | 13914.0 | 14047.4 | 14240.3 | 14459.9 | 14622.0 | 14758.5 | 14742.1 | 14577.9 | 14274.2 | 13911.9 |
| 67.5° | 12641.6 | 12752.4 | 12849.9 | 13108.5 | 13468.7 | 13798.0 | 14089.5 | 14287.5 | 14177.7 | 13926.3 | 13503.5 |
| 70°   | 10897.2 | 10977.3 | 11038.8 | 11263.6 | 11658.6 | 12060.8 | 12441.5 | 12774.0 | 12740.1 | 12435.4 | 12097.8 |
| 72.5° | 7895.9  | 8089.8  | 8194.5  | 8179.1  | 8423.3  | 8873.8  | 8927.1  | 9211.3  | 9290.4  | 8962.0  | 8424.3  |
| 75°   | 3846.9  | 3849.9  | 3728.9  | 3688.8  | 3701.2  | 3779.1  | 3630.4  | 3639.6  | 3588.3  | 3355.4  | 3163.5  |
| 77.5° | 1344.2  | 1307.3  | 1219.0  | 1114.4  | 964.5   | 824.0   | 681.3   | 619.8   | 599.2   | 538.7   | 496.6   |
| 80°   | 1158.5  | 1212.9  | 1195.4  | 1109.2  | 951.2   | 758.3   | 566.4   | 419.7   | 358.1   | 336.6   | 316.0   |
| 82.5° | 1315.5  | 1524.8  | 1658.2  | 1651.0  | 1434.5  | 1077.4  | 672.1   | 385.8   | 275.0   | 241.1   | 221.6   |
| 85°   | 733.7   | 789.1   | 804.5   | 732.6   | 608.5   | 415.6   | 231.9   | 163.2   | 138.5   | 126.2   | 113.9   |
| 87.5° | 117.0   | 106.7   | 104.7   | 91.3    | 86.2    | 79.0    | 69.8    | 65.7    | 60.5    | 57.5    | 57.5    |
| 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):**

|       | 87°     | 88°     | 89°     | 90°     | 91°     | 92°     | 93°     | 94°     | 95°     | 96°     | 97°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 1473.5  | 1473.5  | 1473.5  | 1473.5  | 1473.5  | 1473.5  | 1473.5  | 1473.5  | 1473.5  | 1473.5  | 1473.5  |
| 2.5°  | 1487.9  | 1486.8  | 1483.7  | 1480.7  | 1478.6  | 1477.6  | 1476.6  | 1474.5  | 1473.5  | 1472.5  | 1470.4  |
| 5°    | 1522.7  | 1520.7  | 1515.6  | 1510.4  | 1508.4  | 1505.3  | 1502.2  | 1500.2  | 1498.1  | 1497.1  | 1493.0  |
| 7.5°  | 1577.1  | 1575.1  | 1568.9  | 1564.8  | 1563.8  | 1555.6  | 1554.5  | 1551.5  | 1546.3  | 1545.3  | 1539.2  |
| 10°   | 1642.8  | 1641.8  | 1636.6  | 1633.6  | 1631.5  | 1627.4  | 1621.2  | 1616.1  | 1611.0  | 1611.0  | 1606.9  |
| 12.5° | 1718.7  | 1714.6  | 1717.7  | 1710.5  | 1708.5  | 1704.4  | 1701.3  | 1700.3  | 1694.1  | 1689.0  | 1687.9  |
| 15°   | 1808.0  | 1802.9  | 1802.9  | 1800.8  | 1798.8  | 1794.7  | 1793.6  | 1794.7  | 1788.5  | 1790.6  | 1784.4  |
| 17.5° | 1918.8  | 1920.9  | 1919.8  | 1919.8  | 1914.7  | 1914.7  | 1906.5  | 1916.8  | 1909.6  | 1914.7  | 1912.7  |
| 20°   | 2057.3  | 2058.4  | 2056.3  | 2059.4  | 2061.4  | 2060.4  | 2059.4  | 2058.4  | 2061.4  | 2065.6  | 2062.5  |
| 22.5° | 2205.1  | 2205.1  | 2204.1  | 2215.4  | 2203.0  | 2212.3  | 2215.4  | 2209.2  | 2225.6  | 2223.6  | 2226.6  |
| 25°   | 2365.2  | 2365.2  | 2373.4  | 2382.6  | 2384.7  | 2377.5  | 2381.6  | 2376.5  | 2386.7  | 2394.9  | 2397.0  |
| 27.5° | 2514.0  | 2527.3  | 2533.5  | 2527.3  | 2532.4  | 2543.7  | 2542.7  | 2542.7  | 2549.9  | 2547.8  | 2567.3  |
| 30°   | 2666.8  | 2675.1  | 2683.3  | 2679.2  | 2681.2  | 2695.6  | 2696.6  | 2697.6  | 2706.9  | 2720.2  | 2734.6  |
| 32.5° | 2841.3  | 2849.5  | 2845.4  | 2858.7  | 2857.7  | 2875.1  | 2878.2  | 2881.3  | 2910.0  | 2904.9  | 2934.7  |
| 35°   | 3055.7  | 3064.0  | 3059.8  | 3074.2  | 3072.2  | 3078.3  | 3089.6  | 3101.9  | 3107.0  | 3136.8  | 3160.4  |
| 37.5° | 3156.3  | 3156.3  | 3165.5  | 3182.0  | 3188.1  | 3198.4  | 3215.8  | 3231.2  | 3256.9  | 3288.7  | 3325.6  |
| 40°   | 3277.4  | 3280.5  | 3292.8  | 3310.2  | 3321.5  | 3345.1  | 3376.9  | 3398.5  | 3437.5  | 3472.3  | 3515.4  |
| 42.5° | 3424.1  | 3437.5  | 3451.8  | 3475.4  | 3500.0  | 3537.0  | 3582.1  | 3609.8  | 3661.1  | 3706.3  | 3759.7  |
| 45°   | 3595.5  | 3608.8  | 3642.7  | 3685.8  | 3721.7  | 3762.7  | 3799.7  | 3865.3  | 3911.5  | 3958.7  | 4004.9  |
| 47.5° | 3802.7  | 3841.7  | 3869.4  | 3920.7  | 3964.9  | 4019.3  | 4065.4  | 4127.0  | 4177.3  | 4234.7  | 4273.7  |
| 50°   | 4068.5  | 4116.7  | 4152.6  | 4219.3  | 4262.4  | 4323.0  | 4381.5  | 4427.6  | 4479.0  | 4535.4  | 4567.2  |
| 52.5° | 4450.2  | 4499.5  | 4544.6  | 4627.7  | 4681.1  | 4722.1  | 4800.1  | 4857.6  | 4904.8  | 4945.8  | 4980.7  |
| 55°   | 5277.3  | 5262.9  | 5388.1  | 5549.2  | 5567.6  | 5716.4  | 5744.1  | 5792.4  | 5879.6  | 5891.9  | 5989.4  |
| 57.5° | 7640.4  | 7566.5  | 7748.1  | 7984.1  | 7943.1  | 7868.2  | 8181.1  | 8200.6  | 8156.5  | 8274.5  | 8141.1  |
| 60°   | 10910.6 | 10781.3 | 10830.5 | 10895.2 | 10801.8 | 10757.7 | 10773.1 | 10817.2 | 10774.1 | 10726.9 | 10597.6 |
| 62.5° | 13094.1 | 12895.1 | 12752.4 | 12632.4 | 12480.5 | 12370.7 | 12247.6 | 12095.7 | 12054.7 | 11882.3 | 11737.6 |
| 65°   | 13560.0 | 13250.1 | 13024.4 | 12797.6 | 12588.3 | 12394.3 | 12208.6 | 12078.3 | 11905.9 | 11701.7 | 11550.9 |
| 67.5° | 13048.0 | 12664.2 | 12333.8 | 12004.4 | 11767.4 | 11482.1 | 11342.6 | 11130.2 | 10917.8 | 10683.8 | 10545.3 |
| 70°   | 11560.1 | 11159.9 | 10744.4 | 10422.2 | 10100.0 | 9747.0  | 9678.2  | 9426.8  | 9304.7  | 8985.6  | 8930.2  |
| 72.5° | 7979.0  | 7712.2  | 7526.5  | 7128.4  | 6932.4  | 6751.8  | 6694.3  | 6461.4  | 6486.0  | 6136.1  | 6263.3  |
| 75°   | 2837.2  | 2799.2  | 2744.8  | 2520.1  | 2480.1  | 2410.3  | 2391.9  | 2375.4  | 2541.7  | 2310.8  | 2478.0  |
| 77.5° | 487.4   | 484.3   | 456.6   | 443.3   | 468.9   | 452.5   | 456.6   | 448.4   | 496.6   | 503.8   | 492.5   |
| 80°   | 302.7   | 294.5   | 285.3   | 279.1   | 280.1   | 274.0   | 275.0   | 277.0   | 280.1   | 279.1   | 282.2   |
| 82.5° | 207.3   | 200.1   | 196.0   | 191.9   | 198.0   | 200.1   | 205.2   | 210.4   | 218.6   | 223.7   | 229.8   |
| 85°   | 112.9   | 103.6   | 103.6   | 102.6   | 110.8   | 117.0   | 125.2   | 135.4   | 149.8   | 162.1   | 175.5   |
| 87.5° | 57.5    | 55.4    | 56.4    | 58.5    | 65.7    | 70.8    | 81.1    | 90.3    | 102.6   | 115.9   | 128.3   |
| 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):**

|       | 98°     | 99°     | 100°    | 101°    | 102°   | 103°   | 104°   | 105°   | 115°   | 125°   | 135°   |
|-------|---------|---------|---------|---------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1473.5  | 1473.5  | 1473.5  | 1473.5  | 1473.5 | 1473.5 | 1473.5 | 1473.5 | 1473.5 | 1473.5 | 1473.5 |
| 2.5°  | 1469.4  | 1469.4  | 1468.4  | 1468.4  | 1467.3 | 1466.3 | 1465.3 | 1462.2 | 1450.9 | 1440.7 | 1433.5 |
| 5°    | 1492.0  | 1488.9  | 1487.9  | 1484.8  | 1483.7 | 1481.7 | 1478.6 | 1475.5 | 1455.0 | 1436.5 | 1423.2 |
| 7.5°  | 1538.1  | 1534.0  | 1532.0  | 1528.9  | 1525.8 | 1521.7 | 1517.6 | 1514.5 | 1489.9 | 1468.4 | 1451.9 |
| 10°   | 1598.7  | 1596.6  | 1595.6  | 1591.5  | 1591.5 | 1585.3 | 1584.3 | 1577.1 | 1550.4 | 1530.9 | 1516.6 |
| 12.5° | 1682.8  | 1678.7  | 1677.7  | 1672.6  | 1674.6 | 1672.6 | 1670.5 | 1666.4 | 1646.9 | 1624.3 | 1604.8 |
| 15°   | 1787.5  | 1787.5  | 1782.3  | 1778.2  | 1779.3 | 1777.2 | 1781.3 | 1776.2 | 1763.9 | 1743.4 | 1711.5 |
| 17.5° | 1913.7  | 1911.6  | 1913.7  | 1910.6  | 1912.7 | 1914.7 | 1909.6 | 1910.6 | 1904.5 | 1878.8 | 1831.6 |
| 20°   | 2060.4  | 2057.3  | 2069.7  | 2064.5  | 2075.8 | 2065.6 | 2067.6 | 2070.7 | 2070.7 | 2036.8 | 1973.2 |
| 22.5° | 2228.7  | 2226.6  | 2226.6  | 2236.9  | 2241.0 | 2242.0 | 2246.1 | 2249.2 | 2257.4 | 2214.3 | 2112.8 |
| 25°   | 2397.0  | 2404.2  | 2405.2  | 2418.5  | 2424.7 | 2424.7 | 2427.8 | 2439.1 | 2463.7 | 2404.2 | 2272.8 |
| 27.5° | 2568.3  | 2585.8  | 2589.9  | 2599.1  | 2608.4 | 2617.6 | 2624.8 | 2633.0 | 2673.0 | 2608.4 | 2437.0 |
| 30°   | 2739.7  | 2759.2  | 2773.6  | 2783.8  | 2795.1 | 2817.7 | 2821.8 | 2838.2 | 2904.9 | 2825.9 | 2593.0 |
| 32.5° | 2940.8  | 2968.5  | 2987.0  | 3000.3  | 3017.8 | 3039.3 | 3051.6 | 3072.2 | 3136.8 | 3007.5 | 2706.9 |
| 35°   | 3180.9  | 3197.3  | 3224.0  | 3246.6  | 3256.9 | 3293.8 | 3313.3 | 3318.4 | 3367.7 | 3164.5 | 2791.0 |
| 37.5° | 3347.2  | 3374.9  | 3421.0  | 3452.8  | 3471.3 | 3491.8 | 3524.7 | 3546.2 | 3593.4 | 3307.1 | 2833.1 |
| 40°   | 3558.5  | 3600.6  | 3637.5  | 3684.7  | 3714.5 | 3729.9 | 3762.7 | 3780.2 | 3786.3 | 3429.2 | 2819.7 |
| 42.5° | 3816.1  | 3854.1  | 3903.3  | 3941.3  | 3963.8 | 3981.3 | 4008.0 | 4015.2 | 3935.1 | 3486.7 | 2747.9 |
| 45°   | 4058.2  | 4116.7  | 4158.8  | 4186.5  | 4202.9 | 4212.2 | 4228.6 | 4229.6 | 4058.2 | 3458.0 | 2624.8 |
| 47.5° | 4318.9  | 4360.9  | 4399.9  | 4419.4  | 4417.4 | 4419.4 | 4413.3 | 4409.2 | 4119.8 | 3358.4 | 2466.8 |
| 50°   | 4607.2  | 4634.9  | 4651.3  | 4660.6  | 4665.7 | 4646.2 | 4618.5 | 4600.0 | 4124.9 | 3216.8 | 2306.7 |
| 52.5° | 4994.1  | 5028.9  | 5025.9  | 5024.8  | 4983.8 | 4965.3 | 4891.4 | 4853.5 | 4095.2 | 3050.6 | 2126.1 |
| 55°   | 5974.0  | 5940.1  | 5873.4  | 5906.3  | 5739.0 | 5651.8 | 5536.9 | 5430.2 | 4134.2 | 2892.6 | 1916.8 |
| 57.5° | 8194.5  | 8207.8  | 8018.0  | 7916.4  | 7634.2 | 7281.2 | 6997.0 | 6721.0 | 4485.1 | 2796.1 | 1643.8 |
| 60°   | 10511.4 | 10337.0 | 10095.9 | 9728.5  | 9365.3 | 8840.9 | 8335.1 | 7856.9 | 4835.0 | 2695.6 | 1320.6 |
| 62.5° | 11523.2 | 11274.8 | 10910.6 | 10435.5 | 9865.0 | 9223.7 | 8593.6 | 8010.8 | 4665.7 | 2370.3 | 960.4  |
| 65°   | 11317.9 | 10938.3 | 10536.1 | 9979.9  | 9286.3 | 8583.4 | 7847.7 | 7252.5 | 3903.3 | 1768.0 | 592.1  |
| 67.5° | 10244.6 | 9922.4  | 9497.6  | 8837.8  | 8096.0 | 7364.4 | 6690.2 | 6023.2 | 2899.8 | 1102.0 | 331.4  |
| 70°   | 8647.0  | 8332.0  | 7901.0  | 7225.8  | 6485.0 | 5785.2 | 5071.0 | 4527.2 | 1848.0 | 531.5  | 239.1  |
| 72.5° | 5998.6  | 5743.1  | 5438.4  | 4957.1  | 4307.6 | 3671.4 | 3188.1 | 2770.5 | 1024.1 | 282.2  | 218.6  |
| 75°   | 2436.0  | 2437.0  | 2381.6  | 2178.4  | 1840.8 | 1587.4 | 1353.4 | 1148.2 | 427.9  | 240.1  | 215.5  |
| 77.5° | 552.0   | 561.3   | 613.6   | 581.8   | 524.3  | 490.5  | 439.2  | 387.9  | 260.6  | 247.3  | 217.5  |
| 80°   | 279.1   | 280.1   | 277.0   | 278.1   | 275.0  | 276.0  | 271.9  | 268.8  | 244.2  | 254.5  | 217.5  |
| 82.5° | 232.9   | 238.1   | 237.0   | 237.0   | 238.1  | 238.1  | 238.1  | 237.0  | 253.4  | 267.8  | 210.4  |
| 85°   | 184.7   | 195.0   | 203.2   | 211.4   | 220.6  | 226.8  | 229.8  | 232.9  | 246.3  | 263.7  | 190.9  |
| 87.5° | 139.6   | 151.9   | 162.1   | 170.3   | 184.7  | 184.7  | 195.0  | 202.1  | 202.1  | 206.2  | 100.6  |
| 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):**

|       | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1473.5 | 1473.5 | 1473.5 | 1473.5 | 1473.5 |
| 2.5°  | 1423.2 | 1419.1 | 1415.0 | 1412.9 | 1408.8 |
| 5°    | 1412.9 | 1404.7 | 1399.6 | 1399.6 | 1395.5 |
| 7.5°  | 1442.7 | 1439.6 | 1432.4 | 1428.3 | 1432.4 |
| 10°   | 1506.3 | 1501.2 | 1493.0 | 1486.8 | 1489.9 |
| 12.5° | 1591.5 | 1571.0 | 1554.5 | 1547.4 | 1542.2 |
| 15°   | 1679.7 | 1638.7 | 1605.9 | 1587.4 | 1582.3 |
| 17.5° | 1774.1 | 1702.3 | 1653.1 | 1625.4 | 1620.2 |
| 20°   | 1870.6 | 1781.3 | 1711.5 | 1675.6 | 1674.6 |
| 22.5° | 1986.5 | 1867.5 | 1778.2 | 1731.0 | 1728.0 |
| 25°   | 2108.6 | 1944.5 | 1826.5 | 1765.9 | 1759.8 |
| 27.5° | 2214.3 | 2006.0 | 1856.2 | 1784.4 | 1778.2 |
| 30°   | 2302.6 | 2052.2 | 1880.9 | 1797.7 | 1789.5 |
| 32.5° | 2366.2 | 2078.9 | 1891.1 | 1801.8 | 1792.6 |
| 35°   | 2386.7 | 2068.6 | 1862.4 | 1764.9 | 1754.6 |
| 37.5° | 2359.0 | 2001.9 | 1782.3 | 1674.6 | 1662.3 |
| 40°   | 2275.9 | 1885.0 | 1652.0 | 1541.2 | 1525.8 |
| 42.5° | 2148.7 | 1741.3 | 1495.0 | 1389.3 | 1369.9 |
| 45°   | 1991.7 | 1579.2 | 1339.1 | 1221.1 | 1211.8 |
| 47.5° | 1827.5 | 1408.8 | 1163.6 | 1056.9 | 1045.6 |
| 50°   | 1650.0 | 1211.8 | 992.2  | 876.3  | 876.3  |
| 52.5° | 1438.6 | 1019.9 | 793.2  | 706.0  | 698.8  |
| 55°   | 1195.4 | 803.4  | 632.1  | 565.4  | 556.1  |
| 57.5° | 933.8  | 617.7  | 504.8  | 465.9  | 455.6  |
| 60°   | 686.5  | 463.8  | 406.3  | 384.8  | 380.7  |
| 62.5° | 465.9  | 353.0  | 327.3  | 318.1  | 317.1  |
| 65°   | 315.0  | 275.0  | 267.8  | 264.7  | 265.8  |
| 67.5° | 242.2  | 228.8  | 225.7  | 224.7  | 224.7  |
| 70°   | 210.4  | 202.1  | 199.1  | 200.1  | 199.1  |
| 72.5° | 198.0  | 186.8  | 187.8  | 189.8  | 188.8  |
| 75°   | 193.9  | 179.6  | 183.7  | 184.7  | 180.6  |
| 77.5° | 190.9  | 171.4  | 181.6  | 184.7  | 173.4  |
| 80°   | 184.7  | 164.2  | 188.8  | 189.8  | 170.3  |
| 82.5° | 169.3  | 145.7  | 188.8  | 174.4  | 153.9  |
| 85°   | 143.7  | 110.8  | 213.4  | 151.9  | 113.9  |
| 87.5° | 91.3   | 65.7   | 144.7  | 103.6  | 68.7   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)