

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: McGRAW-EDISON

Report Number: P591126

Luminaire Tested: **CTN-CA10-630-722-U-T3-SSS-HM-EX180**

Issue Date: 1/19/2022

Test Information

Test Method: LM-79-08
Report Number: P591126
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-9)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/19/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: CTN-CA10-630-722-U-T3-SSS-HM-EX180
Description: CELESTEON HIGH MAST LUMINAIRE, 180D FIELD INSTALLED SHIELD ON STREET SIDE
Light Source: (10) 2200K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 38835 lumens
Efficiency: N/A
Efficacy: 61.5 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')
IES Classification: Type II - Short
BUG Rating: B4 - U0 - G4

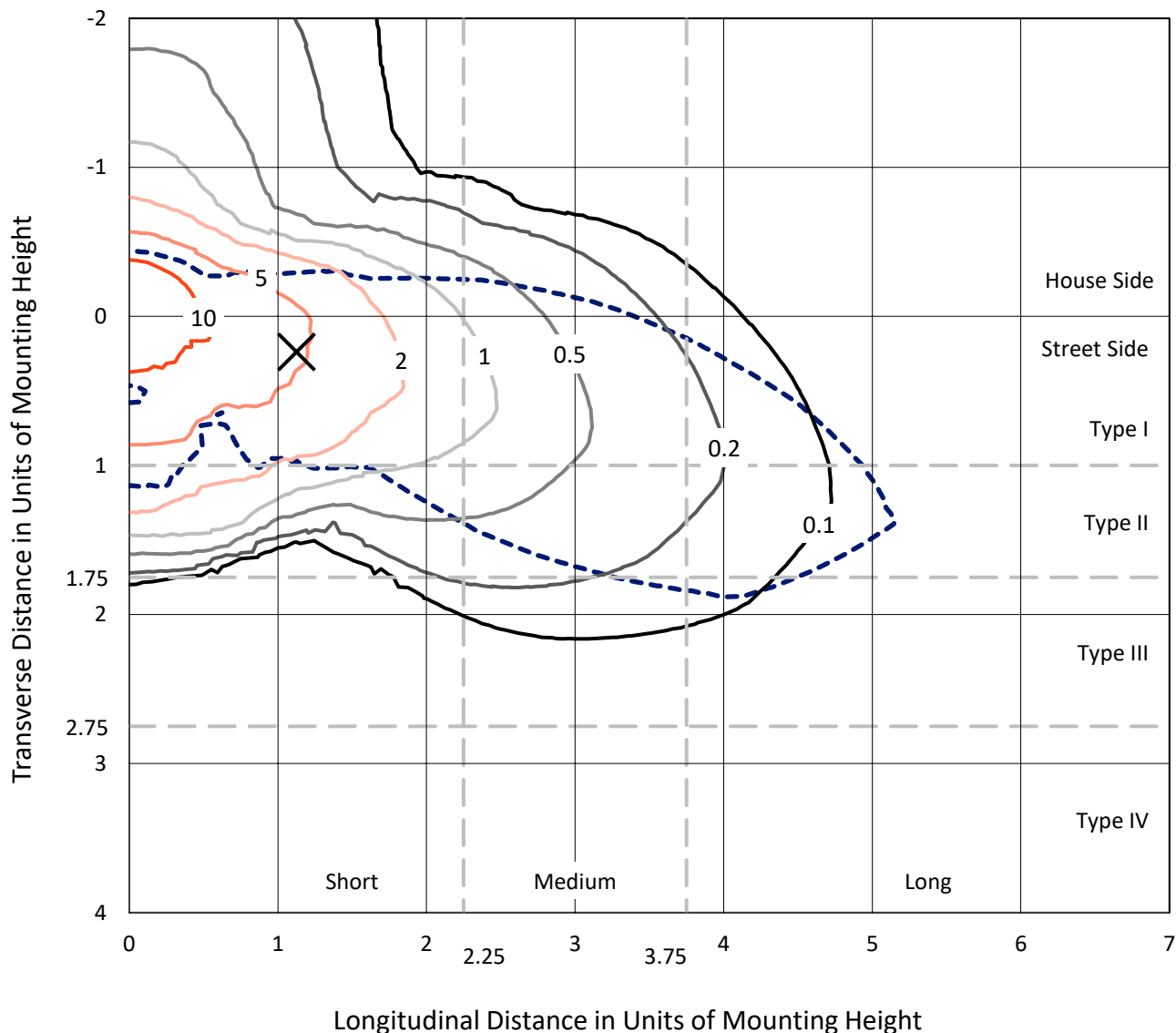
Input Watts (W): 631.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

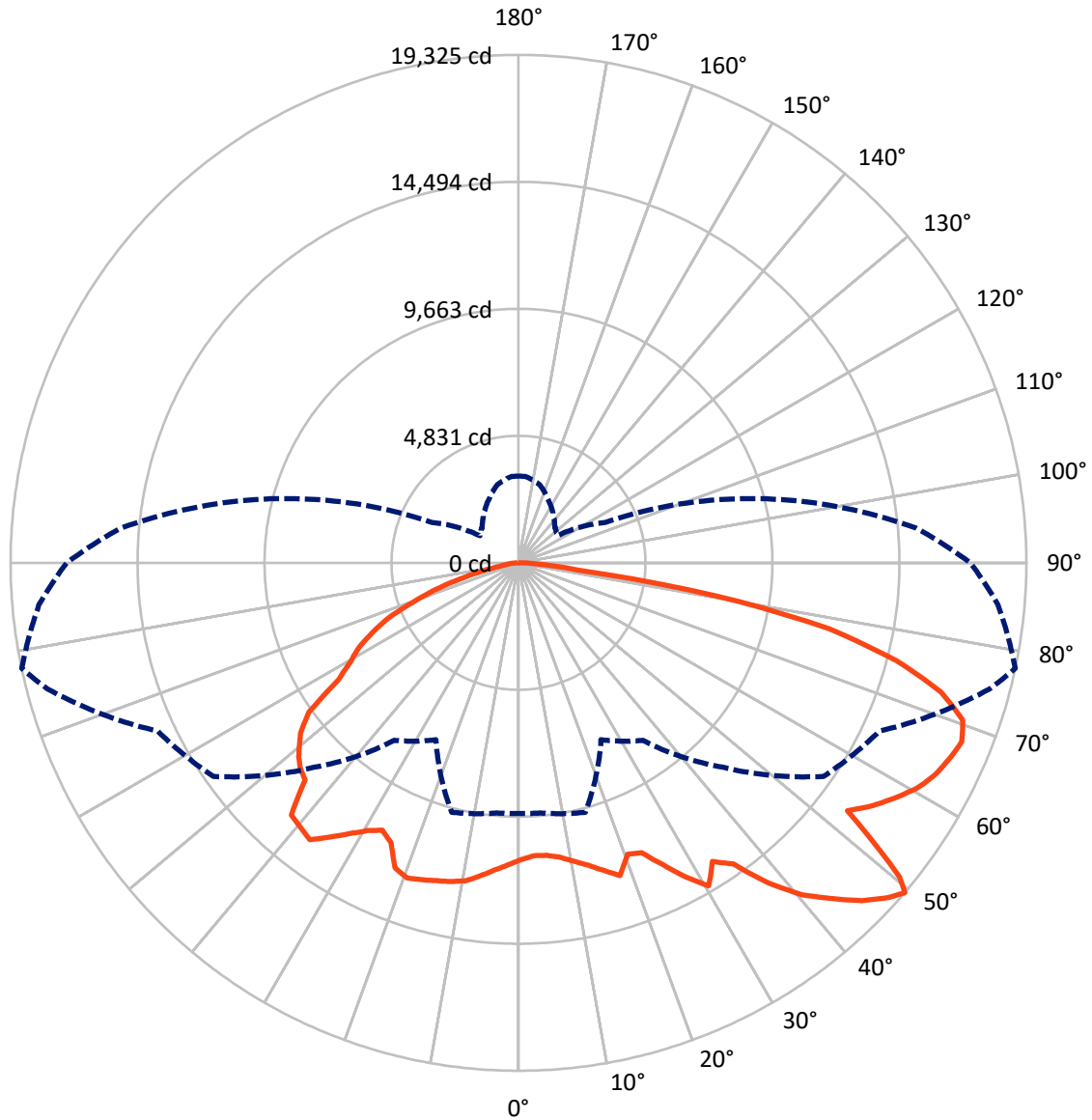
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 14.1 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 49-Deg Vertical



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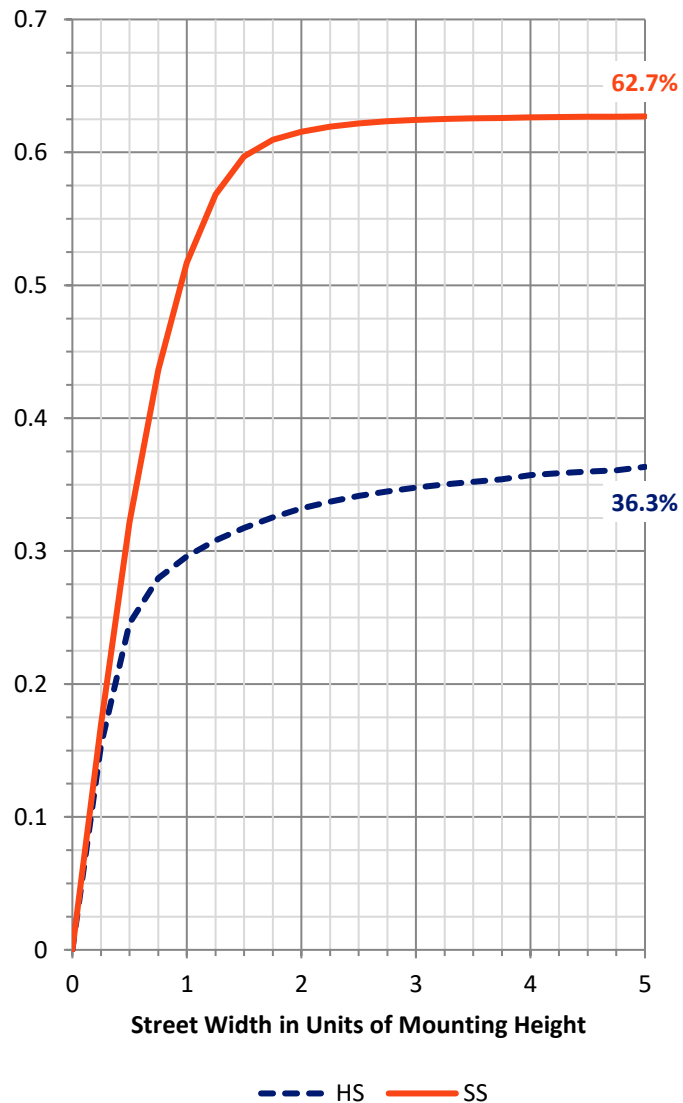
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 14525.2 | 0.0 | 14525.2 |
| | % Fixture | 37.4 | 0.0 | 37.4 |
| Street Side | Lumens | 24309.8 | 0.0 | 24309.8 |
| | % Fixture | 62.6 | 0.0 | 62.6 |
| Total | Lumens | 38835.0 | 0.0 | 38835.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 1130.4 | 2.9 |
| 10°-20° | 3469.9 | 8.9 |
| 20°-30° | 5028.3 | 12.9 |
| 30°-40° | 6178.6 | 15.9 |
| 40°-50° | 6973.5 | 18.0 |
| 50°-60° | 6626.6 | 17.1 |
| 60°-70° | 4949.1 | 12.7 |
| 70°-80° | 3675.5 | 9.5 |
| 80°-90° | 803.2 | 2.1 |
| 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° | 38835.0 | 100.0 |
| 0°-180° | 38835.0 | 100.0 |

Coefficient of Utilization

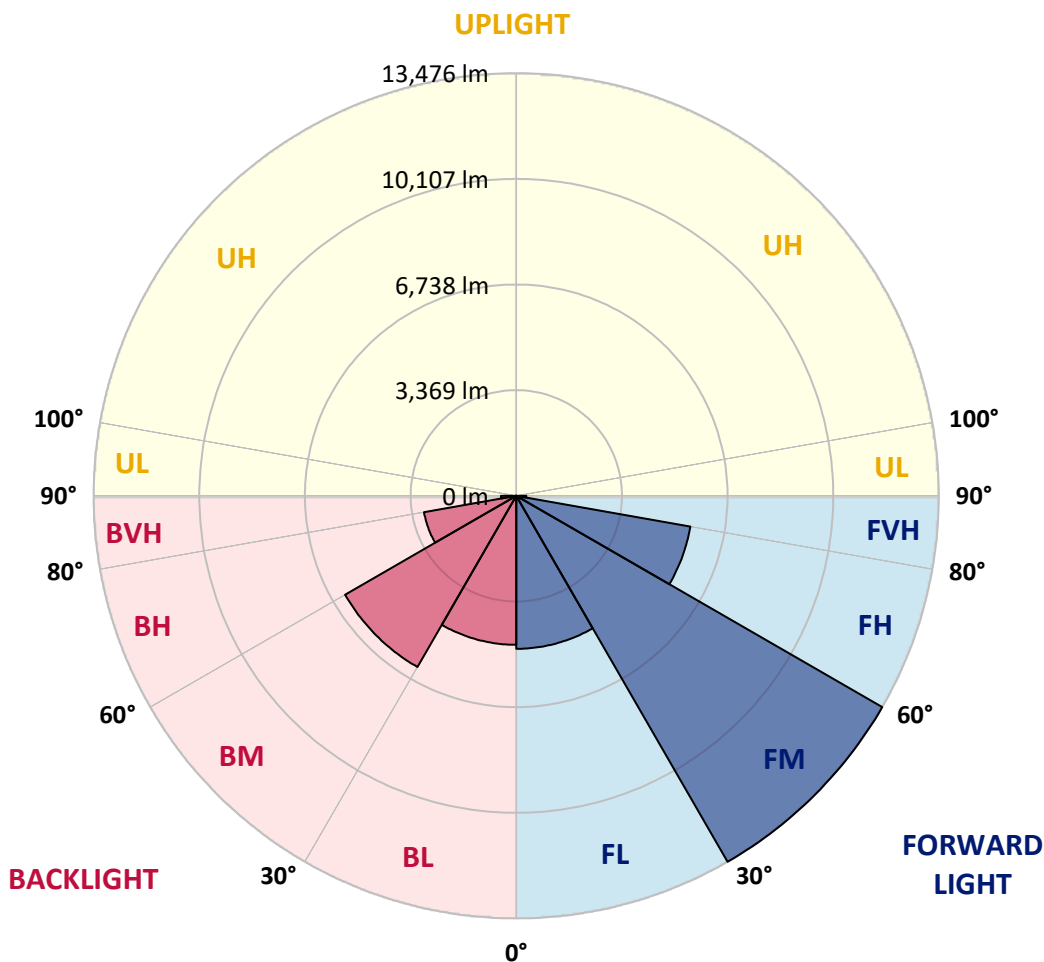


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 4877.9 | 12.6 | | | |
| FM (30°-60°) | 13475.9 | 34.7 | | | |
| FH (60°-80°) | 5638.6 | 14.5 | | | G3/7500 |
| FVH (80°-90°) | 317.5 | 0.8 | | | G3/500 |
| BL (0°-30°) | 4750.6 | 12.2 | B4/5000 | | |
| BM (30°-60°) | 6302.8 | 16.2 | B4/8500 | | |
| BH (60°-80°) | 2986.1 | 7.7 | B4/5000 | | G4/5000 |
| BVH (80°-90°) | 485.7 | 1.3 | | | G3/500 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B4-U0-G4
 Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 78° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 11293.0 | 11293.0 | 11293.0 | 11293.0 | 11293.0 | 11293.0 | 11293.0 | 11293.0 | 11293.0 | 11293.0 | 11293.0 |
| 2.5° | 11049.0 | 10988.5 | 11004.8 | 11097.8 | 10918.8 | 11049.0 | 10995.5 | 11121.0 | 11162.9 | 11158.2 | 11339.5 |
| 5° | 11139.6 | 11060.6 | 11083.8 | 11146.6 | 10951.4 | 11051.3 | 11009.5 | 11144.3 | 11179.1 | 11181.5 | 11427.8 |
| 7.5° | 11472.0 | 11381.3 | 11358.1 | 11362.7 | 11179.1 | 11253.5 | 11146.6 | 11251.2 | 11313.9 | 11307.0 | 11581.2 |
| 10° | 11955.4 | 11855.5 | 11804.3 | 11788.1 | 11564.9 | 11532.4 | 11402.2 | 11439.4 | 11532.4 | 11544.0 | 11822.9 |
| 12.5° | 12452.8 | 12373.7 | 12299.4 | 12262.2 | 11955.4 | 11883.3 | 11692.8 | 11725.3 | 11795.0 | 11809.0 | 12099.5 |
| 15° | 12892.0 | 12817.7 | 12806.0 | 12764.2 | 12452.8 | 12313.3 | 12083.2 | 12048.4 | 12101.8 | 12146.0 | 12399.3 |
| 17.5° | 12462.1 | 12366.8 | 12306.3 | 12320.3 | 12162.2 | 11809.0 | 11667.2 | 11906.6 | 12352.8 | 12508.5 | 12747.9 |
| 20° | 11248.9 | 11365.1 | 11316.3 | 11128.0 | 10958.3 | 11530.1 | 11409.2 | 11358.1 | 11634.7 | 11834.5 | 12413.2 |
| 22.5° | 9882.3 | 9882.3 | 10347.1 | 10672.5 | 10737.5 | 11058.3 | 11718.3 | 11948.4 | 11978.6 | 11978.6 | 11811.3 |
| 25° | 8801.5 | 9108.3 | 9896.2 | 11132.6 | 11139.6 | 11074.5 | 11258.2 | 12520.2 | 12729.3 | 12706.1 | 12424.9 |
| 27.5° | 9219.9 | 9168.7 | 9698.7 | 10558.6 | 11774.1 | 11699.7 | 11341.8 | 11911.2 | 13635.7 | 13528.8 | 13168.6 |
| 30° | 9589.4 | 9538.3 | 9633.6 | 10700.4 | 11955.4 | 12378.4 | 12071.6 | 11901.9 | 13684.6 | 14265.6 | 14049.4 |
| 32.5° | 9935.7 | 9877.6 | 9986.8 | 10149.5 | 11376.7 | 13052.4 | 12836.2 | 12724.7 | 12987.3 | 13552.1 | 15046.5 |
| 35° | 10214.6 | 10223.9 | 10349.4 | 10588.8 | 11151.2 | 12824.6 | 13603.2 | 13645.0 | 14105.2 | 14070.4 | 14825.7 |
| 37.5° | 10421.5 | 10440.1 | 10549.3 | 10832.8 | 11042.0 | 10593.4 | 14333.0 | 14816.4 | 15525.3 | 15455.6 | 14900.1 |
| 40° | 10433.1 | 10474.9 | 10693.4 | 11042.0 | 11288.4 | 9433.7 | 14198.2 | 16108.6 | 16810.5 | 16606.0 | 15915.7 |
| 42.5° | 10216.9 | 10237.9 | 10602.7 | 11193.1 | 8566.8 | 9812.5 | 13166.3 | 17396.2 | 17710.0 | 17459.0 | 16692.0 |
| 45° | 10024.0 | 10019.4 | 10409.8 | 10939.7 | 8095.0 | 10256.4 | 13138.4 | 17022.0 | 18537.4 | 18342.1 | 17363.7 |
| 47.5° | 9752.1 | 9749.8 | 10130.9 | 8232.1 | 8197.3 | 10735.2 | 13831.0 | 14760.6 | 19223.0 | 19013.8 | 17974.9 |
| 49° | 9533.6 | 9556.9 | 9826.5 | 7425.6 | 8243.7 | 11002.5 | 14168.0 | 15146.4 | 18551.3 | 19325.3 | 18314.2 |
| 50° | 9415.1 | 9438.3 | 8780.6 | 7344.3 | 8257.7 | 11155.9 | 14344.6 | 15430.0 | 16696.6 | 18797.7 | 18532.7 |
| 52.5° | 8875.9 | 8671.4 | 6807.4 | 7174.6 | 8262.3 | 11337.2 | 12334.2 | 16031.9 | 15913.4 | 15669.4 | 17547.3 |
| 55° | 5347.9 | 6052.1 | 6163.6 | 6981.7 | 8188.0 | 8234.4 | 12048.4 | 16731.5 | 16680.4 | 16324.8 | 15109.3 |
| 57.5° | 3242.2 | 3209.6 | 4759.8 | 6444.8 | 5482.7 | 6905.0 | 12520.2 | 17656.5 | 17354.4 | 16880.3 | 15367.2 |
| 60° | 1143.5 | 1011.0 | 1020.3 | 1099.3 | 2040.6 | 5166.6 | 9986.8 | 13296.4 | 17493.8 | 17419.5 | 15602.0 |
| 62.5° | 90.6 | 86.0 | 86.0 | 90.6 | 130.2 | 1940.7 | 7918.4 | 13338.3 | 17977.2 | 17784.3 | 15655.4 |
| 65° | 11.6 | 11.6 | 11.6 | 25.6 | 67.4 | 1754.7 | 7930.0 | 13554.4 | 18337.5 | 18007.5 | 15513.7 |
| 67.5° | 0.0 | 0.0 | 7.0 | 18.6 | 53.5 | 1552.5 | 7697.6 | 13682.2 | 18660.5 | 18193.4 | 15383.5 |
| 70° | 0.0 | 0.0 | 4.6 | 16.3 | 46.5 | 1285.3 | 7414.0 | 13793.8 | 18509.5 | 17930.8 | 14728.1 |
| 72.5° | 0.0 | 0.0 | 4.6 | 13.9 | 39.5 | 848.3 | 6572.7 | 12968.7 | 17433.4 | 16805.9 | 13382.4 |
| 75° | 0.0 | 0.0 | 4.6 | 11.6 | 37.2 | 483.4 | 5385.0 | 11458.0 | 15513.7 | 14849.0 | 11276.7 |
| 77.5° | 0.0 | 0.0 | 2.3 | 9.3 | 32.5 | 265.0 | 3721.0 | 9484.8 | 12815.3 | 12085.5 | 8448.3 |
| 80° | 0.0 | 0.0 | 2.3 | 9.3 | 30.2 | 181.3 | 1692.0 | 6161.3 | 8541.2 | 7627.8 | 4629.7 |
| 82.5° | 0.0 | 0.0 | 2.3 | 9.3 | 23.2 | 123.2 | 683.3 | 1726.8 | 2642.6 | 2259.1 | 1473.5 |
| 85° | 0.0 | 0.0 | 2.3 | 7.0 | 16.3 | 79.0 | 337.0 | 708.9 | 1066.8 | 1024.9 | 746.1 |
| 87.5° | 0.0 | 0.0 | 2.3 | 7.0 | 11.6 | 23.2 | 99.9 | 232.4 | 416.0 | 423.0 | 318.4 |
| 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° | 11293.0 | 11293.0 | 11293.0 | 11293.0 | 11293.0 | 11293.0 | 11293.0 | 11293.0 | 11293.0 | 11293.0 | 11293.0 |
| 2.5° | 11425.5 | 11446.4 | 11516.1 | 11620.7 | 11637.0 | 11778.8 | 11755.5 | 12020.5 | 12046.0 | 12108.8 | 12178.5 |
| 5° | 11546.3 | 11618.4 | 11776.4 | 12015.8 | 12190.1 | 12404.0 | 12383.0 | 12682.9 | 12713.1 | 12696.8 | 12803.7 |
| 7.5° | 11723.0 | 11829.9 | 12076.2 | 12399.3 | 12457.4 | 12722.4 | 12687.5 | 12947.8 | 12952.5 | 12917.6 | 13022.2 |
| 10° | 11981.0 | 12106.5 | 12334.2 | 12517.8 | 12657.3 | 12817.7 | 12794.4 | 13026.8 | 13003.6 | 12964.1 | 13073.3 |
| 12.5° | 12229.6 | 12299.4 | 12438.8 | 12655.0 | 12680.5 | 12745.6 | 12706.1 | 12922.2 | 12899.0 | 12843.2 | 12945.5 |
| 15° | 12452.8 | 12487.6 | 12489.9 | 12596.9 | 12538.8 | 12587.6 | 12483.0 | 12638.7 | 12585.2 | 12564.3 | 12636.4 |
| 17.5° | 12738.6 | 12673.6 | 12578.3 | 12571.3 | 12373.7 | 12306.3 | 12139.0 | 12180.8 | 12069.3 | 12060.0 | 12099.5 |
| 20° | 12775.8 | 12910.6 | 12636.4 | 12352.8 | 12020.5 | 11850.8 | 11534.7 | 11537.0 | 11411.5 | 11362.7 | 11386.0 |
| 22.5° | 11757.8 | 12090.2 | 12703.8 | 12162.2 | 11597.5 | 11216.3 | 10809.6 | 10686.4 | 10449.3 | 10349.4 | 10309.9 |
| 25° | 12155.3 | 11723.0 | 11676.5 | 11841.5 | 11049.0 | 10467.9 | 9877.6 | 9515.0 | 9233.8 | 9006.1 | 9022.3 |
| 27.5° | 12771.2 | 12208.7 | 11072.2 | 11139.6 | 10358.7 | 9542.9 | 8652.8 | 8141.5 | 7855.6 | 7634.8 | 7609.2 |
| 30° | 13586.9 | 12880.4 | 11202.4 | 9654.5 | 9566.2 | 8380.9 | 7288.5 | 6723.7 | 6433.2 | 6354.2 | 6305.4 |
| 32.5° | 14600.3 | 13679.9 | 11495.2 | 9315.2 | 7916.0 | 7123.5 | 5898.7 | 5443.1 | 5306.0 | 5299.0 | 5243.3 |
| 35° | 15804.2 | 14737.4 | 11764.8 | 8864.3 | 6826.0 | 5801.1 | 4713.4 | 4413.5 | 4434.5 | 4436.8 | 4483.3 |
| 37.5° | 15034.9 | 15736.8 | 12101.8 | 8436.6 | 5763.9 | 4311.3 | 3790.7 | 3602.4 | 3662.8 | 3760.5 | 3806.9 |
| 40° | 15046.5 | 14326.0 | 12494.6 | 7723.1 | 4478.6 | 3288.7 | 2965.6 | 2923.8 | 3181.8 | 3379.3 | 3428.1 |
| 42.5° | 15650.8 | 14233.1 | 12350.5 | 6909.7 | 3279.4 | 2500.8 | 2470.6 | 2696.0 | 3067.9 | 3288.7 | 3328.2 |
| 45° | 16299.2 | 14674.6 | 10258.8 | 5756.9 | 2377.6 | 2115.0 | 2347.4 | 2661.1 | 3065.5 | 3300.3 | 3323.5 |
| 47.5° | 16915.1 | 14953.5 | 9833.5 | 4499.5 | 1910.4 | 1994.1 | 2310.2 | 2661.1 | 3081.8 | 3321.2 | 3335.1 |
| 49° | 17189.4 | 15179.0 | 9438.3 | 3639.6 | 1791.9 | 1947.6 | 2289.3 | 2665.8 | 3086.5 | 3291.0 | 3298.0 |
| 50° | 17352.1 | 15306.8 | 9119.9 | 3374.7 | 1733.8 | 1917.4 | 2280.0 | 2672.8 | 3079.5 | 3256.1 | 3263.1 |
| 52.5° | 17605.4 | 15513.7 | 8387.8 | 2689.0 | 1624.6 | 1847.7 | 2266.0 | 2700.7 | 3053.9 | 3158.5 | 3153.9 |
| 55° | 14518.9 | 14500.3 | 7776.6 | 2256.7 | 1540.9 | 1784.9 | 2261.4 | 2723.9 | 3065.5 | 3172.5 | 3167.8 |
| 57.5° | 13914.6 | 11906.6 | 6551.8 | 1845.4 | 1471.2 | 1731.5 | 2266.0 | 2758.8 | 3274.7 | 3460.6 | 3437.4 |
| 60° | 13958.8 | 11725.3 | 5575.6 | 1601.3 | 1389.8 | 1687.3 | 2280.0 | 2914.5 | 3783.7 | 3972.0 | 3913.9 |
| 62.5° | 13805.4 | 11281.4 | 4989.9 | 1438.6 | 1303.8 | 1647.8 | 2289.3 | 3130.6 | 3848.8 | 3865.1 | 3765.1 |
| 65° | 13440.5 | 10723.6 | 4202.1 | 1259.7 | 1213.2 | 1610.6 | 2287.0 | 3209.6 | 3551.3 | 3418.8 | 3386.3 |
| 67.5° | 12764.2 | 10130.9 | 3325.8 | 1104.0 | 1115.6 | 1554.9 | 2340.4 | 3072.5 | 3360.7 | 3253.8 | 3205.0 |
| 70° | 11962.4 | 8866.6 | 2345.1 | 959.9 | 1027.3 | 1492.1 | 2333.4 | 3040.0 | 3260.8 | 3102.7 | 3035.3 |
| 72.5° | 10535.3 | 7453.5 | 1578.1 | 827.4 | 915.7 | 1420.1 | 2214.9 | 2942.4 | 3195.7 | 3091.1 | 2998.1 |
| 75° | 8373.9 | 5577.9 | 915.7 | 713.5 | 806.5 | 1315.5 | 2098.7 | 2881.9 | 3230.6 | 3030.7 | 2837.8 |
| 77.5° | 5724.4 | 3177.1 | 683.3 | 597.3 | 694.9 | 1180.7 | 1903.5 | 2679.7 | 3123.6 | 2951.7 | 2693.7 |
| 80° | 2565.9 | 1148.1 | 522.9 | 485.7 | 583.4 | 957.5 | 1640.8 | 2370.6 | 2958.6 | 2958.6 | 2777.4 |
| 82.5° | 1020.3 | 722.8 | 362.6 | 381.2 | 476.4 | 729.8 | 1299.2 | 2045.2 | 2607.7 | 2726.2 | 2914.5 |
| 85° | 576.4 | 423.0 | 232.4 | 276.6 | 364.9 | 564.8 | 945.9 | 1589.7 | 2124.3 | 2354.4 | 2551.9 |
| 87.5° | 227.8 | 160.4 | 93.0 | 155.7 | 211.5 | 290.5 | 413.7 | 778.6 | 1143.5 | 1408.4 | 1557.2 |
| 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)