

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: P510710

Luminaire Tested: **CST-CA8-230-727-U-T4-HSS**

Issue Date: 4/6/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P510710  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-151-17)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 4/6/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: CST-CA8-230-727-U-T4-HSS  
Description: CELESTEON HIGH MAST LUMINAIRE  
Light Source: (8) 2700K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 26861 lumens  
Efficiency: N/A  
Efficacy: 117.6 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U0 - G5

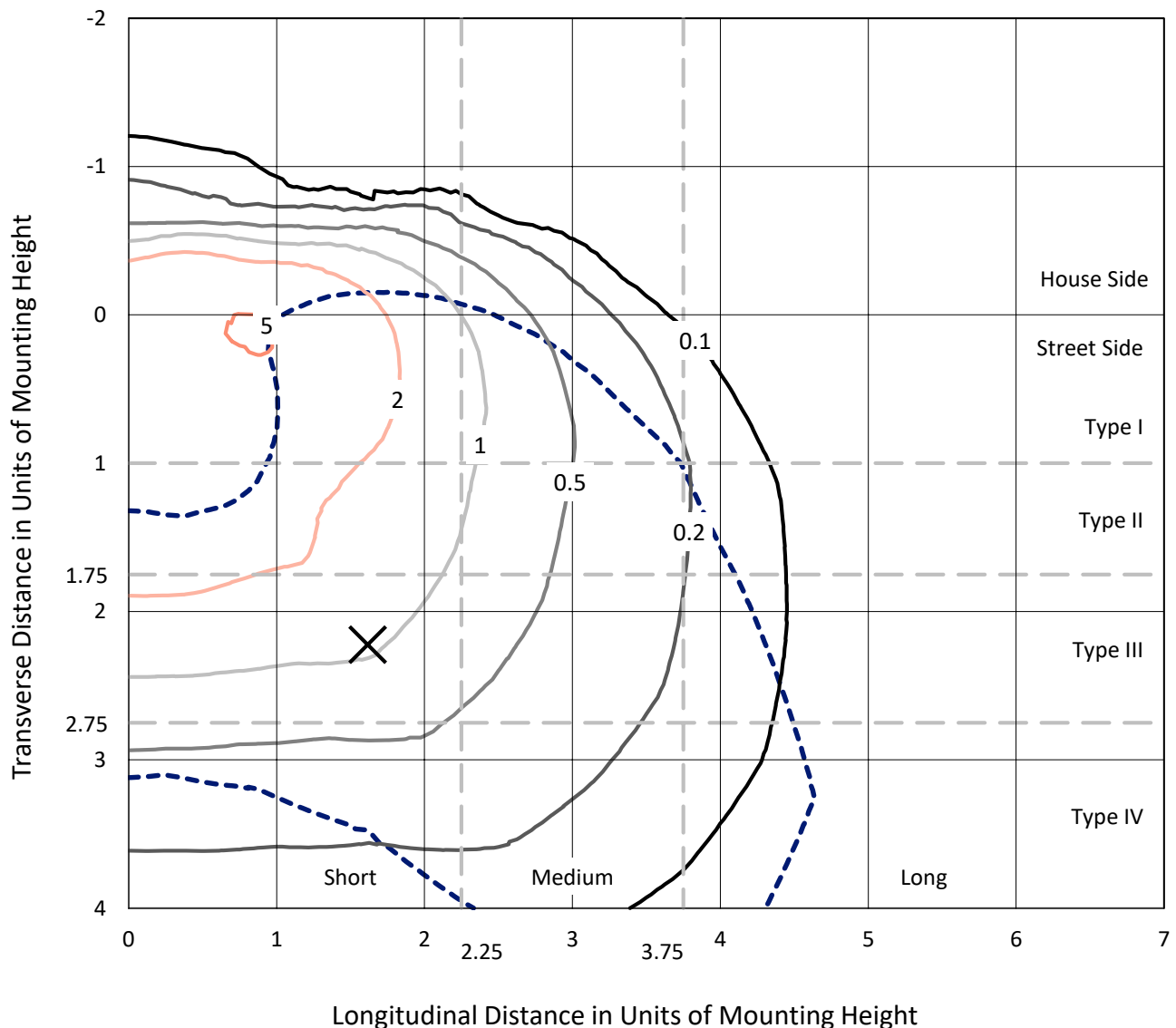
Input Watts (W): 228.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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## Iso-Footcandle Lines of Horizontal Illumination

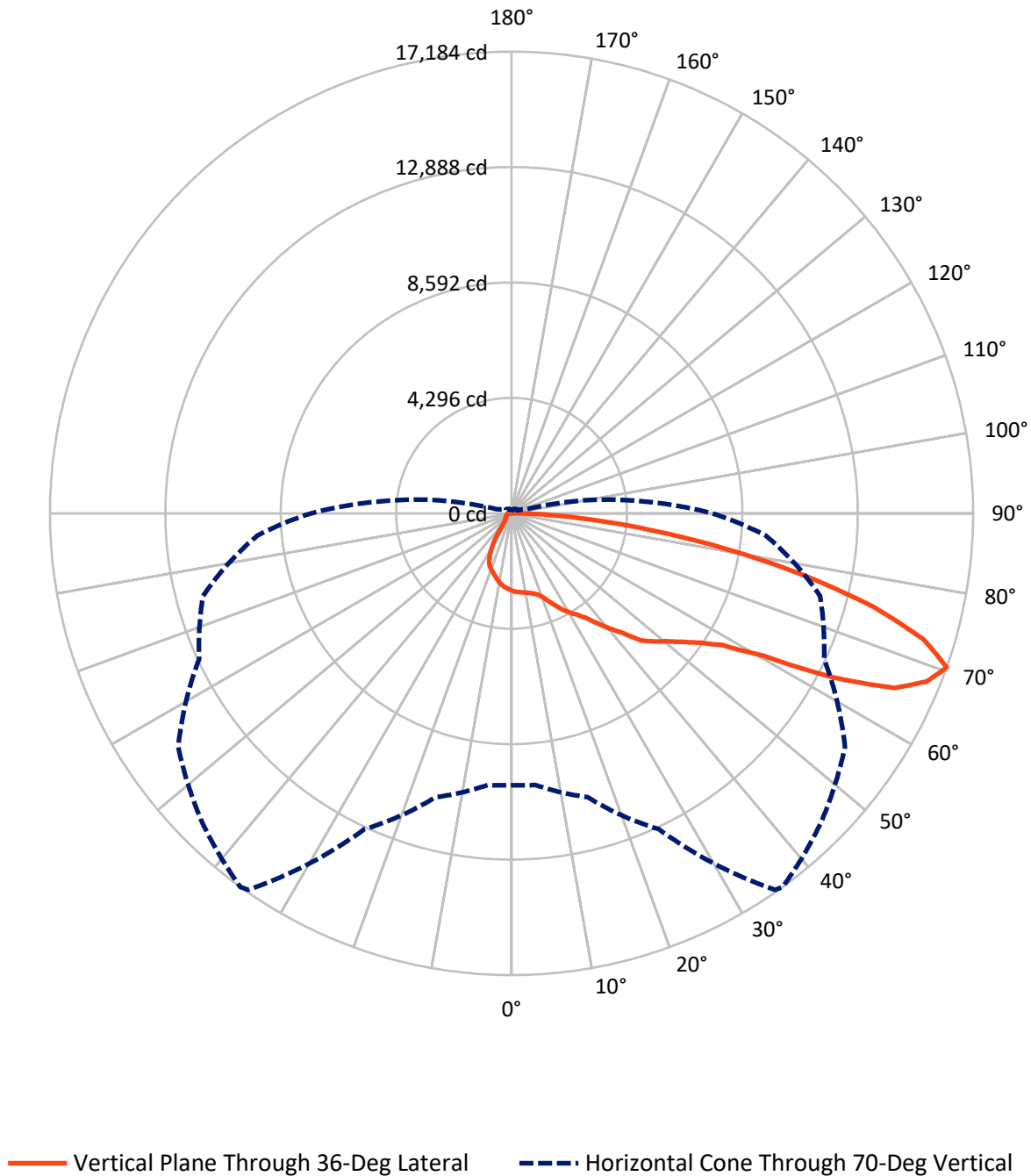
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.2 fc  
 Type IV - Short - N/A

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## Luminous Intensity Polar Plot



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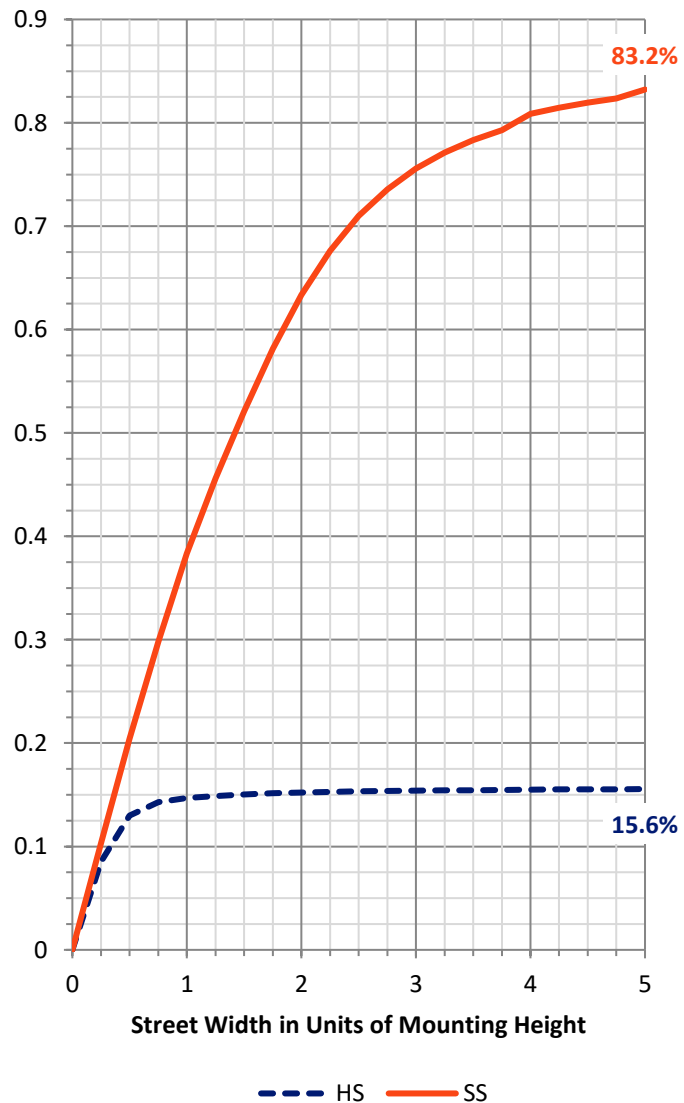
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 4238.9   | 0.0    | 4238.9  |
|                    | % Fixture | 15.8     | 0.0    | 15.8    |
| <b>Street Side</b> | Lumens    | 22622.1  | 0.0    | 22622.1 |
|                    | % Fixture | 84.2     | 0.0    | 84.2    |
| <b>Total</b>       | Lumens    | 26861.0  | 0.0    | 26861.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 273.0   | 1.0       |
| 10°-20°   | 811.7   | 3.0       |
| 20°-30°   | 1459.7  | 5.4       |
| 30°-40°   | 2309.9  | 8.6       |
| 40°-50°   | 3610.0  | 13.4      |
| 50°-60°   | 5183.9  | 19.3      |
| 60°-70°   | 7031.5  | 26.2      |
| 70°-80°   | 5204.1  | 19.4      |
| 80°-90°   | 977.2   | 3.6       |
| 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°    | 26861.0 | 100.0     |
| 0°-180°   | 26861.0 | 100.0     |

**Coefficient of Utilization**



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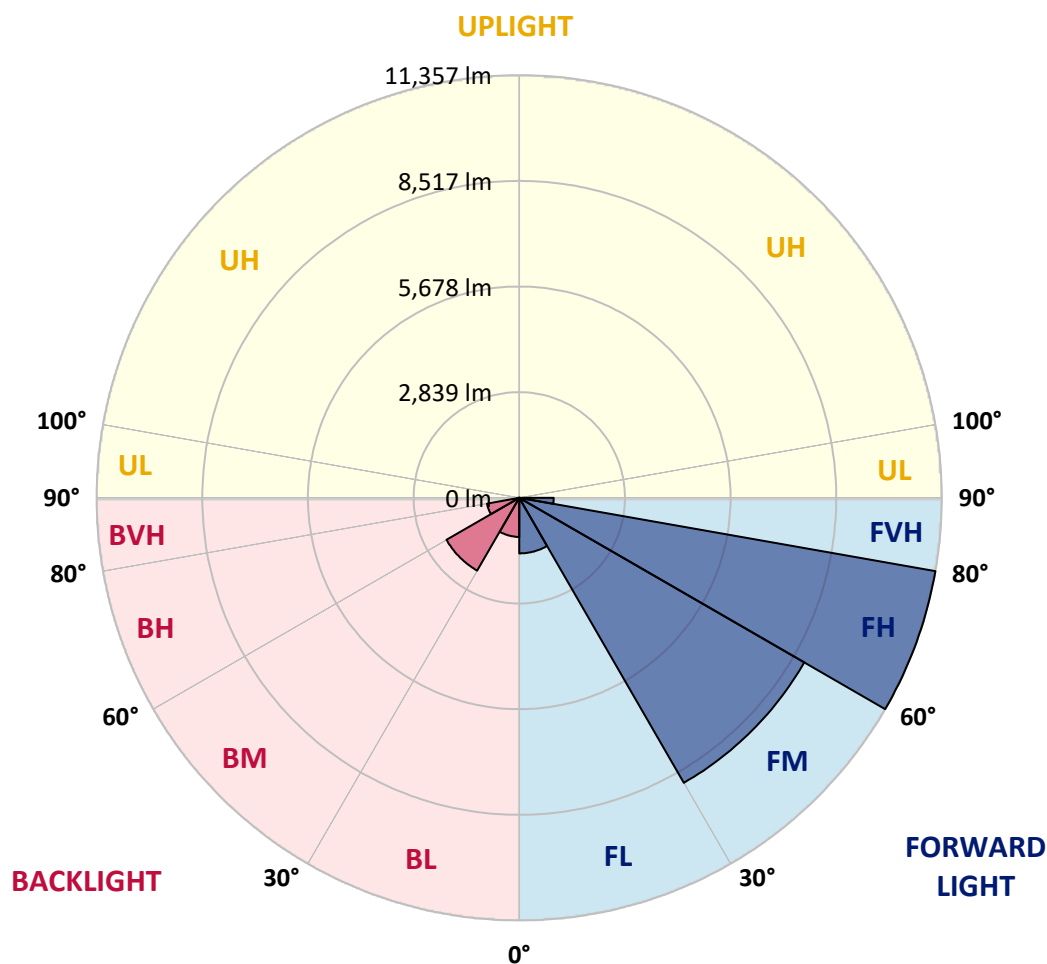
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |          |
|------|-------------|---------|-----------|-------------------------|------|----------|
|      |             |         |           | B                       | U    | G        |
| FL   | (0°-30°)    | 1494.0  | 5.6       |                         |      |          |
| FM   | (30°-60°)   | 8845.1  | 32.9      |                         |      |          |
| FH   | (60°-80°)   | 11356.6 | 42.3      |                         |      | G4/12000 |
| FVH  | (80°-90°)   | 926.5   | 3.4       |                         |      | G5       |
| BL   | (0°-30°)    | 1050.4  | 3.9       | B3/2500                 |      |          |
| BM   | (30°-60°)   | 2258.8  | 8.4       | B2/2500                 |      |          |
| BH   | (60°-80°)   | 879.0   | 3.3       | B2/1000                 |      | G2/1000  |
| BVH  | (80°-90°)   | 50.7    | 0.2       |                         |      | G1/100   |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |          |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |          |

**BUG Rating: B3-U0-G5**

Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 36°     | 45°     | 55°     | 65°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 2878.0  | 2878.0  | 2878.0  | 2878.0  | 2878.0  | 2878.0  | 2878.0  | 2878.0  | 2878.0  | 2878.0  | 2878.0  |
| 2.5°  | 2936.3  | 2930.1  | 2925.2  | 2927.0  | 2923.3  | 2925.8  | 2920.2  | 2913.4  | 2897.2  | 2890.4  | 2887.3  |
| 5°    | 2962.4  | 2960.5  | 2955.5  | 2951.8  | 2945.0  | 2942.5  | 2936.3  | 2941.9  | 2933.2  | 2910.9  | 2897.9  |
| 7.5°  | 2977.9  | 2977.2  | 2971.7  | 2963.6  | 2967.3  | 2970.4  | 2976.6  | 2967.9  | 2956.8  | 2946.2  | 2919.6  |
| 10°   | 2984.7  | 2984.7  | 2977.9  | 2982.2  | 3001.4  | 3003.3  | 3006.4  | 3012.0  | 3001.4  | 2985.9  | 2959.3  |
| 12.5° | 3002.0  | 3000.8  | 3003.3  | 3017.6  | 3037.4  | 3041.7  | 3057.2  | 3057.2  | 3058.5  | 3049.2  | 3018.2  |
| 15°   | 3045.5  | 3045.5  | 3051.0  | 3064.1  | 3098.2  | 3100.6  | 3123.6  | 3144.1  | 3146.5  | 3132.9  | 3109.3  |
| 17.5° | 3145.9  | 3143.4  | 3140.3  | 3148.4  | 3185.0  | 3186.2  | 3225.9  | 3252.0  | 3258.8  | 3273.7  | 3269.9  |
| 20°   | 3336.9  | 3334.4  | 3333.8  | 3334.4  | 3332.0  | 3328.2  | 3367.3  | 3395.2  | 3429.9  | 3456.0  | 3469.0  |
| 22.5° | 3610.4  | 3604.8  | 3604.8  | 3574.4  | 3550.9  | 3554.6  | 3560.8  | 3576.3  | 3622.2  | 3668.1  | 3717.1  |
| 25°   | 3905.0  | 3901.2  | 3904.3  | 3826.8  | 3795.2  | 3807.6  | 3799.5  | 3823.7  | 3883.9  | 3923.6  | 3975.7  |
| 27.5° | 4145.6  | 4151.1  | 4133.8  | 4073.6  | 4053.2  | 4062.5  | 4043.9  | 4113.3  | 4179.7  | 4249.1  | 4327.9  |
| 30°   | 4445.1  | 4415.3  | 4372.5  | 4299.4  | 4291.9  | 4293.2  | 4291.9  | 4403.5  | 4541.2  | 4640.4  | 4749.6  |
| 32.5° | 4836.4  | 4841.4  | 4745.2  | 4572.8  | 4509.6  | 4500.9  | 4525.7  | 4689.4  | 4875.5  | 5095.6  | 5239.5  |
| 35°   | 5232.0  | 5240.1  | 5170.0  | 4990.2  | 4809.7  | 4782.4  | 4745.9  | 4958.6  | 5227.1  | 5668.6  | 5885.7  |
| 37.5° | 5651.9  | 5680.4  | 5597.3  | 5436.7  | 5222.7  | 5197.3  | 5024.3  | 5233.3  | 5630.2  | 6347.0  | 6631.7  |
| 40°   | 6213.7  | 6183.3  | 6082.9  | 5878.8  | 5679.8  | 5638.8  | 5437.9  | 5547.7  | 6148.6  | 7196.6  | 7403.1  |
| 42.5° | 6627.9  | 6619.3  | 6534.3  | 6332.8  | 6132.5  | 6099.6  | 5937.7  | 6056.8  | 6801.6  | 8058.0  | 8150.4  |
| 45°   | 6956.6  | 7009.9  | 7008.1  | 6881.6  | 6768.7  | 6750.1  | 6654.6  | 6830.1  | 7591.0  | 8871.0  | 8825.7  |
| 47.5° | 7248.7  | 7281.6  | 7228.9  | 7173.7  | 7121.0  | 7127.2  | 7197.8  | 7558.8  | 8397.8  | 9581.0  | 9380.7  |
| 50°   | 7726.8  | 7684.6  | 7448.4  | 7406.2  | 7480.6  | 7483.7  | 7698.9  | 8254.5  | 9286.4  | 10194.9 | 9850.8  |
| 52.5° | 8364.3  | 8318.4  | 7832.9  | 7760.9  | 7937.0  | 7950.1  | 8307.9  | 8947.9  | 10203.0 | 10781.6 | 10318.3 |
| 55°   | 9313.1  | 9206.4  | 8686.2  | 8363.7  | 8444.3  | 8497.0  | 8930.5  | 9614.5  | 10920.5 | 11298.8 | 10672.4 |
| 57.5° | 10478.3 | 10555.8 | 10289.2 | 9560.5  | 9225.1  | 9244.9  | 9643.0  | 10252.6 | 11553.6 | 11751.5 | 10879.6 |
| 60°   | 11709.9 | 11691.3 | 11802.9 | 11496.0 | 10853.5 | 10746.8 | 10544.1 | 10903.7 | 12044.2 | 12132.8 | 11092.9 |
| 62.5° | 12384.6 | 12493.1 | 12865.2 | 12926.6 | 13506.4 | 13450.0 | 12067.7 | 11711.2 | 12611.0 | 12372.2 | 11151.2 |
| 65°   | 12380.9 | 12428.0 | 13120.7 | 13882.2 | 15693.6 | 15677.5 | 15035.0 | 12878.9 | 13033.3 | 12500.0 | 11034.6 |
| 67.5° | 11580.9 | 11654.1 | 12464.0 | 13951.7 | 16704.4 | 16685.2 | 16241.2 | 14520.3 | 13166.0 | 12346.2 | 10490.7 |
| 70°   | 10122.4 | 10147.2 | 10937.2 | 12973.7 | 17110.6 | 17184.4 | 16282.7 | 15150.4 | 12836.1 | 11889.1 | 9499.1  |
| 72.5° | 8350.7  | 8299.2  | 9071.9  | 11079.2 | 16076.2 | 16032.2 | 15594.4 | 14398.2 | 12280.4 | 11001.7 | 7747.3  |
| 75°   | 6148.6  | 6291.8  | 6985.1  | 8895.8  | 13764.4 | 13925.6 | 14119.7 | 13247.2 | 10906.8 | 9066.9  | 5357.3  |
| 77.5° | 4060.0  | 4242.3  | 4943.1  | 6670.1  | 10896.9 | 11147.5 | 11650.4 | 11267.1 | 8872.8  | 6503.9  | 2551.2  |
| 80°   | 2097.9  | 2235.6  | 2866.2  | 4425.9  | 7811.8  | 8173.3  | 9095.4  | 8533.6  | 6290.6  | 2940.7  | 571.1   |
| 82.5° | 793.8   | 775.8   | 1284.3  | 2533.2  | 5008.8  | 5337.5  | 6007.8  | 5117.3  | 2238.7  | 516.6   | 265.4   |
| 85°   | 348.5   | 369.0   | 532.1   | 1155.3  | 2863.8  | 2906.5  | 3403.3  | 1995.0  | 328.0   | 246.8   | 180.5   |
| 87.5° | 150.7   | 173.0   | 223.2   | 332.4   | 966.2   | 1115.6  | 1380.4  | 633.8   | 99.2    | 85.6    | 90.5    |
| 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):**

|       | 90°     | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2878.0  | 2878.0 | 2878.0 | 2878.0 | 2878.0 | 2878.0 | 2878.0 | 2878.0 | 2878.0 | 2878.0 | 2878.0 |
| 2.5°  | 2881.7  | 2878.0 | 2871.8 | 2856.3 | 2830.9 | 2827.8 | 2825.3 | 2822.8 | 2817.9 | 2820.4 | 2834.6 |
| 5°    | 2887.9  | 2881.1 | 2858.8 | 2836.5 | 2814.1 | 2794.3 | 2770.1 | 2760.8 | 2748.4 | 2740.4 | 2755.2 |
| 7.5°  | 2909.0  | 2894.8 | 2861.9 | 2831.5 | 2770.7 | 2741.6 | 2710.6 | 2674.0 | 2648.0 | 2631.2 | 2646.1 |
| 10°   | 2944.4  | 2926.4 | 2885.5 | 2822.8 | 2751.5 | 2671.5 | 2616.9 | 2556.2 | 2506.6 | 2492.9 | 2506.6 |
| 12.5° | 3002.0  | 2975.4 | 2927.6 | 2842.7 | 2716.2 | 2611.4 | 2507.8 | 2427.8 | 2347.8 | 2324.9 | 2331.7 |
| 15°   | 3095.7  | 3074.6 | 3001.4 | 2884.2 | 2716.8 | 2556.8 | 2403.0 | 2274.0 | 2169.2 | 2132.6 | 2130.1 |
| 17.5° | 3245.8  | 3223.4 | 3139.1 | 2966.7 | 2739.1 | 2514.0 | 2300.1 | 2103.5 | 1944.7 | 1864.1 | 1851.1 |
| 20°   | 3460.9  | 3429.9 | 3302.2 | 3088.2 | 2787.5 | 2495.4 | 2204.6 | 1940.4 | 1693.6 | 1542.3 | 1519.3 |
| 22.5° | 3700.3  | 3667.4 | 3478.9 | 3181.9 | 2822.2 | 2458.8 | 2113.4 | 1759.9 | 1435.0 | 1250.2 | 1224.1 |
| 25°   | 3998.0  | 3926.0 | 3648.2 | 3270.6 | 2814.1 | 2381.9 | 1965.2 | 1515.0 | 1162.7 | 1002.7 | 985.4  |
| 27.5° | 4291.9  | 4200.8 | 3820.6 | 3317.1 | 2778.8 | 2259.8 | 1748.1 | 1228.5 | 910.4  | 796.9  | 782.6  |
| 30°   | 4656.6  | 4480.4 | 3973.8 | 3338.8 | 2689.5 | 2076.8 | 1457.3 | 933.9  | 681.5  | 603.4  | 589.7  |
| 32.5° | 5090.0  | 4823.4 | 4117.7 | 3314.6 | 2540.7 | 1797.8 | 1133.0 | 684.0  | 506.6  | 457.7  | 457.0  |
| 35°   | 5661.8  | 5243.8 | 4275.8 | 3235.2 | 2312.5 | 1497.0 | 794.4  | 467.6  | 395.0  | 378.3  | 381.4  |
| 37.5° | 6330.3  | 5813.1 | 4436.4 | 3105.0 | 2054.5 | 1145.4 | 529.6  | 360.3  | 347.3  | 347.9  | 348.5  |
| 40°   | 7035.4  | 6441.9 | 4652.8 | 2922.1 | 1741.3 | 829.1  | 381.4  | 323.7  | 323.1  | 329.3  | 331.1  |
| 42.5° | 7708.8  | 7052.7 | 4919.5 | 2678.3 | 1413.3 | 548.2  | 330.5  | 308.8  | 300.8  | 303.2  | 305.1  |
| 45°   | 8334.5  | 7576.7 | 5146.5 | 2440.8 | 1061.7 | 391.3  | 324.3  | 291.5  | 279.1  | 277.8  | 279.1  |
| 47.5° | 8838.7  | 7996.6 | 5284.7 | 2161.8 | 756.6  | 324.9  | 311.3  | 275.3  | 258.0  | 254.3  | 252.4  |
| 50°   | 9222.6  | 8308.5 | 5335.0 | 1845.5 | 511.6  | 310.1  | 293.9  | 256.7  | 235.6  | 236.3  | 236.3  |
| 52.5° | 9597.1  | 8591.9 | 5276.7 | 1526.8 | 376.4  | 297.0  | 282.2  | 241.9  | 219.5  | 231.3  | 234.4  |
| 55°   | 9866.9  | 8711.0 | 5106.8 | 1182.0 | 313.8  | 280.9  | 269.1  | 224.5  | 209.0  | 228.2  | 234.4  |
| 57.5° | 10024.4 | 8804.6 | 4794.8 | 853.3  | 287.7  | 265.4  | 252.4  | 208.4  | 194.1  | 199.1  | 202.2  |
| 60°   | 10122.4 | 8673.8 | 4382.5 | 583.5  | 274.1  | 253.0  | 235.6  | 197.8  | 178.6  | 166.8  | 165.0  |
| 62.5° | 10068.4 | 8346.3 | 3839.2 | 401.2  | 259.8  | 239.4  | 221.4  | 187.9  | 162.5  | 147.0  | 145.7  |
| 65°   | 9628.8  | 7740.5 | 2947.5 | 324.9  | 251.2  | 233.2  | 212.7  | 178.6  | 151.3  | 136.4  | 134.6  |
| 67.5° | 8813.3  | 6651.5 | 1721.5 | 289.0  | 247.4  | 227.0  | 205.9  | 169.9  | 145.1  | 129.0  | 126.5  |
| 70°   | 7473.2  | 5003.2 | 576.7  | 258.0  | 246.8  | 226.3  | 200.3  | 163.7  | 138.3  | 121.5  | 119.1  |
| 72.5° | 5391.4  | 3018.8 | 280.9  | 227.0  | 230.7  | 217.0  | 196.0  | 158.8  | 133.9  | 112.9  | 108.5  |
| 75°   | 3064.1  | 982.9  | 253.6  | 196.0  | 214.6  | 207.1  | 193.5  | 159.4  | 135.8  | 102.3  | 97.4   |
| 77.5° | 871.9   | 287.1  | 245.0  | 166.8  | 202.8  | 213.9  | 181.1  | 143.9  | 138.9  | 94.9   | 88.7   |
| 80°   | 294.6   | 255.5  | 236.3  | 129.6  | 163.7  | 176.7  | 156.9  | 126.5  | 140.1  | 86.2   | 80.0   |
| 82.5° | 236.3   | 256.7  | 198.4  | 103.6  | 124.6  | 133.9  | 124.6  | 113.5  | 113.5  | 76.9   | 71.9   |
| 85°   | 189.1   | 238.1  | 125.9  | 82.5   | 93.0   | 102.9  | 88.1   | 85.0   | 79.4   | 64.5   | 62.6   |
| 87.5° | 109.8   | 74.4   | 52.1   | 42.2   | 39.1   | 39.7   | 34.1   | 40.9   | 50.2   | 44.0   | 43.4   |
| 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)