

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: P232724

Luminaire Tested: **CST-8-6-D-U-T4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P232724  
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-8-6-D-U-T4  
Description: CELESTEON HIGH MAST LUMINAIRE  
(8) 70 CRI, 4000K LEDS AND TYPE IV OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 61862 lumens  
Efficiency: N/A  
Efficacy: 129.7 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B4 - U0 - G5

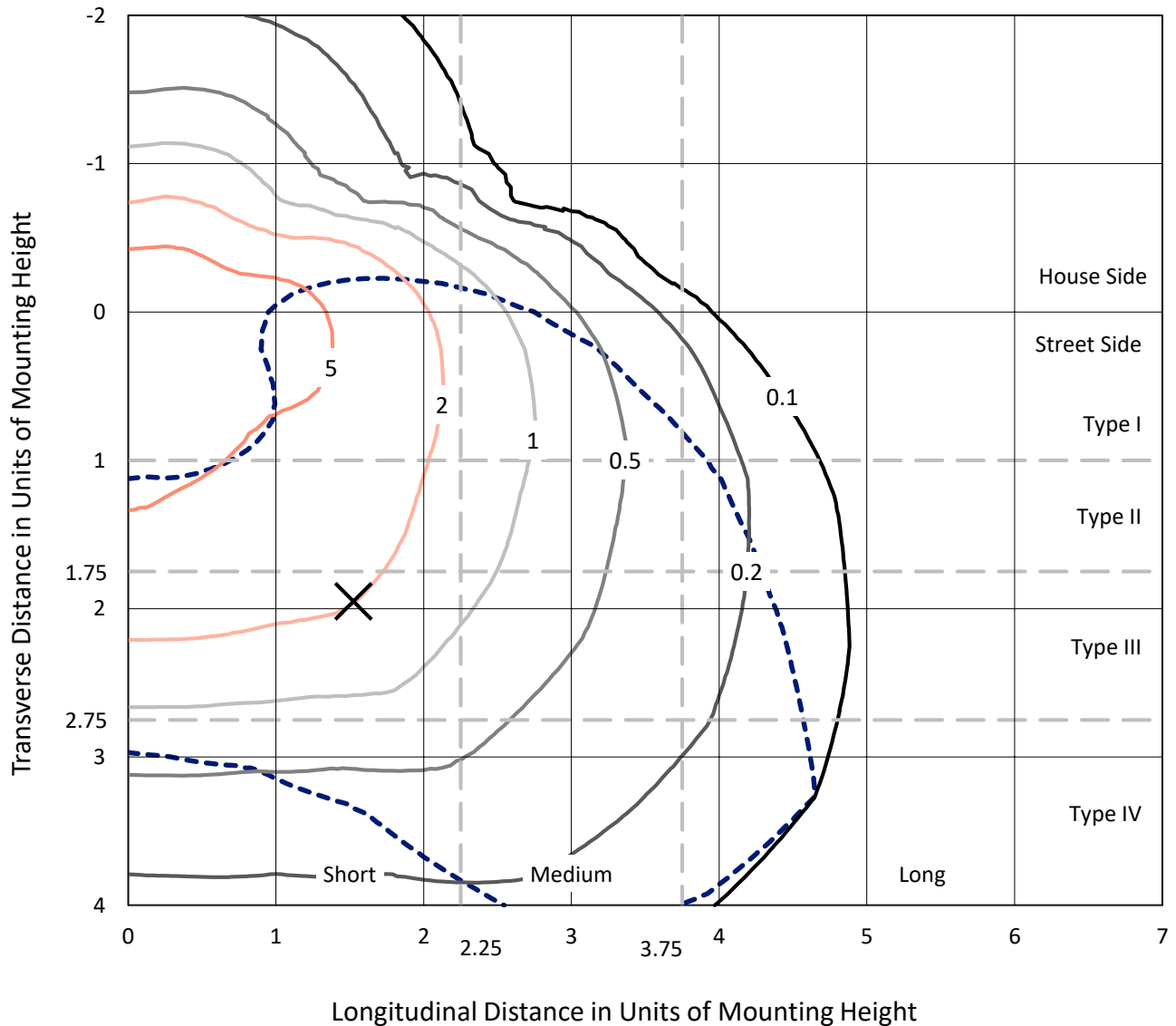
Input Watts (W): 477  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

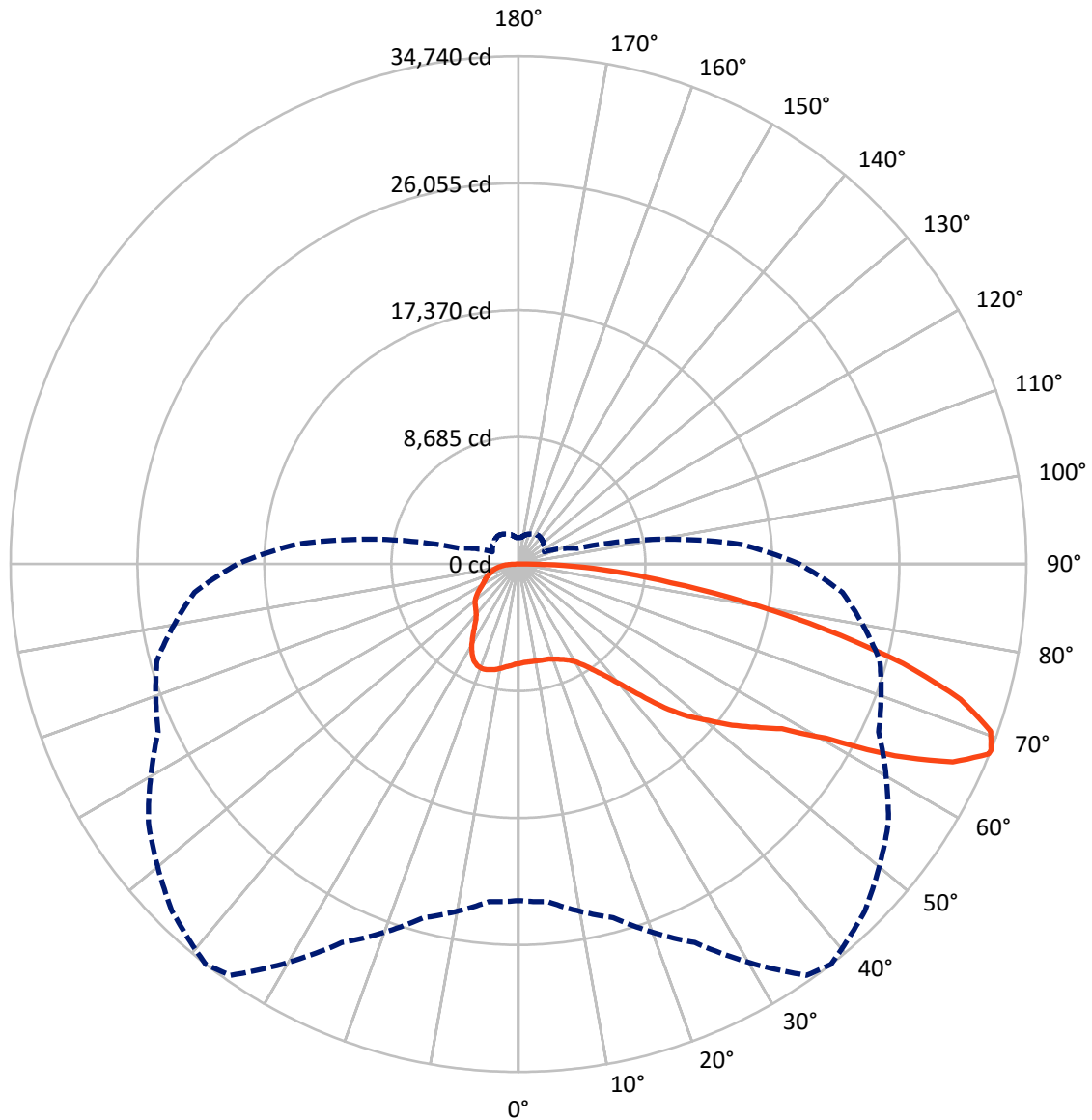
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 7.8 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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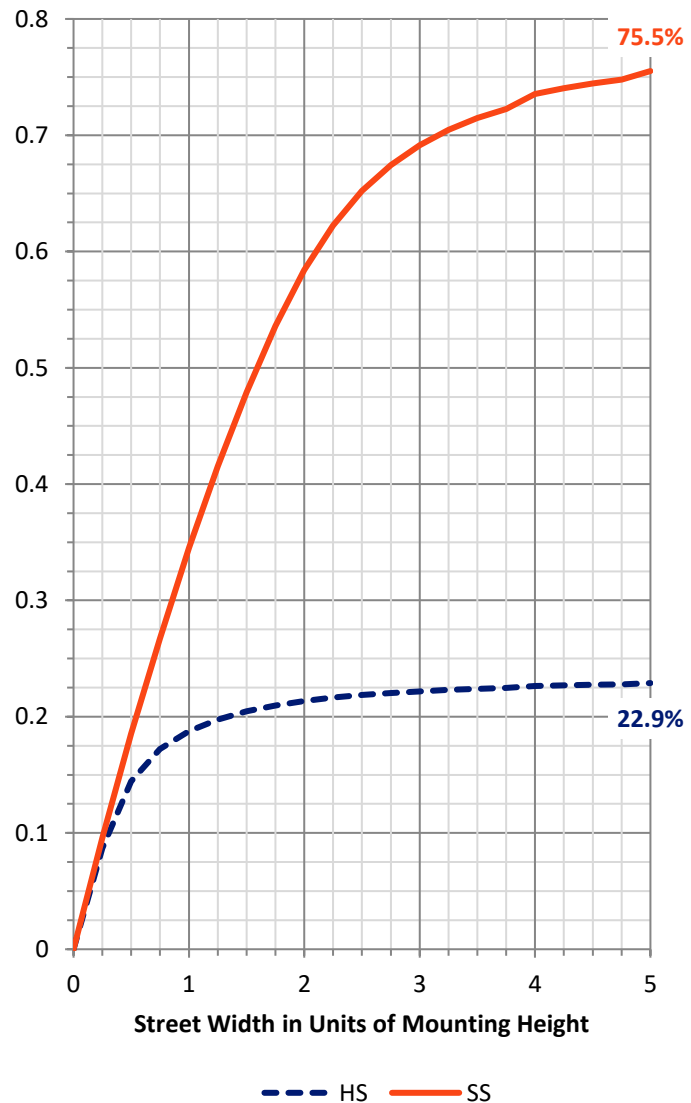
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 14437.3  | 0.0    | 14437.3 |
|                    | % Fixture | 23.3     | 0.0    | 23.3    |
| <b>Street Side</b> | Lumens    | 47424.7  | 0.0    | 47424.7 |
|                    | % Fixture | 76.7     | 0.0    | 76.7    |
| <b>Total</b>       | Lumens    | 61862.0  | 0.0    | 61862.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 659.1   | 1.1       |
| 10°-20°   | 2034.5  | 3.3       |
| 20°-30°   | 3456.4  | 5.6       |
| 30°-40°   | 5234.2  | 8.5       |
| 40°-50°   | 8657.4  | 14.0      |
| 50°-60°   | 12470.5 | 20.2      |
| 60°-70°   | 15727.1 | 25.4      |
| 70°-80°   | 11193.2 | 18.1      |
| 80°-90°   | 2429.6  | 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°    | 61862.0 | 100.0     |
| 0°-180°   | 61862.0 | 100.0     |



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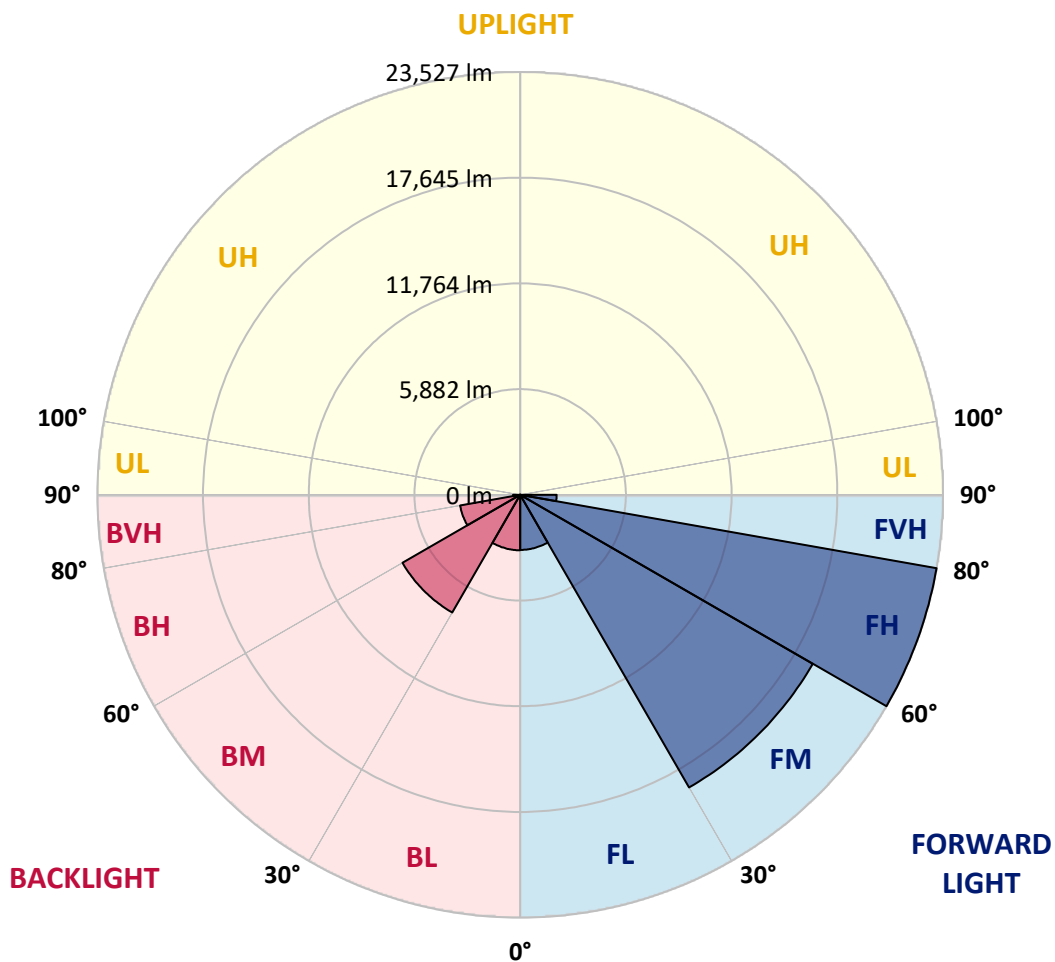
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|---------|-----------|-------------------------|------|---------|
|      |             |         |           | B                       | U    | G       |
| FL   | (0°-30°)    | 3065.0  | 5.0       |                         |      |         |
| FM   | (30°-60°)   | 18801.8 | 30.4      |                         |      |         |
| FH   | (60°-80°)   | 23527.1 | 38.0      |                         |      | G5      |
| FVH  | (80°-90°)   | 2030.9  | 3.3       |                         |      | G5      |
| BL   | (0°-30°)    | 3085.0  | 5.0       | B4/5000                 |      |         |
| BM   | (30°-60°)   | 7560.3  | 12.2      | B4/8500                 |      |         |
| BH   | (60°-80°)   | 3393.2  | 5.5       | B4/5000                 |      | G4/5000 |
| BVH  | (80°-90°)   | 398.7   | 0.6       |                         |      | G3/500  |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |         |

**BUG Rating: B4-U0-G5**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 38°     | 45°     | 55°     | 65°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 6815.0  | 6815.0  | 6815.0  | 6815.0  | 6815.0  | 6815.0  | 6815.0  | 6815.0  | 6815.0  | 6815.0  | 6815.0  |
| 2.5°  | 6790.9  | 6803.0  | 6794.9  | 6790.9  | 6738.6  | 6750.7  | 6770.8  | 6742.7  | 6811.0  | 6807.0  | 6847.2  |
| 5°    | 6726.6  | 6732.6  | 6734.6  | 6752.7  | 6702.5  | 6728.6  | 6752.7  | 6734.6  | 6807.0  | 6786.9  | 6843.2  |
| 7.5°  | 6708.5  | 6706.5  | 6708.5  | 6742.7  | 6688.4  | 6728.6  | 6756.7  | 6750.7  | 6829.1  | 6813.0  | 6881.3  |
| 10°   | 6662.3  | 6664.3  | 6670.3  | 6708.5  | 6680.4  | 6734.6  | 6784.9  | 6811.0  | 6915.5  | 6901.4  | 6979.8  |
| 12.5° | 6581.9  | 6598.0  | 6620.1  | 6684.4  | 6690.4  | 6762.8  | 6837.1  | 6889.4  | 7026.0  | 7038.1  | 7136.6  |
| 15°   | 6511.5  | 6539.7  | 6577.9  | 6664.3  | 6700.5  | 6782.9  | 6877.3  | 6973.8  | 7152.7  | 7206.9  | 7331.5  |
| 17.5° | 6533.7  | 6575.9  | 6626.1  | 6714.5  | 6740.7  | 6827.1  | 6933.6  | 7062.2  | 7283.3  | 7399.9  | 7560.6  |
| 20°   | 6670.3  | 6698.5  | 6740.7  | 6823.1  | 6857.2  | 6943.6  | 7030.1  | 7156.7  | 7444.1  | 7633.0  | 7831.9  |
| 22.5° | 6841.1  | 6881.3  | 6909.5  | 6959.7  | 6999.9  | 7076.3  | 7166.7  | 7291.3  | 7631.0  | 7868.1  | 8141.4  |
| 25°   | 7024.0  | 7044.1  | 7084.3  | 7118.5  | 7168.7  | 7229.0  | 7331.5  | 7484.3  | 7844.0  | 8135.4  | 8517.3  |
| 27.5° | 7192.8  | 7202.9  | 7279.3  | 7307.4  | 7405.9  | 7450.1  | 7530.5  | 7733.5  | 8121.3  | 8481.1  | 8951.4  |
| 30°   | 7440.0  | 7460.1  | 7518.4  | 7584.7  | 7729.4  | 7773.7  | 7856.1  | 8069.1  | 8491.1  | 8951.4  | 9516.1  |
| 32.5° | 7908.3  | 7960.6  | 7952.5  | 8022.9  | 8193.7  | 8252.0  | 8364.5  | 8641.9  | 9102.1  | 9630.7  | 10301.9 |
| 35°   | 8856.9  | 8931.3  | 8838.8  | 8744.4  | 8834.8  | 8913.2  | 9086.0  | 9492.0  | 10060.7 | 10933.0 | 11596.2 |
| 37.5° | 10410.4 | 10484.8 | 10155.2 | 9853.7  | 9656.8  | 9719.1  | 9954.2  | 10529.0 | 11399.2 | 12914.6 | 13654.2 |
| 40°   | 12225.2 | 12305.6 | 11847.4 | 11304.8 | 10860.6 | 10836.5 | 10908.9 | 11640.4 | 12896.5 | 15119.3 | 15696.0 |
| 42.5° | 13806.9 | 14017.9 | 13419.0 | 12950.7 | 12376.0 | 12279.5 | 12104.6 | 12844.2 | 14480.2 | 17161.1 | 17486.7 |
| 45°   | 15344.3 | 15549.3 | 15077.0 | 14753.5 | 14166.6 | 14009.9 | 13678.3 | 14126.4 | 16033.7 | 18947.8 | 18961.9 |
| 47.5° | 16755.2 | 16920.0 | 16371.3 | 16164.3 | 15585.5 | 15517.2 | 15177.5 | 15491.1 | 17472.7 | 20461.1 | 20175.8 |
| 50°   | 18332.8 | 18505.7 | 17631.4 | 17376.2 | 16909.9 | 16817.5 | 16706.9 | 16932.0 | 19122.7 | 21765.5 | 21206.7 |
| 52.5° | 20262.2 | 20197.9 | 19118.6 | 18533.8 | 18286.6 | 18308.7 | 18184.1 | 18433.3 | 20873.1 | 22870.8 | 22018.7 |
| 55°   | 22571.4 | 22241.8 | 21056.0 | 20169.7 | 19601.0 | 19709.5 | 19546.7 | 19912.5 | 22603.5 | 23803.3 | 22605.5 |
| 57.5° | 23883.7 | 23974.2 | 23861.6 | 22722.1 | 21275.1 | 21259.0 | 21001.8 | 21353.5 | 24114.8 | 24565.0 | 22963.3 |
| 60°   | 25797.0 | 26170.8 | 26313.5 | 26006.0 | 24707.7 | 24195.2 | 22907.0 | 22826.6 | 25391.0 | 25222.2 | 23146.1 |
| 62.5° | 27006.8 | 27181.7 | 28039.9 | 28411.7 | 28829.7 | 28918.1 | 26872.2 | 24601.2 | 26333.6 | 25557.8 | 23222.5 |
| 65°   | 26428.0 | 26604.9 | 28208.7 | 29665.7 | 32145.7 | 32644.2 | 31993.0 | 27412.8 | 26970.7 | 25632.2 | 22967.3 |
| 67.5° | 23461.7 | 23678.7 | 25831.2 | 28817.6 | 34151.5 | 34688.1 | 33637.0 | 30654.5 | 27179.7 | 25588.0 | 22412.6 |
| 68°   | 23027.6 | 23188.3 | 25045.3 | 28570.4 | 34352.4 | 34740.3 | 33528.4 | 30899.7 | 27191.7 | 25602.0 | 22241.8 |
| 70°   | 19691.4 | 19974.8 | 21930.3 | 26321.5 | 34028.9 | 34276.1 | 32851.2 | 30763.0 | 26918.4 | 25372.9 | 20991.7 |
| 72.5° | 15348.4 | 15740.3 | 17227.5 | 21861.9 | 31430.3 | 31631.3 | 30437.5 | 29255.7 | 26092.4 | 23783.2 | 17993.2 |
| 75°   | 11119.9 | 11455.5 | 12886.4 | 16871.7 | 26460.2 | 27173.7 | 26972.7 | 27185.7 | 23389.3 | 20151.6 | 13031.1 |
| 77.5° | 7679.2  | 7966.6  | 9301.1  | 12589.0 | 20517.4 | 21419.8 | 22462.8 | 23015.5 | 19219.1 | 14950.4 | 6194.0  |
| 80°   | 4919.8  | 5140.9  | 6276.4  | 8865.0  | 14795.7 | 15643.8 | 16767.2 | 17340.0 | 13670.2 | 7520.4  | 1099.3  |
| 82.5° | 2892.0  | 3042.7  | 3818.5  | 5719.7  | 9972.3  | 10488.8 | 11031.4 | 10070.8 | 5486.6  | 1439.0  | 693.4   |
| 85°   | 1437.0  | 1537.4  | 2013.8  | 3235.7  | 6200.0  | 6674.3  | 6855.2  | 4296.8  | 1159.6  | 526.6   | 472.3   |
| 87.5° | 643.1   | 671.3   | 864.2   | 1457.1  | 2946.3  | 3105.0  | 3028.7  | 1336.5  | 233.1   | 197.0   | 168.8   |
| 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°    | 6815.0  | 6815.0  | 6815.0  | 6815.0 | 6815.0 | 6815.0 | 6815.0 | 6815.0 | 6815.0 | 6815.0 | 6815.0 |
| 2.5°  | 6851.2  | 6835.1  | 6831.1  | 6857.2 | 6829.1 | 6863.3 | 6853.2 | 6929.6 | 6939.6 | 6911.5 | 6957.7 |
| 5°    | 6861.2  | 6853.2  | 6859.2  | 6907.5 | 6897.4 | 6967.8 | 6985.8 | 7062.2 | 7062.2 | 7040.1 | 7088.3 |
| 7.5°  | 6907.5  | 6907.5  | 6925.6  | 7014.0 | 7014.0 | 7074.3 | 7094.4 | 7178.8 | 7176.8 | 7176.8 | 7221.0 |
| 10°   | 7024.0  | 7024.0  | 7062.2  | 7174.8 | 7146.6 | 7225.0 | 7235.1 | 7279.3 | 7269.2 | 7271.2 | 7317.5 |
| 12.5° | 7196.9  | 7206.9  | 7273.2  | 7371.7 | 7353.6 | 7381.8 | 7361.7 | 7353.6 | 7281.3 | 7281.3 | 7311.4 |
| 15°   | 7395.8  | 7438.0  | 7528.5  | 7618.9 | 7558.6 | 7548.6 | 7434.0 | 7333.5 | 7178.8 | 7112.5 | 7146.6 |
| 17.5° | 7655.1  | 7727.4  | 7831.9  | 7896.3 | 7781.7 | 7699.3 | 7492.3 | 7231.0 | 6979.8 | 6833.1 | 6837.1 |
| 20°   | 7942.5  | 8038.9  | 8167.6  | 8189.7 | 8020.9 | 7815.9 | 7470.2 | 7060.2 | 6628.1 | 6395.0 | 6378.9 |
| 22.5° | 8262.0  | 8382.6  | 8531.3  | 8444.9 | 8169.6 | 7836.0 | 7341.6 | 6796.9 | 6216.1 | 5824.2 | 5818.2 |
| 25°   | 8651.9  | 8782.6  | 8877.0  | 8635.8 | 8203.7 | 7733.5 | 7118.5 | 6386.9 | 5669.5 | 5247.4 | 5219.3 |
| 27.5° | 9148.3  | 9234.7  | 9164.4  | 8734.3 | 8101.3 | 7488.3 | 6740.7 | 5860.4 | 5100.7 | 4718.9 | 4676.7 |
| 30°   | 9737.2  | 9727.1  | 9345.3  | 8706.2 | 7894.2 | 7100.4 | 6226.2 | 5289.6 | 4634.5 | 4306.9 | 4268.7 |
| 32.5° | 10452.6 | 10307.9 | 9520.1  | 8571.5 | 7560.6 | 6591.9 | 5615.2 | 4815.3 | 4296.8 | 3965.2 | 3925.0 |
| 35°   | 11594.2 | 11186.2 | 9747.2  | 8368.5 | 7096.4 | 5979.0 | 5038.4 | 4449.6 | 4035.6 | 3655.7 | 3577.3 |
| 37.5° | 13364.8 | 12504.6 | 10125.1 | 8155.5 | 6563.8 | 5378.1 | 4608.3 | 4184.3 | 3830.6 | 3400.5 | 3308.0 |
| 40°   | 15185.6 | 14036.0 | 10699.8 | 7926.4 | 6065.4 | 4923.9 | 4365.1 | 4059.7 | 3706.0 | 3291.9 | 3199.5 |
| 42.5° | 16767.2 | 15464.9 | 11389.2 | 7639.0 | 5554.9 | 4566.1 | 4240.5 | 4019.5 | 3665.8 | 3271.9 | 3183.4 |
| 45°   | 18164.0 | 16749.2 | 12108.7 | 7305.4 | 5020.3 | 4276.7 | 4134.0 | 3963.2 | 3605.5 | 3225.6 | 3145.2 |
| 47.5° | 19327.6 | 17772.1 | 12741.7 | 6935.6 | 4495.8 | 4063.7 | 4029.5 | 3830.6 | 3490.9 | 3125.1 | 3056.8 |
| 50°   | 20228.0 | 18499.6 | 13165.8 | 6523.6 | 4047.6 | 3896.9 | 3878.8 | 3627.6 | 3298.0 | 2948.3 | 2880.0 |
| 52.5° | 20867.1 | 18988.0 | 13413.0 | 6368.9 | 3695.9 | 3703.9 | 3673.8 | 3406.5 | 3087.0 | 2739.3 | 2685.0 |
| 55°   | 21273.1 | 19323.6 | 13352.7 | 6169.9 | 3340.2 | 3432.6 | 3436.7 | 3243.7 | 2962.4 | 2624.7 | 2580.5 |
| 57.5° | 21427.8 | 19309.6 | 12997.0 | 5173.1 | 2994.5 | 3107.1 | 3161.3 | 3131.2 | 2882.0 | 2552.4 | 2516.2 |
| 60°   | 21343.4 | 19082.5 | 12239.3 | 3790.4 | 2636.8 | 2789.5 | 2922.2 | 2916.1 | 2705.1 | 2393.6 | 2355.4 |
| 62.5° | 21202.7 | 18555.9 | 10754.1 | 2713.1 | 2367.5 | 2564.4 | 2725.2 | 2670.9 | 2470.0 | 2196.6 | 2170.5 |
| 65°   | 20698.3 | 17627.4 | 8314.3  | 2170.5 | 2254.9 | 2437.8 | 2570.5 | 2478.0 | 2281.1 | 1995.7 | 1981.6 |
| 67.5° | 19582.9 | 15770.4 | 4853.5  | 1979.6 | 2172.5 | 2331.3 | 2425.8 | 2311.2 | 2128.3 | 1851.0 | 1826.9 |
| 68°   | 19205.0 | 15294.1 | 4128.0  | 1961.5 | 2156.4 | 2305.2 | 2391.6 | 2271.0 | 2092.1 | 1822.8 | 1798.7 |
| 70°   | 17297.8 | 12396.1 | 1969.5  | 1887.1 | 2086.1 | 2184.6 | 2234.8 | 2124.3 | 1949.4 | 1710.3 | 1694.2 |
| 72.5° | 13463.2 | 7478.2  | 1316.4  | 1774.6 | 1949.4 | 2043.9 | 2056.0 | 1883.1 | 1718.3 | 1541.5 | 1531.4 |
| 75°   | 7954.5  | 2482.0  | 1223.9  | 1607.8 | 1760.5 | 1891.2 | 1925.3 | 1752.5 | 1569.6 | 1364.6 | 1360.6 |
| 77.5° | 1937.4  | 962.7   | 1155.6  | 1435.0 | 1595.7 | 1722.3 | 1748.5 | 1621.9 | 1461.1 | 1230.0 | 1221.9 |
| 80°   | 797.9   | 799.9   | 1077.2  | 1189.8 | 1368.6 | 1491.2 | 1529.4 | 1416.9 | 1272.2 | 1123.4 | 1107.4 |
| 82.5° | 663.2   | 675.3   | 914.4   | 878.3  | 1095.3 | 1238.0 | 1276.2 | 1197.8 | 1147.6 | 986.8  | 970.7  |
| 85°   | 472.3   | 598.9   | 606.9   | 590.9  | 767.7  | 882.3  | 1075.2 | 1037.0 | 982.8  | 846.1  | 765.7  |
| 87.5° | 221.1   | 349.7   | 263.3   | 253.2  | 389.9  | 522.5  | 615.0  | 645.1  | 558.7  | 434.1  | 401.9  |
| 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)