

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: P232701

Luminaire Tested: **CST-10-8-D-U-T3**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P232701  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-19)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: CST-10-8-D-U-T3  
Description: CELESTEON HIGH MAST LUMINAIRE  
(10) 70 CRI, 4000K LEDS AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 80781 lumens  
Efficiency: N/A  
Efficacy: 128.0 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type III - Medium - Semi-Cutoff  
BUG Rating: B5 - U0 - G5

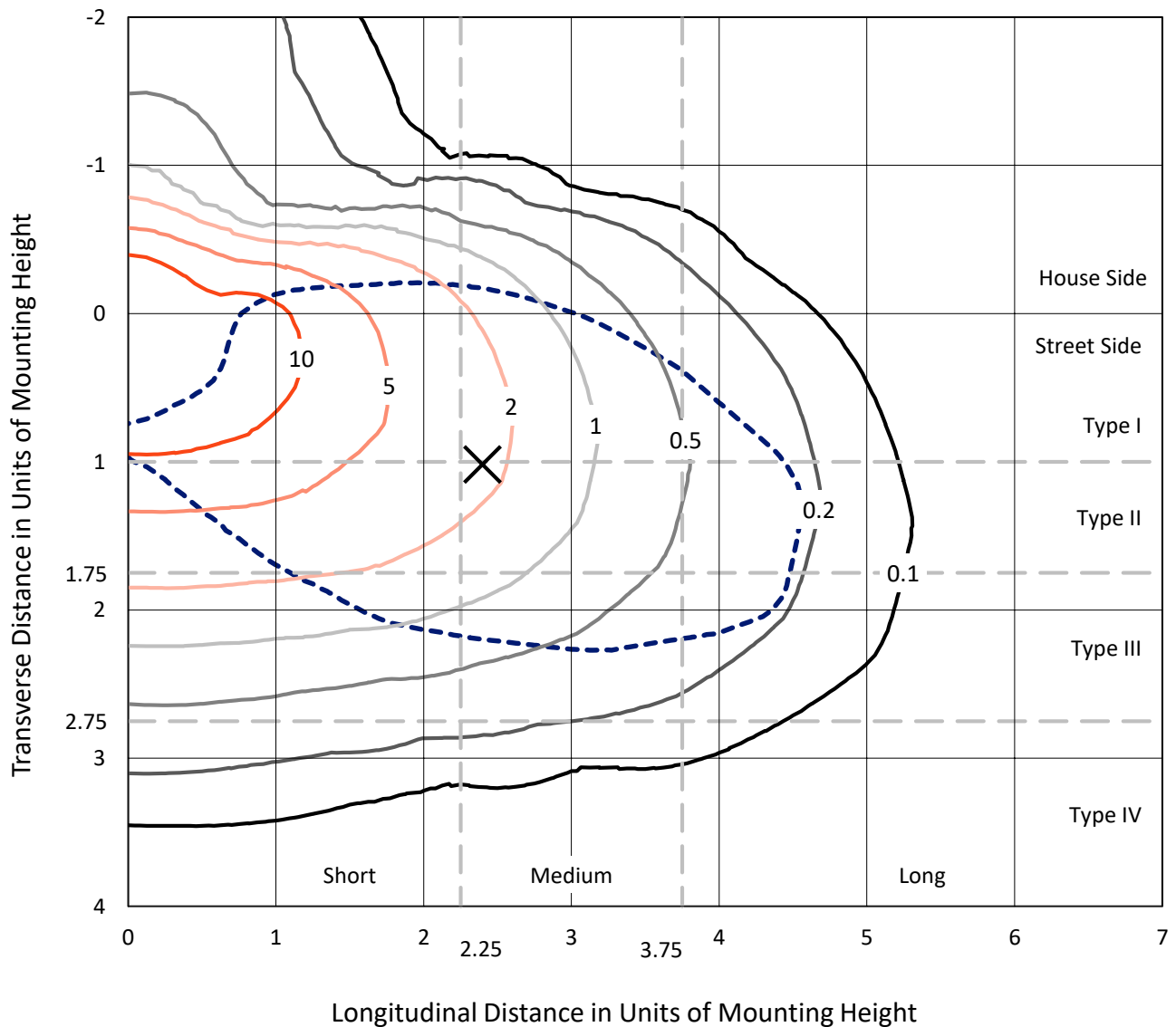
Input Watts (W): 631  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

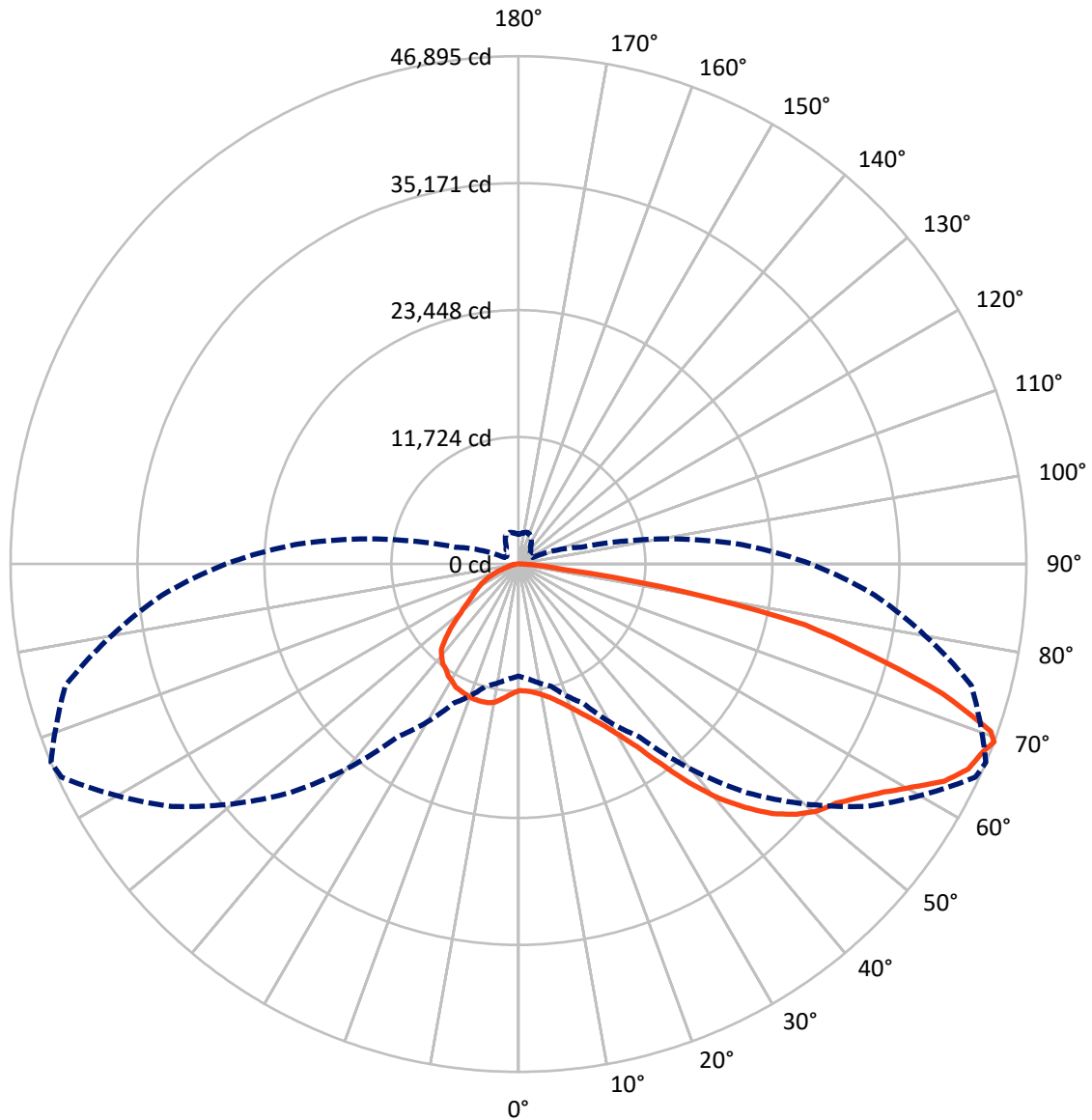
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 15.4 fc  
 Type III - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical



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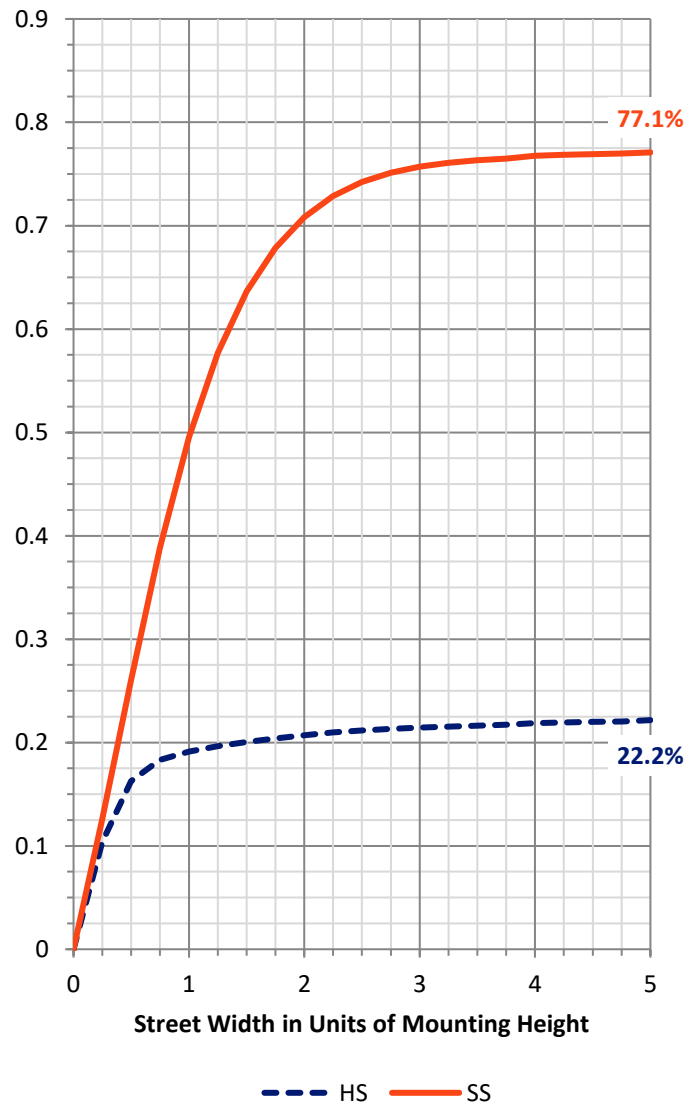
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 18376.0  | 0.0    | 18376.0 |
|                    | % Fixture | 22.7     | 0.0    | 22.7    |
| <b>Street Side</b> | Lumens    | 62405.1  | 0.0    | 62405.1 |
|                    | % Fixture | 77.3     | 0.0    | 77.3    |
| <b>Total</b>       | Lumens    | 80781.0  | 0.0    | 80781.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 1186.7  | 1.5       |
| 10°-20°   | 3811.3  | 4.7       |
| 20°-30°   | 6627.9  | 8.2       |
| 30°-40°   | 9984.1  | 12.4      |
| 40°-50°   | 13789.0 | 17.1      |
| 50°-60°   | 16457.2 | 20.4      |
| 60°-70°   | 17332.5 | 21.5      |
| 70°-80°   | 10167.4 | 12.6      |
| 80°-90°   | 1425.0  | 1.8       |
| 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°    | 80781.0 | 100.0     |
| 0°-180°   | 80781.0 | 100.0     |

**Coefficient of Utilization**



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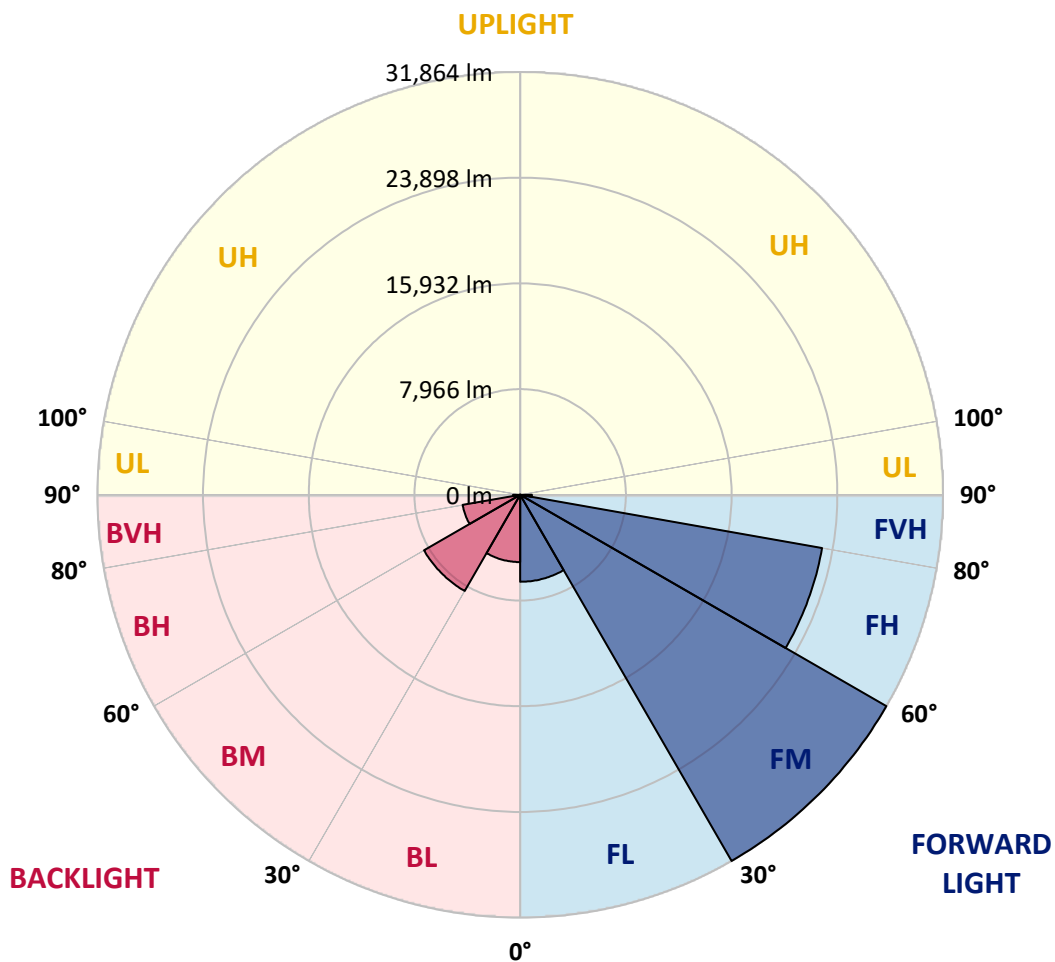
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|---------|-----------|-------------------------|------|---------|
|                |         |           | B                       | U    | G       |
| FL (0°-30°)    | 6555.3  | 8.1       |                         |      |         |
| FM (30°-60°)   | 31864.3 | 39.4      |                         |      |         |
| FH (60°-80°)   | 23099.9 | 28.6      |                         |      | G5      |
| FVH (80°-90°)  | 885.6   | 1.1       |                         |      | G5      |
| BL (0°-30°)    | 5070.6  | 6.3       | B5                      |      |         |
| BM (30°-60°)   | 8366.0  | 10.4      | B4/8500                 |      |         |
| BH (60°-80°)   | 4399.9  | 5.4       | B4/5000                 |      | G4/5000 |
| BVH (80°-90°)  | 539.4   | 0.7       |                         |      | G4/750  |
| UL (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0     | 0.0       |                         | U0/0 |         |

**BUG Rating: B5-U0-G5**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 67°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 11690.2 | 11690.2 | 11690.2 | 11690.2 | 11690.2 | 11690.2 | 11690.2 | 11690.2 | 11690.2 | 11690.2 | 11690.2 |
| 2.5°  | 11739.3 | 11754.8 | 11739.3 | 11713.4 | 11628.1 | 11666.9 | 11633.3 | 11741.9 | 11734.1 | 11692.8 | 11767.7 |
| 5°    | 12013.4 | 12031.5 | 11997.9 | 11977.2 | 11845.3 | 11863.4 | 11791.0 | 11850.5 | 11829.8 | 11760.0 | 11876.3 |
| 7.5°  | 12460.7 | 12478.8 | 12437.5 | 12409.0 | 12222.8 | 12181.5 | 12049.6 | 12067.7 | 12028.9 | 11917.7 | 12052.2 |
| 10°   | 13063.2 | 13078.7 | 13008.9 | 12939.1 | 12701.2 | 12600.4 | 12380.6 | 12344.4 | 12287.5 | 12178.9 | 12315.9 |
| 12.5° | 13712.2 | 13735.5 | 13650.2 | 13559.7 | 13283.0 | 13117.5 | 12804.6 | 12693.4 | 12623.6 | 12491.8 | 12641.7 |
| 15°   | 14407.8 | 14436.2 | 14348.3 | 14244.9 | 13939.8 | 13683.8 | 13293.3 | 13125.3 | 13058.0 | 12892.5 | 12985.6 |
| 17.5° | 15320.6 | 15312.8 | 15240.4 | 15098.2 | 14733.6 | 14358.7 | 13877.7 | 13626.9 | 13580.4 | 13420.0 | 13443.3 |
| 20°   | 16378.1 | 16341.9 | 16274.7 | 16078.2 | 15682.6 | 15217.1 | 14588.8 | 14270.7 | 14224.2 | 14089.7 | 13947.5 |
| 22.5° | 17526.2 | 17490.0 | 17425.4 | 17174.5 | 16784.1 | 16173.9 | 15421.4 | 15046.5 | 14984.4 | 14816.3 | 14578.4 |
| 25°   | 18656.2 | 18617.4 | 18581.2 | 18343.3 | 17963.2 | 17270.2 | 16365.2 | 15886.8 | 15858.4 | 15687.7 | 15250.7 |
| 27.5° | 19830.1 | 19806.8 | 19817.2 | 19612.9 | 19232.8 | 18514.0 | 17487.4 | 16967.7 | 16918.6 | 16701.3 | 16106.6 |
| 30°   | 21037.6 | 21042.8 | 21141.1 | 20923.9 | 20574.8 | 19850.8 | 18832.0 | 18301.9 | 18309.7 | 18115.8 | 17246.9 |
| 32.5° | 22118.5 | 22123.7 | 22343.5 | 22234.9 | 22043.5 | 21322.1 | 20386.0 | 20013.7 | 20088.7 | 20073.2 | 19183.7 |
| 35°   | 22899.4 | 22933.0 | 23424.3 | 23571.7 | 23499.3 | 22870.9 | 22307.3 | 22397.8 | 22635.6 | 23307.9 | 22374.5 |
| 37.5° | 23633.7 | 23646.7 | 24275.0 | 24616.3 | 24885.2 | 24507.7 | 24394.0 | 25252.4 | 25627.4 | 26558.2 | 25177.4 |
| 40°   | 23845.8 | 24024.2 | 24818.0 | 25293.8 | 25919.5 | 26105.7 | 26682.3 | 27951.9 | 28394.1 | 28955.2 | 27065.0 |
| 42.5° | 23651.8 | 23905.2 | 24900.8 | 26030.7 | 26899.5 | 27822.7 | 28880.2 | 30317.9 | 30718.7 | 31065.2 | 28872.5 |
| 45°   | 23245.9 | 23439.8 | 24474.1 | 26165.2 | 27739.9 | 29570.6 | 30791.1 | 32513.2 | 32875.2 | 32650.2 | 30284.3 |
| 47.5° | 22705.5 | 22852.8 | 24006.1 | 25950.6 | 28412.2 | 31137.6 | 32541.6 | 34274.1 | 34537.8 | 34012.9 | 31243.6 |
| 50°   | 21955.6 | 22131.4 | 23419.1 | 25655.8 | 28906.1 | 32448.6 | 33948.3 | 35598.0 | 35820.4 | 34861.1 | 32184.8 |
| 52.5° | 21029.9 | 21249.7 | 22746.8 | 25154.2 | 29275.8 | 33426.0 | 34930.9 | 36479.7 | 36704.7 | 36081.5 | 32929.5 |
| 55°   | 19980.1 | 20285.2 | 21826.3 | 24543.9 | 29301.7 | 33945.7 | 35543.7 | 37772.6 | 38093.2 | 37421.0 | 33581.1 |
| 57.5° | 18914.8 | 19111.3 | 20742.9 | 23610.5 | 28815.6 | 34119.0 | 36278.1 | 39277.5 | 39745.5 | 38719.0 | 34292.2 |
| 60°   | 17614.1 | 17802.9 | 19419.0 | 22361.6 | 27845.9 | 34385.3 | 37746.8 | 41431.4 | 41803.8 | 40231.7 | 34897.3 |
| 62.5° | 16075.6 | 16290.2 | 17756.3 | 20652.4 | 26410.8 | 34493.9 | 39243.9 | 43722.4 | 44149.1 | 41607.3 | 35246.3 |
| 65°   | 14120.8 | 14358.7 | 15695.5 | 18583.8 | 24360.3 | 33723.3 | 39890.3 | 45416.1 | 45635.9 | 42662.3 | 35096.4 |
| 67.5° | 11984.9 | 12181.5 | 13246.8 | 16011.0 | 21523.8 | 31714.2 | 39551.6 | 46041.8 | 46264.2 | 43378.5 | 34199.1 |
| 69°   | 10350.8 | 10653.3 | 11677.2 | 14177.7 | 19483.6 | 29875.7 | 39034.5 | 46556.4 | 46895.1 | 43298.4 | 33020.0 |
| 70°   | 9042.4  | 9381.1  | 10306.8 | 12561.6 | 17751.2 | 27967.5 | 38072.6 | 46166.0 | 46261.6 | 42525.2 | 31957.3 |
| 72.5° | 5714.5  | 5825.7  | 6247.2  | 7746.9  | 12489.2 | 21741.0 | 33317.4 | 40984.1 | 40958.3 | 37940.7 | 27897.6 |
| 75°   | 2823.6  | 2968.4  | 3767.4  | 4349.2  | 6154.1  | 13983.7 | 26224.7 | 33661.3 | 33666.4 | 32021.9 | 22935.6 |
| 77.5° | 1696.3  | 1758.3  | 1962.6  | 2803.0  | 3516.6  | 6275.6  | 17800.3 | 26648.7 | 27057.3 | 26061.8 | 16504.8 |
| 80°   | 1168.8  | 1137.7  | 1197.2  | 1378.2  | 1892.8  | 3299.4  | 7317.7  | 15064.6 | 15506.7 | 14301.8 | 7030.7  |
| 82.5° | 920.5   | 894.7   | 912.8   | 959.3   | 902.4   | 1528.2  | 3095.1  | 4504.4  | 4372.5  | 3855.4  | 2702.1  |
| 85°   | 643.9   | 592.1   | 625.8   | 607.7   | 537.8   | 897.3   | 1504.9  | 1872.1  | 1859.2  | 1921.2  | 1471.3  |
| 87.5° | 204.3   | 181.0   | 186.2   | 181.0   | 150.0   | 318.0   | 540.4   | 729.2   | 672.3   | 682.6   | 517.1   |
| 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):**

|       | 90°     | 95°     | 105°    | 115°    | 125°    | 135°    | 145°    | 155°    | 165°    | 175°    | 180°    |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 11690.2 | 11690.2 | 11690.2 | 11690.2 | 11690.2 | 11690.2 | 11690.2 | 11690.2 | 11690.2 | 11690.2 | 11690.2 |
| 2.5°  | 11785.8 | 11765.2 | 11788.4 | 11910.0 | 11881.5 | 11987.5 | 12013.4 | 12186.6 | 12194.4 | 12178.9 | 12256.4 |
| 5°    | 11930.6 | 11951.3 | 12039.2 | 12233.2 | 12297.8 | 12525.4 | 12628.8 | 12840.8 | 12861.5 | 12869.3 | 12944.3 |
| 7.5°  | 12140.1 | 12176.3 | 12365.0 | 12618.5 | 12740.0 | 13037.3 | 13192.5 | 13453.6 | 13471.7 | 13500.2 | 13585.5 |
| 10°   | 12450.4 | 12502.1 | 12652.1 | 12998.6 | 13037.3 | 13272.6 | 13414.9 | 13639.8 | 13624.3 | 13663.1 | 13740.7 |
| 12.5° | 12763.3 | 12791.7 | 12905.5 | 13143.4 | 13117.5 | 13347.6 | 13409.7 | 13557.1 | 13546.7 | 13544.2 | 13601.0 |
| 15°   | 13099.4 | 13050.3 | 13065.8 | 13156.3 | 13060.6 | 13202.8 | 13158.9 | 13267.5 | 13125.3 | 13068.4 | 13107.2 |
| 17.5° | 13456.2 | 13337.3 | 13184.7 | 13117.5 | 12936.5 | 12913.2 | 12763.3 | 12711.5 | 12613.3 | 12582.3 | 12613.3 |
| 20°   | 13880.3 | 13626.9 | 13257.1 | 13063.2 | 12667.6 | 12463.3 | 12176.3 | 12008.2 | 11780.7 | 11798.8 | 11842.7 |
| 22.5° | 14312.1 | 13955.3 | 13396.8 | 12877.0 | 12318.5 | 11904.8 | 11333.3 | 11180.8 | 10883.4 | 10795.5 | 10883.4 |
| 25°   | 14842.2 | 14363.8 | 13466.6 | 12711.5 | 11791.0 | 11054.1 | 10474.9 | 9934.4  | 9709.5  | 9489.7  | 9572.4  |
| 27.5° | 15537.8 | 14891.3 | 13720.0 | 12507.3 | 11193.7 | 10211.1 | 9290.6  | 8592.4  | 8313.2  | 8077.9  | 8093.4  |
| 30°   | 16440.2 | 15597.2 | 13815.7 | 12078.0 | 10474.9 | 9055.3  | 7896.9  | 7121.2  | 6772.1  | 6676.4  | 6635.0  |
| 32.5° | 18108.0 | 16735.0 | 13986.3 | 11765.2 | 9580.2  | 7798.6  | 6376.5  | 5543.8  | 5324.1  | 5365.4  | 5499.9  |
| 35°   | 21063.5 | 19116.4 | 14503.5 | 11111.0 | 8592.4  | 6428.2  | 4954.3  | 4310.4  | 4346.6  | 4421.6  | 4406.1  |
| 37.5° | 23613.1 | 21265.2 | 15364.5 | 10650.7 | 7384.9  | 4869.0  | 3741.6  | 3400.3  | 3617.5  | 3764.8  | 3759.7  |
| 40°   | 25345.5 | 22832.2 | 16491.9 | 9789.6  | 5859.3  | 3470.1  | 2753.8  | 2565.1  | 2841.7  | 3157.2  | 3211.5  |
| 42.5° | 27065.0 | 24256.9 | 17037.5 | 9026.8  | 4113.9  | 2448.7  | 1993.6  | 2042.7  | 2397.0  | 2694.3  | 2748.7  |
| 45°   | 28301.0 | 25291.2 | 17278.0 | 7666.7  | 2627.1  | 1874.7  | 1740.2  | 1921.2  | 2303.9  | 2539.2  | 2565.1  |
| 47.5° | 29208.6 | 26069.5 | 17016.8 | 6203.2  | 1934.1  | 1714.4  | 1716.9  | 1947.1  | 2332.3  | 2598.7  | 2609.0  |
| 50°   | 30010.2 | 26617.7 | 15964.4 | 4837.9  | 1740.2  | 1660.1  | 1750.6  | 2022.1  | 2415.1  | 2684.0  | 2676.2  |
| 52.5° | 30558.4 | 26778.0 | 14687.1 | 3964.0  | 1685.9  | 1629.0  | 1779.0  | 2091.9  | 2440.9  | 2621.9  | 2606.4  |
| 55°   | 30923.0 | 26537.5 | 13704.5 | 3263.2  | 1639.4  | 1626.4  | 1825.5  | 2179.8  | 2466.8  | 2539.2  | 2503.0  |
| 57.5° | 31147.9 | 26051.4 | 12874.4 | 2805.5  | 1600.6  | 1626.4  | 1877.3  | 2213.4  | 2562.5  | 2694.3  | 2653.0  |
| 60°   | 31080.7 | 25834.2 | 11749.6 | 2430.6  | 1546.3  | 1631.6  | 1905.7  | 2262.5  | 2947.8  | 3258.0  | 3265.8  |
| 62.5° | 30946.2 | 25410.2 | 10650.7 | 2133.2  | 1481.6  | 1662.6  | 1941.9  | 2547.0  | 3620.0  | 3622.6  | 3493.3  |
| 65°   | 30307.6 | 24132.8 | 9052.7  | 1864.3  | 1414.4  | 1670.4  | 1949.7  | 3015.0  | 4059.6  | 3718.3  | 3550.2  |
| 67.5° | 28549.2 | 22263.3 | 7183.2  | 1613.5  | 1339.4  | 1623.9  | 1941.9  | 2950.3  | 3278.7  | 2934.8  | 2849.5  |
| 69°   | 27015.9 | 20642.0 | 6001.5  | 1463.5  | 1285.1  | 1577.3  | 1949.7  | 2828.8  | 3035.7  | 2831.4  | 2753.8  |
| 70°   | 25898.9 | 19328.5 | 5099.1  | 1373.0  | 1236.0  | 1554.0  | 1949.7  | 2784.9  | 3002.1  | 2808.1  | 2733.1  |
| 72.5° | 22229.7 | 15183.5 | 3056.4  | 1145.5  | 1093.8  | 1463.5  | 1931.6  | 2717.6  | 3027.9  | 2862.4  | 2764.2  |
| 75°   | 17029.7 | 11043.7 | 1779.0  | 941.2   | 920.5   | 1313.6  | 1835.9  | 2676.2  | 3115.8  | 2865.0  | 2650.4  |
| 77.5° | 10911.9 | 5096.5  | 1326.5  | 765.4   | 747.3   | 1137.7  | 1714.4  | 2541.8  | 3201.2  | 3004.6  | 2733.1  |
| 80°   | 3790.7  | 2311.7  | 990.3   | 605.1   | 579.2   | 930.9   | 1502.3  | 2291.0  | 3048.6  | 3069.3  | 2865.0  |
| 82.5° | 2078.9  | 1523.0  | 700.7   | 449.9   | 426.6   | 584.4   | 1168.8  | 1975.5  | 2821.1  | 3038.3  | 3053.8  |
| 85°   | 1142.9  | 858.5   | 460.3   | 289.6   | 325.8   | 501.6   | 809.3   | 1535.9  | 2270.3  | 2640.0  | 2756.4  |
| 87.5° | 462.8   | 310.3   | 181.0   | 113.8   | 134.5   | 199.1   | 274.1   | 786.1   | 1370.4  | 1768.7  | 1947.1  |
| 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)