

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: P232733

Luminaire Tested: **CST-10-8-D-U-T4-7050**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P232733  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-20)  
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-T4-7050  
Description: CELESTEON HIGH MAST LUMINAIRE  
(10) 70 CRI, 5000K LEDS AND TYPE IV OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 80394 lumens  
Efficiency: N/A  
Efficacy: 127.4 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short - Non-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

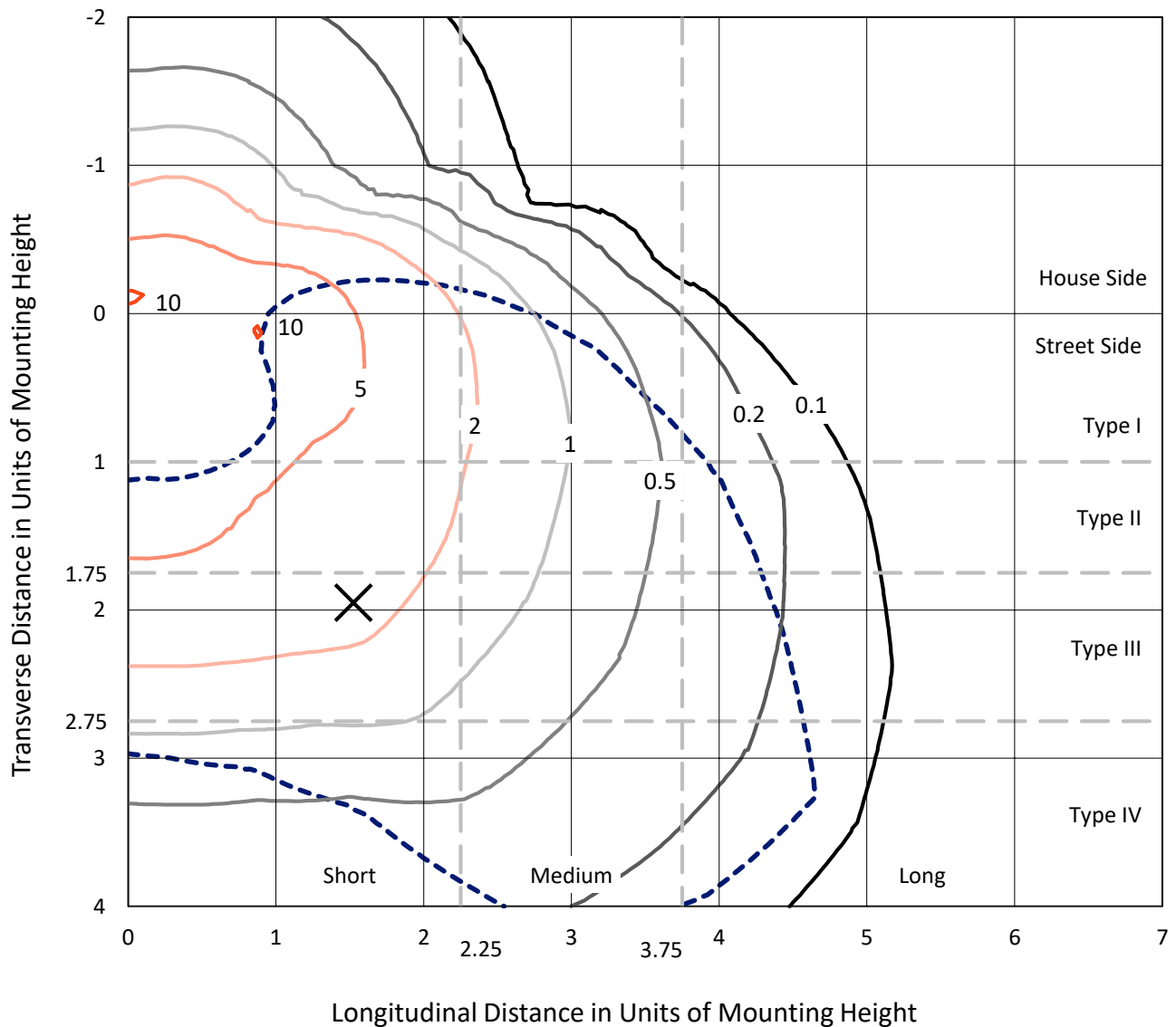


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

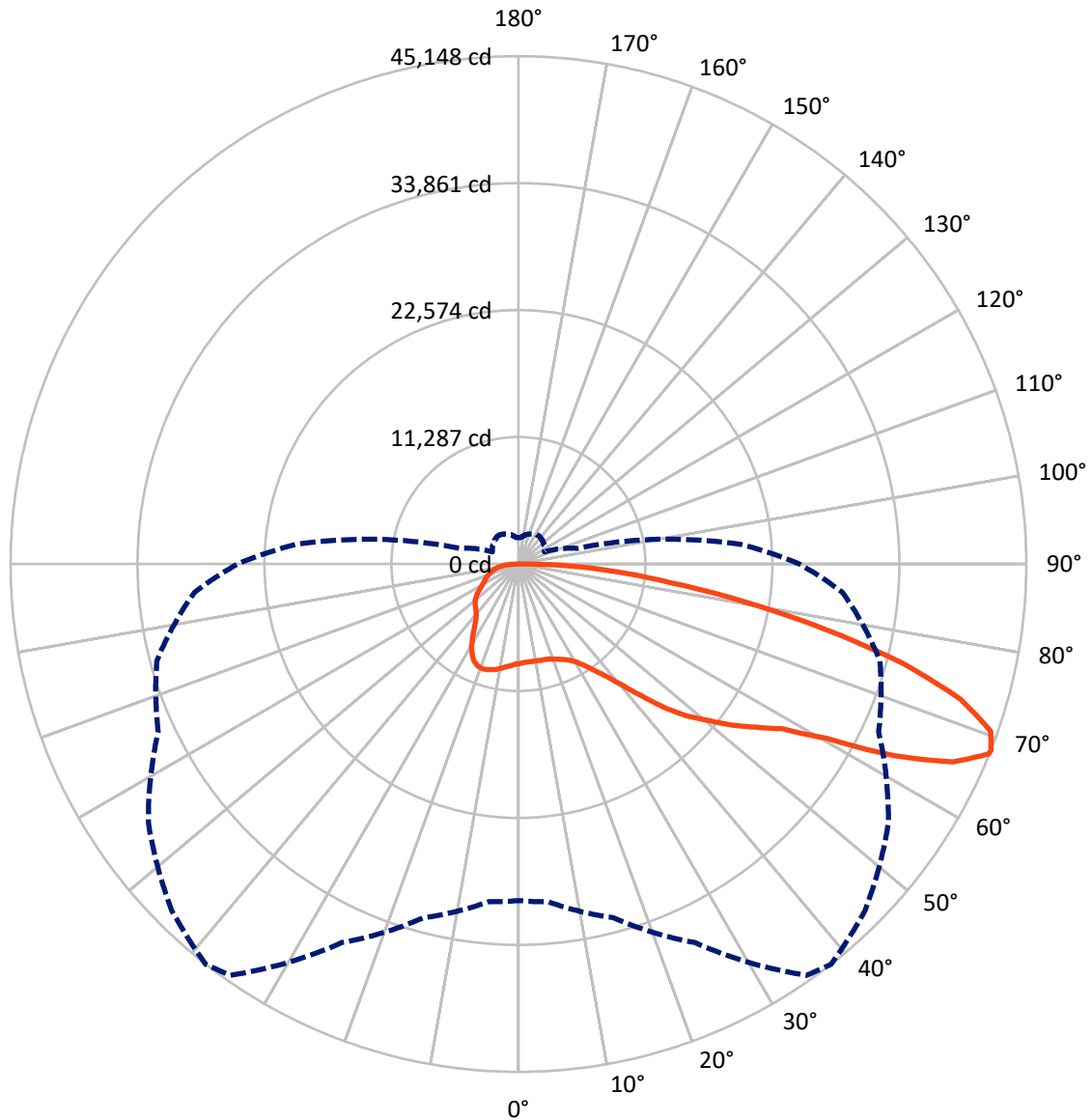


Based on 30 foot mounting height. Maximum calculated value = 10.2 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral      - - - Horizontal Cone Through 68-Deg Vertical



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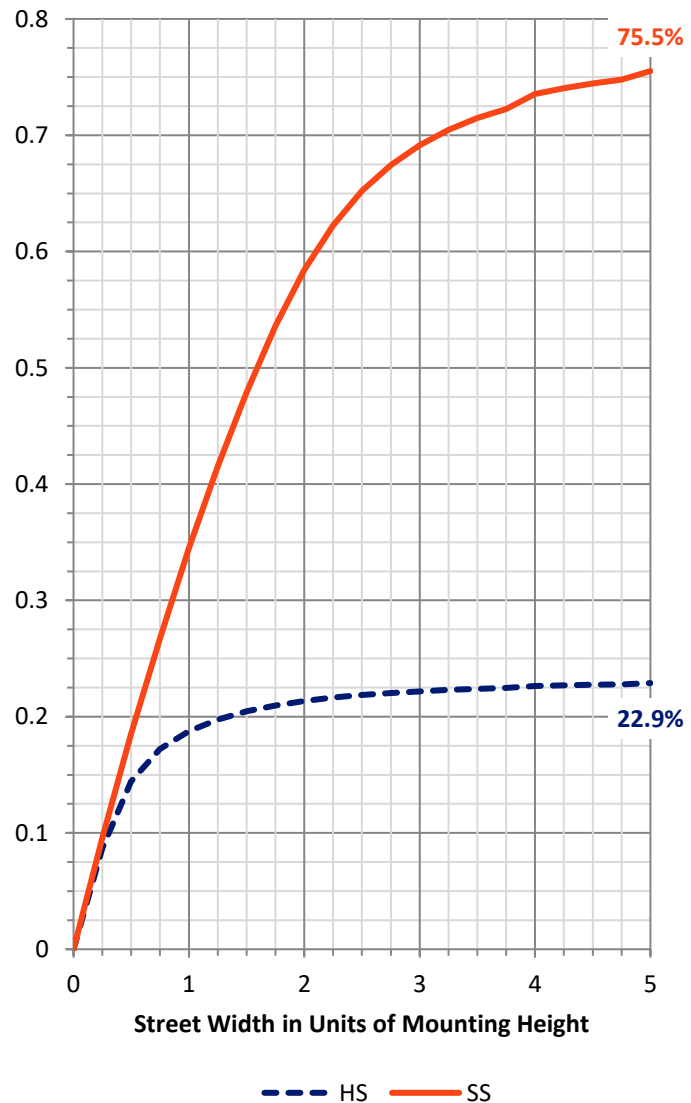
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 18762.2  | 0.0    | 18762.2 |
|                    | % Fixture | 23.3     | 0.0    | 23.3    |
| <b>Street Side</b> | Lumens    | 61631.8  | 0.0    | 61631.8 |
|                    | % Fixture | 76.7     | 0.0    | 76.7    |
| <b>Total</b>       | Lumens    | 80394.0  | 0.0    | 80394.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 856.5   | 1.1       |
| 10°-20°   | 2644.0  | 3.3       |
| 20°-30°   | 4491.9  | 5.6       |
| 30°-40°   | 6802.3  | 8.5       |
| 40°-50°   | 11250.9 | 14.0      |
| 50°-60°   | 16206.3 | 20.2      |
| 60°-70°   | 20438.5 | 25.4      |
| 70°-80°   | 14546.4 | 18.1      |
| 80°-90°   | 3157.4  | 3.9       |
| 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°    | 80394.0 | 100.0     |
| 0°-180°   | 80394.0 | 100.0     |



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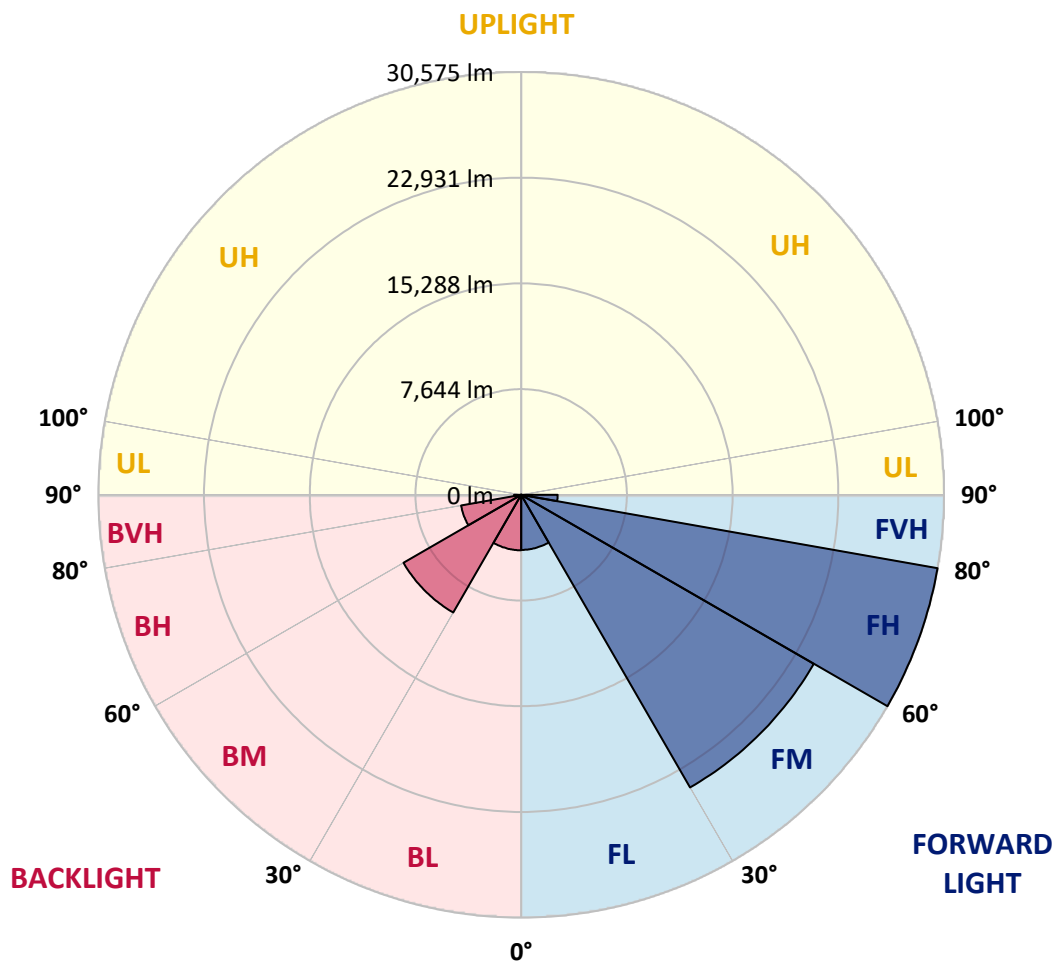
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|---------|-----------|-------------------------|------|---------|
|      |             |         |           | B                       | U    | G       |
| FL   | (0°-30°)    | 3983.1  | 5.0       |                         |      |         |
| FM   | (30°-60°)   | 24434.3 | 30.4      |                         |      |         |
| FH   | (60°-80°)   | 30575.1 | 38.0      |                         |      | G5      |
| FVH  | (80°-90°)   | 2639.2  | 3.3       |                         |      | G5      |
| BL   | (0°-30°)    | 4009.2  | 5.0       | B4/5000                 |      |         |
| BM   | (30°-60°)   | 9825.1  | 12.2      | B5                      |      |         |
| BH   | (60°-80°)   | 4409.7  | 5.5       | B4/5000                 |      | G4/5000 |
| BVH  | (80°-90°)   | 518.1   | 0.6       |                         |      | 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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 38°     | 45°     | 55°     | 65°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 8856.6  | 8856.6  | 8856.6  | 8856.6  | 8856.6  | 8856.6  | 8856.6  | 8856.6  | 8856.6  | 8856.6  | 8856.6  |
| 2.5°  | 8825.3  | 8840.9  | 8830.5  | 8825.3  | 8757.3  | 8773.0  | 8799.1  | 8762.6  | 8851.4  | 8846.1  | 8898.4  |
| 5°    | 8741.7  | 8749.5  | 8752.1  | 8775.6  | 8710.3  | 8744.3  | 8775.6  | 8752.1  | 8846.1  | 8820.0  | 8893.2  |
| 7.5°  | 8718.2  | 8715.6  | 8718.2  | 8762.6  | 8692.1  | 8744.3  | 8780.9  | 8773.0  | 8874.9  | 8854.0  | 8942.8  |
| 10°   | 8658.1  | 8660.7  | 8668.5  | 8718.2  | 8681.6  | 8752.1  | 8817.4  | 8851.4  | 8987.2  | 8968.9  | 9070.8  |
| 12.5° | 8553.6  | 8574.5  | 8603.3  | 8686.8  | 8694.7  | 8788.7  | 8885.3  | 8953.2  | 9130.8  | 9146.5  | 9274.5  |
| 15°   | 8462.2  | 8498.8  | 8548.4  | 8660.7  | 8707.7  | 8814.8  | 8937.6  | 9062.9  | 9295.4  | 9365.9  | 9527.8  |
| 17.5° | 8490.9  | 8545.8  | 8611.1  | 8726.0  | 8760.0  | 8872.3  | 9010.7  | 9177.8  | 9465.1  | 9616.6  | 9825.6  |
| 20°   | 8668.5  | 8705.1  | 8760.0  | 8867.0  | 8911.4  | 9023.7  | 9136.1  | 9300.6  | 9674.1  | 9919.6  | 10178.2 |
| 22.5° | 8890.5  | 8942.8  | 8979.3  | 9044.6  | 9096.9  | 9196.1  | 9313.7  | 9475.6  | 9917.0  | 10225.2 | 10580.4 |
| 25°   | 9128.2  | 9154.3  | 9206.6  | 9251.0  | 9316.3  | 9394.6  | 9527.8  | 9726.3  | 10193.8 | 10572.5 | 11068.8 |
| 27.5° | 9347.6  | 9360.7  | 9459.9  | 9496.5  | 9624.5  | 9681.9  | 9786.4  | 10050.2 | 10554.3 | 11021.8 | 11632.9 |
| 30°   | 9668.9  | 9695.0  | 9770.7  | 9856.9  | 10045.0 | 10102.4 | 10209.5 | 10486.4 | 11034.8 | 11632.9 | 12366.8 |
| 32.5° | 10277.4 | 10345.3 | 10334.9 | 10426.3 | 10648.3 | 10724.0 | 10870.3 | 11230.7 | 11828.8 | 12515.7 | 13388.1 |
| 35°   | 11510.2 | 11606.8 | 11486.7 | 11363.9 | 11481.4 | 11583.3 | 11807.9 | 12335.5 | 13074.6 | 14208.2 | 15070.1 |
| 37.5° | 13529.1 | 13625.7 | 13197.4 | 12805.6 | 12549.7 | 12630.6 | 12936.2 | 13683.2 | 14814.1 | 16783.4 | 17744.5 |
| 40°   | 15887.5 | 15992.0 | 15396.5 | 14691.3 | 14114.1 | 14082.8 | 14176.8 | 15127.5 | 16759.9 | 19648.5 | 20398.1 |
| 42.5° | 17943.0 | 18217.3 | 17439.0 | 16830.4 | 16083.4 | 15958.1 | 15730.8 | 16692.0 | 18818.0 | 22302.1 | 22725.2 |
| 45°   | 19941.0 | 20207.5 | 19593.7 | 19173.2 | 18410.5 | 18206.8 | 17775.9 | 18358.3 | 20836.9 | 24624.0 | 24642.3 |
| 47.5° | 21774.5 | 21988.7 | 21275.7 | 21006.7 | 20254.5 | 20165.7 | 19724.3 | 20131.7 | 22706.9 | 26590.7 | 26219.8 |
| 50°   | 23824.8 | 24049.4 | 22913.3 | 22581.6 | 21975.6 | 21855.5 | 21711.8 | 22004.4 | 24851.2 | 28285.7 | 27559.7 |
| 52.5° | 26332.1 | 26248.5 | 24846.0 | 24086.0 | 23764.7 | 23793.4 | 23631.5 | 23955.4 | 27126.1 | 29722.2 | 28614.8 |
| 55°   | 29333.1 | 28904.7 | 27363.8 | 26212.0 | 25472.8 | 25613.9 | 25402.3 | 25877.7 | 29374.9 | 30934.1 | 29377.5 |
| 57.5° | 31038.6 | 31156.1 | 31009.8 | 29528.9 | 27648.5 | 27627.6 | 27293.3 | 27750.3 | 31338.9 | 31924.0 | 29842.4 |
| 60°   | 33525.0 | 34010.8 | 34196.2 | 33796.6 | 32109.4 | 31443.4 | 29769.2 | 29664.8 | 32997.4 | 32778.0 | 30080.0 |
| 62.5° | 35097.3 | 35324.5 | 36439.8 | 36922.9 | 37466.2 | 37581.1 | 34922.3 | 31971.0 | 34222.3 | 33214.2 | 30179.3 |
| 65°   | 34345.1 | 34574.9 | 36659.1 | 38552.7 | 41775.6 | 42423.4 | 41577.2 | 35624.9 | 35050.3 | 33310.8 | 29847.6 |
| 67.5° | 30490.1 | 30772.2 | 33569.4 | 37450.5 | 44382.2 | 45079.6 | 43713.6 | 39837.7 | 35321.9 | 33253.4 | 29126.7 |
| 68°   | 29925.9 | 30134.9 | 32548.2 | 37129.3 | 44643.4 | 45147.5 | 43572.6 | 40156.3 | 35337.6 | 33271.6 | 28904.7 |
| 70°   | 25590.4 | 25958.6 | 28499.9 | 34206.7 | 44222.9 | 44544.2 | 42692.4 | 39978.7 | 34982.4 | 32973.9 | 27280.2 |
| 72.5° | 19946.3 | 20455.6 | 22388.3 | 28411.1 | 40845.9 | 41107.0 | 39555.6 | 38019.9 | 33908.9 | 30908.0 | 23383.4 |
| 75°   | 14451.1 | 14887.2 | 16746.8 | 21926.0 | 34386.9 | 35314.1 | 35052.9 | 35329.7 | 30396.1 | 26188.5 | 16934.9 |
| 77.5° | 9979.7  | 10353.2 | 12087.4 | 16360.3 | 26663.8 | 27836.5 | 29192.0 | 29910.3 | 24976.6 | 19429.1 | 8049.5  |
| 80°   | 6393.7  | 6681.0  | 8156.6  | 11520.6 | 19228.0 | 20330.2 | 21790.2 | 22534.6 | 17765.4 | 9773.3  | 1428.7  |
| 82.5° | 3758.4  | 3954.3  | 4962.4  | 7433.2  | 12959.7 | 13631.0 | 14336.1 | 13087.7 | 7130.2  | 1870.0  | 901.1   |
| 85°   | 1867.4  | 1998.0  | 2617.0  | 4205.0  | 8057.4  | 8673.8  | 8908.8  | 5584.0  | 1507.0  | 684.3   | 613.8   |
| 87.5° | 835.8   | 872.3   | 1123.1  | 1893.6  | 3828.9  | 4035.2  | 3936.0  | 1736.8  | 303.0   | 256.0   | 219.4   |
| 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°    | 8856.6  | 8856.6  | 8856.6  | 8856.6  | 8856.6  | 8856.6  | 8856.6 | 8856.6 | 8856.6 | 8856.6 | 8856.6 |
| 2.5°  | 8903.6  | 8882.7  | 8877.5  | 8911.4  | 8874.9  | 8919.3  | 8906.2 | 9005.5 | 9018.5 | 8982.0 | 9042.0 |
| 5°    | 8916.7  | 8906.2  | 8914.1  | 8976.7  | 8963.7  | 9055.1  | 9078.6 | 9177.8 | 9177.8 | 9149.1 | 9211.8 |
| 7.5°  | 8976.7  | 8976.7  | 9000.2  | 9115.2  | 9115.2  | 9193.5  | 9219.6 | 9329.3 | 9326.7 | 9326.7 | 9384.2 |
| 10°   | 9128.2  | 9128.2  | 9177.8  | 9324.1  | 9287.5  | 9389.4  | 9402.5 | 9459.9 | 9446.9 | 9449.5 | 9509.5 |
| 12.5° | 9352.8  | 9365.9  | 9452.1  | 9580.1  | 9556.6  | 9593.1  | 9567.0 | 9556.6 | 9462.5 | 9462.5 | 9501.7 |
| 15°   | 9611.4  | 9666.3  | 9783.8  | 9901.3  | 9823.0  | 9809.9  | 9661.0 | 9530.4 | 9329.3 | 9243.1 | 9287.5 |
| 17.5° | 9948.3  | 10042.3 | 10178.2 | 10261.7 | 10112.9 | 10005.8 | 9736.8 | 9397.2 | 9070.8 | 8880.1 | 8885.3 |
| 20°   | 10321.8 | 10447.2 | 10614.3 | 10643.1 | 10423.7 | 10157.3 | 9708.0 | 9175.2 | 8613.7 | 8310.7 | 8289.8 |
| 22.5° | 10737.1 | 10893.8 | 11087.1 | 10974.8 | 10616.9 | 10183.4 | 9540.9 | 8833.1 | 8078.3 | 7569.0 | 7561.1 |
| 25°   | 11243.8 | 11413.5 | 11536.3 | 11222.9 | 10661.3 | 10050.2 | 9251.0 | 8300.3 | 7367.9 | 6819.4 | 6782.8 |
| 27.5° | 11888.9 | 12001.2 | 11909.8 | 11350.9 | 10528.1 | 9731.5  | 8760.0 | 7616.0 | 6628.7 | 6132.5 | 6077.6 |
| 30°   | 12654.1 | 12641.1 | 12144.8 | 11314.3 | 10259.1 | 9227.5  | 8091.3 | 6874.2 | 6022.8 | 5597.1 | 5547.5 |
| 32.5° | 13583.9 | 13395.9 | 12372.1 | 11139.3 | 9825.6  | 8566.7  | 7297.4 | 6257.9 | 5584.0 | 5153.1 | 5100.8 |
| 35°   | 15067.4 | 14537.2 | 12667.2 | 10875.5 | 9222.2  | 7770.1  | 6547.8 | 5782.5 | 5244.5 | 4750.9 | 4649.0 |
| 37.5° | 17368.4 | 16250.6 | 13158.2 | 10598.7 | 8530.1  | 6989.2  | 5988.8 | 5437.8 | 4978.1 | 4419.2 | 4299.0 |
| 40°   | 19734.7 | 18240.8 | 13905.2 | 10300.9 | 7882.4  | 6398.9  | 5672.8 | 5275.8 | 4816.1 | 4278.1 | 4158.0 |
| 42.5° | 21790.2 | 20097.8 | 14801.0 | 9927.4  | 7219.0  | 5934.0  | 5510.9 | 5223.6 | 4763.9 | 4252.0 | 4137.1 |
| 45°   | 23605.4 | 21766.7 | 15736.1 | 9493.9  | 6524.3  | 5557.9  | 5372.5 | 5150.5 | 4685.6 | 4191.9 | 4087.5 |
| 47.5° | 25117.6 | 23096.1 | 16558.8 | 9013.3  | 5842.6  | 5281.0  | 5236.6 | 4978.1 | 4536.7 | 4061.3 | 3972.5 |
| 50°   | 26287.7 | 24041.6 | 17109.9 | 8477.9  | 5260.2  | 5064.3  | 5040.8 | 4714.3 | 4286.0 | 3831.5 | 3742.7 |
| 52.5° | 27118.3 | 24676.2 | 17431.1 | 8276.8  | 4803.1  | 4813.5  | 4774.4 | 4427.0 | 4011.7 | 3559.9 | 3489.4 |
| 55°   | 27645.8 | 25112.4 | 17352.8 | 8018.2  | 4340.8  | 4460.9  | 4466.2 | 4215.4 | 3849.8 | 3411.0 | 3353.5 |
| 57.5° | 27847.0 | 25094.1 | 16890.5 | 6722.8  | 3891.6  | 4037.8  | 4108.4 | 4069.2 | 3745.3 | 3317.0 | 3270.0 |
| 60°   | 27737.3 | 24799.0 | 15905.8 | 4925.8  | 3426.7  | 3625.2  | 3797.5 | 3789.7 | 3515.5 | 3110.6 | 3061.0 |
| 62.5° | 27554.4 | 24114.7 | 13975.7 | 3525.9  | 3076.7  | 3332.6  | 3541.6 | 3471.1 | 3209.9 | 2854.7 | 2820.7 |
| 65°   | 26898.9 | 22908.0 | 10805.0 | 2820.7  | 2930.4  | 3168.1  | 3340.5 | 3220.3 | 2964.4 | 2593.5 | 2575.2 |
| 67.5° | 25449.3 | 20494.7 | 6307.5  | 2572.6  | 2823.3  | 3029.7  | 3152.4 | 3003.6 | 2765.9 | 2405.5 | 2374.1 |
| 68°   | 24958.3 | 19875.8 | 5364.6  | 2549.1  | 2802.5  | 2995.7  | 3108.0 | 2951.3 | 2718.9 | 2368.9 | 2337.6 |
| 70°   | 22479.7 | 16109.5 | 2559.6  | 2452.5  | 2711.0  | 2839.0  | 2904.3 | 2760.7 | 2533.4 | 2222.6 | 2201.7 |
| 72.5° | 17496.4 | 9718.5  | 1710.7  | 2306.2  | 2533.4  | 2656.2  | 2671.9 | 2447.3 | 2233.1 | 2003.2 | 1990.2 |
| 75°   | 10337.5 | 3225.6  | 1590.6  | 2089.4  | 2287.9  | 2457.7  | 2502.1 | 2277.5 | 2039.8 | 1773.4 | 1768.2 |
| 77.5° | 2517.8  | 1251.0  | 1501.8  | 1864.8  | 2073.8  | 2238.3  | 2272.3 | 2107.7 | 1898.8 | 1598.4 | 1588.0 |
| 80°   | 1036.9  | 1039.5  | 1399.9  | 1546.2  | 1778.6  | 1938.0  | 1987.6 | 1841.3 | 1653.3 | 1460.0 | 1439.1 |
| 82.5° | 861.9   | 877.6   | 1188.4  | 1141.4  | 1423.4  | 1608.9  | 1658.5 | 1556.6 | 1491.3 | 1282.4 | 1261.5 |
| 85°   | 613.8   | 778.3   | 788.8   | 767.9   | 997.7   | 1146.6  | 1397.3 | 1347.7 | 1277.2 | 1099.6 | 995.1  |
| 87.5° | 287.3   | 454.5   | 342.1   | 329.1   | 506.7   | 679.1   | 799.2  | 838.4  | 726.1  | 564.1  | 522.4  |
| 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)