

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: P591378

Luminaire Tested: **CTN-CA8-480-730-U-T3-SSS-HM-EX180**

Issue Date: 1/19/2022

Test Information

Test Method: LM-79-08
Report Number: P591378
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-CA8-480-730-U-T3-SSS-HM-EX180
Description: CELESTEON HIGH MAST LUMINAIRE, 180D FIELD INSTALLED SHIELD ON STREET SIDE
Light Source: (8) 3000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 36036 lumens
Efficiency: N/A
Efficacy: 75.0 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): 480.8
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

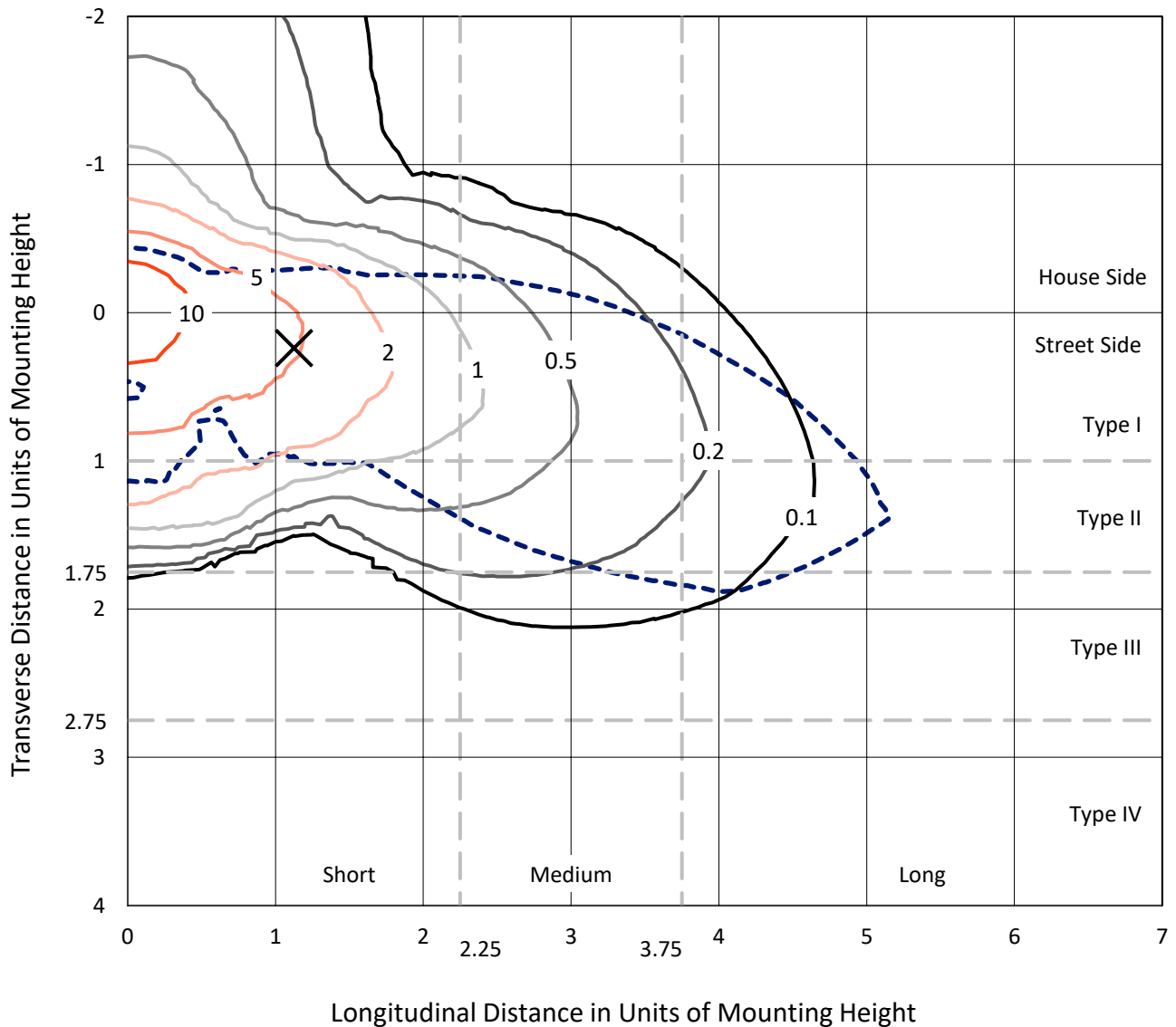




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Iso-Footcandle Lines of Horizontal Illumination

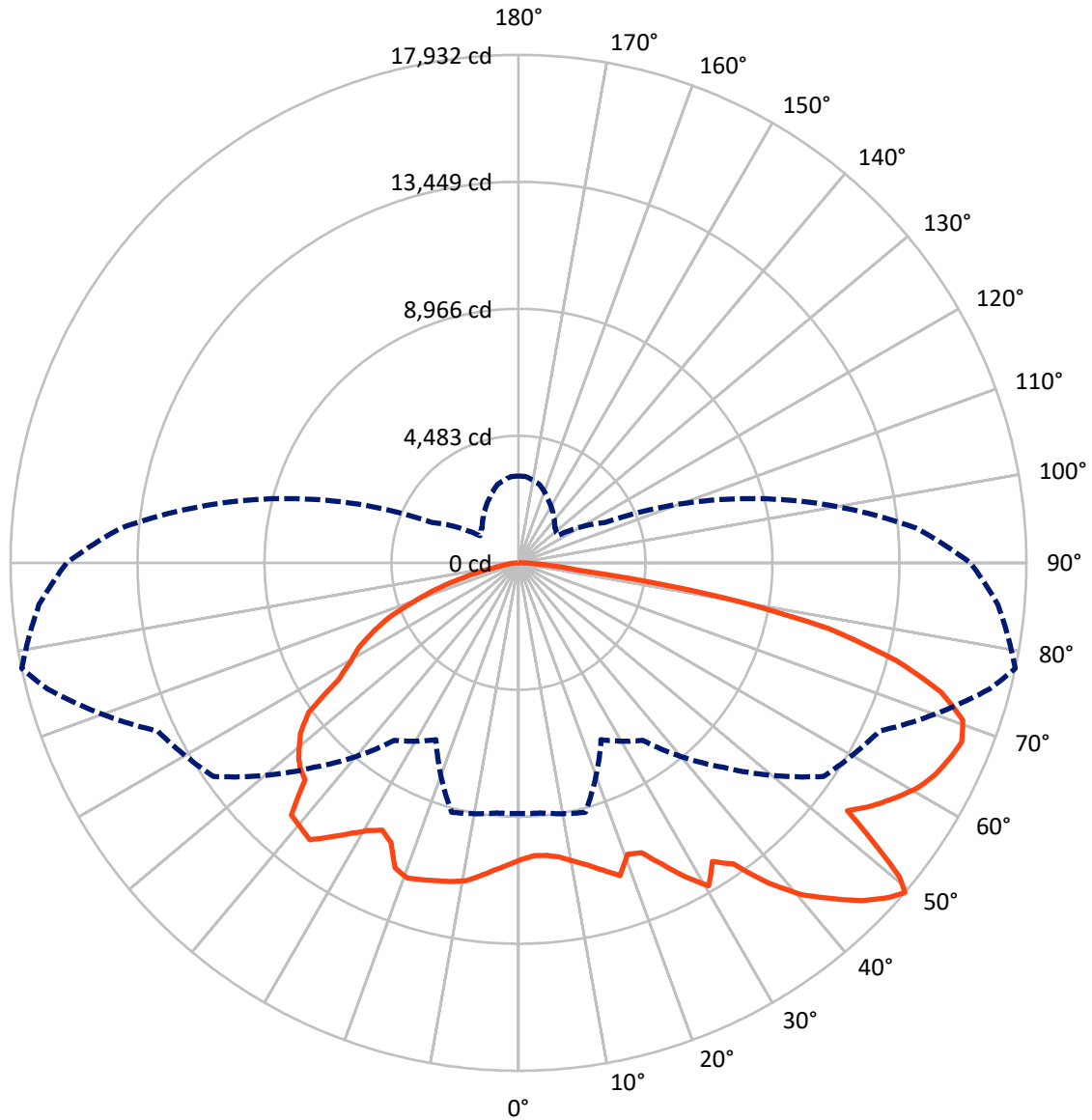
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 13.1 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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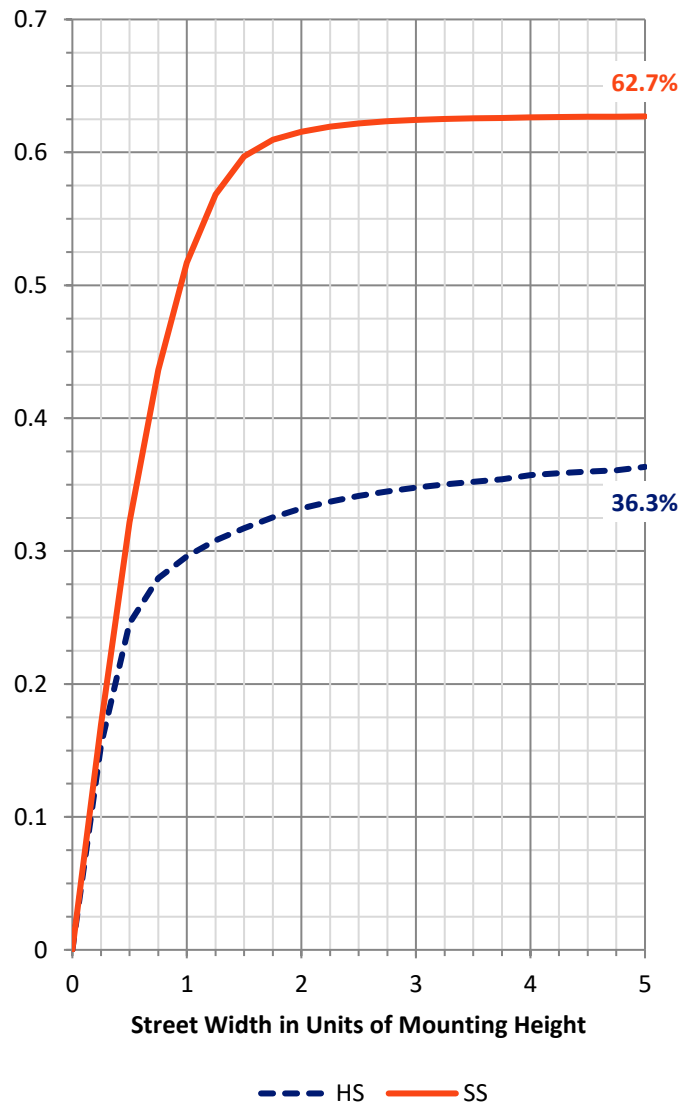
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 13478.3 | 0.0 | 13478.3 |
| | % Fixture | 37.4 | 0.0 | 37.4 |
| Street Side | Lumens | 22557.7 | 0.0 | 22557.7 |
| | % Fixture | 62.6 | 0.0 | 62.6 |
| Total | Lumens | 36036.0 | 0.0 | 36036.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 1048.9 | 2.9 |
| 10°-20° | 3219.8 | 8.9 |
| 20°-30° | 4665.9 | 12.9 |
| 30°-40° | 5733.3 | 15.9 |
| 40°-50° | 6470.9 | 18.0 |
| 50°-60° | 6149.0 | 17.1 |
| 60°-70° | 4592.4 | 12.7 |
| 70°-80° | 3410.6 | 9.5 |
| 80°-90° | 745.3 | 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° | 36036.0 | 100.0 |
| 0°-180° | 36036.0 | 100.0 |

Coefficient of Utilization

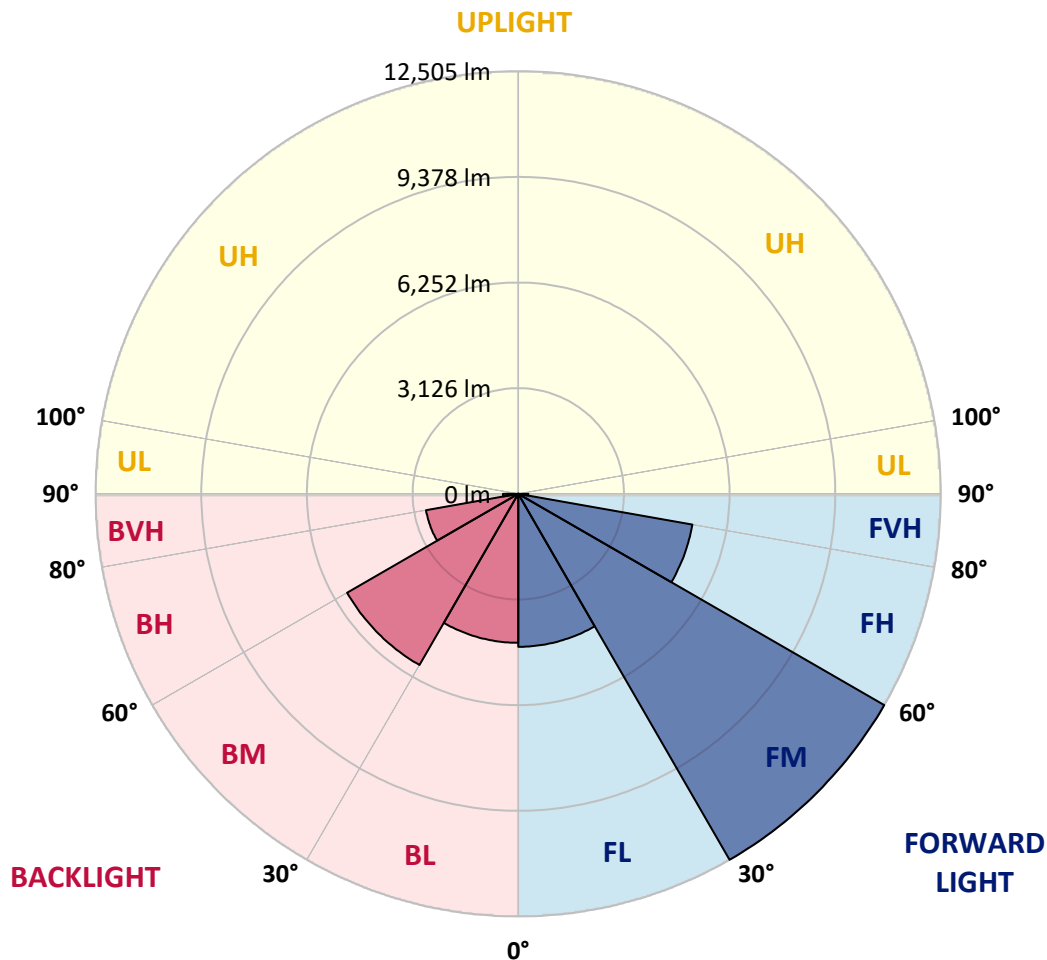


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 4526.4 | 12.6 | | | |
| FM (30°-60°) | 12504.6 | 34.7 | | | |
| FH (60°-80°) | 5232.2 | 14.5 | | | G3/7500 |
| FVH (80°-90°) | 294.6 | 0.8 | | | G3/500 |
| BL (0°-30°) | 4408.2 | 12.2 | B4/5000 | | |
| BM (30°-60°) | 5848.6 | 16.2 | B4/8500 | | |
| BH (60°-80°) | 2770.9 | 7.7 | B4/5000 | | G4/5000 |
| BVH (80°-90°) | 450.7 | 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° | 10479.1 | 10479.1 | 10479.1 | 10479.1 | 10479.1 | 10479.1 | 10479.1 | 10479.1 | 10479.1 | 10479.1 | 10479.1 |
| 2.5° | 10252.6 | 10196.6 | 10211.7 | 10297.9 | 10131.9 | 10252.6 | 10203.0 | 10319.5 | 10358.3 | 10354.0 | 10522.2 |
| 5° | 10336.7 | 10263.4 | 10285.0 | 10343.2 | 10162.1 | 10254.8 | 10216.0 | 10341.1 | 10373.4 | 10375.6 | 10604.2 |
| 7.5° | 10645.1 | 10561.0 | 10539.5 | 10543.8 | 10373.4 | 10442.4 | 10343.2 | 10440.3 | 10498.5 | 10492.0 | 10746.5 |
| 10° | 11093.7 | 11001.0 | 10953.5 | 10938.4 | 10731.4 | 10701.2 | 10580.4 | 10614.9 | 10701.2 | 10712.0 | 10970.8 |
| 12.5° | 11555.2 | 11481.9 | 11412.9 | 11378.4 | 11093.7 | 11026.9 | 10850.0 | 10880.2 | 10944.9 | 10957.9 | 11227.4 |
| 15° | 11962.8 | 11893.8 | 11883.0 | 11844.2 | 11555.2 | 11425.8 | 11212.3 | 11180.0 | 11229.6 | 11270.6 | 11505.6 |
| 17.5° | 11563.9 | 11475.4 | 11419.4 | 11432.3 | 11285.7 | 10957.9 | 10826.3 | 11048.4 | 11462.5 | 11607.0 | 11829.1 |
| 20° | 10438.1 | 10545.9 | 10500.6 | 10326.0 | 10168.5 | 10699.1 | 10586.9 | 10539.5 | 10796.1 | 10981.6 | 11518.6 |
| 22.5° | 9170.0 | 9170.0 | 9601.3 | 9903.3 | 9963.6 | 10261.3 | 10873.7 | 11087.2 | 11115.3 | 11115.3 | 10960.0 |
| 25° | 8167.2 | 8451.8 | 9182.9 | 10330.3 | 10336.7 | 10276.4 | 10446.7 | 11617.8 | 11811.9 | 11790.3 | 11529.4 |
| 27.5° | 8555.4 | 8507.9 | 8999.6 | 9797.6 | 10925.5 | 10856.5 | 10524.4 | 11052.7 | 12653.0 | 12553.8 | 12219.5 |
| 30° | 8898.3 | 8850.8 | 8939.2 | 9929.1 | 11093.7 | 11486.2 | 11201.5 | 11044.1 | 12698.3 | 13237.4 | 13036.8 |
| 32.5° | 9219.6 | 9165.7 | 9267.1 | 9418.0 | 10556.7 | 12111.6 | 11911.1 | 11807.6 | 12051.3 | 12575.3 | 13962.0 |
| 35° | 9478.4 | 9487.0 | 9603.5 | 9825.6 | 10347.5 | 11900.3 | 12622.8 | 12661.6 | 13088.6 | 13056.3 | 13757.2 |
| 37.5° | 9670.3 | 9687.6 | 9789.0 | 10052.1 | 10246.2 | 9829.9 | 13300.0 | 13748.5 | 14406.3 | 14341.6 | 13826.2 |
| 40° | 9681.1 | 9719.9 | 9922.7 | 10246.2 | 10474.8 | 8753.8 | 13174.9 | 14947.6 | 15598.9 | 15409.1 | 14768.6 |
| 42.5° | 9480.6 | 9500.0 | 9838.6 | 10386.3 | 7949.3 | 9105.3 | 12217.3 | 16142.4 | 16433.5 | 16200.6 | 15488.9 |
| 45° | 9301.6 | 9297.2 | 9659.6 | 10151.3 | 7511.6 | 9517.2 | 12191.4 | 15795.2 | 17201.3 | 17020.1 | 16112.2 |
| 47.5° | 9049.2 | 9047.1 | 9400.8 | 7638.8 | 7606.4 | 9961.5 | 12834.1 | 13696.8 | 17837.5 | 17643.4 | 16679.4 |
| 49° | 8846.5 | 8868.1 | 9118.2 | 6890.4 | 7649.6 | 10209.5 | 13146.8 | 14054.8 | 17214.2 | 17932.4 | 16994.3 |
| 50° | 8736.5 | 8758.1 | 8147.8 | 6815.0 | 7662.5 | 10351.8 | 13310.7 | 14317.9 | 15493.2 | 17442.8 | 17197.0 |
| 52.5° | 8236.2 | 8046.4 | 6316.8 | 6657.5 | 7666.8 | 10520.1 | 11445.2 | 14876.5 | 14766.5 | 14540.0 | 16282.6 |
| 55° | 4962.4 | 5615.9 | 5719.4 | 6478.5 | 7597.8 | 7640.9 | 11180.0 | 15525.6 | 15478.2 | 15148.2 | 14020.3 |
| 57.5° | 3008.5 | 2978.3 | 4416.8 | 5980.3 | 5087.5 | 6407.4 | 11617.8 | 16383.9 | 16103.6 | 15663.6 | 14259.7 |
| 60° | 1061.1 | 938.1 | 946.8 | 1020.1 | 1893.5 | 4794.2 | 9267.1 | 12338.1 | 16233.0 | 16164.0 | 14477.5 |
| 62.5° | 84.1 | 79.8 | 79.8 | 84.1 | 120.8 | 1800.8 | 7347.6 | 12376.9 | 16681.6 | 16502.6 | 14527.1 |
| 65° | 10.8 | 10.8 | 10.8 | 23.7 | 62.5 | 1628.3 | 7358.4 | 12577.5 | 17015.8 | 16709.6 | 14395.5 |
| 67.5° | 0.0 | 0.0 | 6.5 | 17.3 | 49.6 | 1440.6 | 7142.8 | 12696.1 | 17315.6 | 16882.1 | 14274.8 |
| 70° | 0.0 | 0.0 | 4.3 | 15.1 | 43.1 | 1192.6 | 6879.7 | 12799.6 | 17175.4 | 16638.4 | 13666.6 |
| 72.5° | 0.0 | 0.0 | 4.3 | 12.9 | 36.7 | 787.2 | 6099.0 | 12034.0 | 16176.9 | 15594.6 | 12417.9 |
| 75° | 0.0 | 0.0 | 4.3 | 10.8 | 34.5 | 448.6 | 4996.9 | 10632.2 | 14395.5 | 13778.7 | 10464.0 |
| 77.5° | 0.0 | 0.0 | 2.2 | 8.6 | 30.2 | 245.9 | 3452.8 | 8801.2 | 11891.7 | 11214.5 | 7839.4 |
| 80° | 0.0 | 0.0 | 2.2 | 8.6 | 28.0 | 168.2 | 1570.0 | 5717.2 | 7925.6 | 7078.1 | 4296.0 |
| 82.5° | 0.0 | 0.0 | 2.2 | 8.6 | 21.6 | 114.3 | 634.0 | 1602.4 | 2452.1 | 2096.2 | 1367.3 |
| 85° | 0.0 | 0.0 | 2.2 | 6.5 | 15.1 | 73.3 | 312.7 | 657.8 | 989.9 | 951.1 | 692.3 |
| 87.5° | 0.0 | 0.0 | 2.2 | 6.5 | 10.8 | 21.6 | 92.7 | 215.7 | 386.0 | 392.5 | 295.5 |
| 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° | 10479.1 | 10479.1 | 10479.1 | 10479.1 | 10479.1 | 10479.1 | 10479.1 | 10479.1 | 10479.1 | 10479.1 | 10479.1 |
| 2.5° | 10602.0 | 10621.4 | 10686.1 | 10783.2 | 10798.3 | 10929.8 | 10908.2 | 11154.1 | 11177.8 | 11236.1 | 11300.8 |
| 5° | 10714.2 | 10781.0 | 10927.7 | 11149.8 | 11311.5 | 11509.9 | 11490.5 | 11768.7 | 11796.8 | 11781.7 | 11880.9 |
| 7.5° | 10878.1 | 10977.3 | 11205.9 | 11505.6 | 11559.6 | 11805.4 | 11773.1 | 12014.6 | 12018.9 | 11986.6 | 12083.6 |
| 10° | 11117.4 | 11233.9 | 11445.2 | 11615.6 | 11745.0 | 11893.8 | 11872.3 | 12087.9 | 12066.4 | 12029.7 | 12131.1 |
| 12.5° | 11348.2 | 11412.9 | 11542.3 | 11742.9 | 11766.6 | 11827.0 | 11790.3 | 11990.9 | 11969.3 | 11917.6 | 12012.4 |
| 15° | 11555.2 | 11587.6 | 11589.7 | 11688.9 | 11635.0 | 11680.3 | 11583.3 | 11727.8 | 11678.2 | 11658.8 | 11725.6 |
| 17.5° | 11820.5 | 11760.1 | 11671.7 | 11665.2 | 11481.9 | 11419.4 | 11264.1 | 11302.9 | 11199.4 | 11190.8 | 11227.4 |
| 20° | 11855.0 | 11980.1 | 11725.6 | 11462.5 | 11154.1 | 10996.7 | 10703.4 | 10705.5 | 10589.1 | 10543.8 | 10565.3 |
| 22.5° | 10910.4 | 11218.8 | 11788.2 | 11285.7 | 10761.6 | 10407.9 | 10030.5 | 9916.2 | 9696.2 | 9603.5 | 9566.8 |
| 25° | 11279.2 | 10878.1 | 10834.9 | 10988.0 | 10252.6 | 9713.5 | 9165.7 | 8829.3 | 8568.3 | 8357.0 | 8372.0 |
| 27.5° | 11850.7 | 11328.8 | 10274.2 | 10336.7 | 9612.1 | 8855.1 | 8029.1 | 7554.7 | 7289.4 | 7084.5 | 7060.8 |
| 30° | 12607.7 | 11952.1 | 10395.0 | 8958.7 | 8876.7 | 7776.8 | 6763.2 | 6239.1 | 5969.6 | 5896.2 | 5850.9 |
| 32.5° | 13548.0 | 12693.9 | 10666.7 | 8643.8 | 7345.5 | 6610.1 | 5473.5 | 5050.8 | 4923.6 | 4917.1 | 4865.4 |
| 35° | 14665.1 | 13675.2 | 10916.9 | 8225.4 | 6334.0 | 5383.0 | 4373.7 | 4095.4 | 4114.9 | 4117.0 | 4160.1 |
| 37.5° | 13951.3 | 14602.6 | 11229.6 | 7828.6 | 5348.4 | 4000.6 | 3517.5 | 3342.8 | 3398.9 | 3489.4 | 3532.6 |
| 40° | 13962.0 | 13293.5 | 11594.1 | 7166.5 | 4155.8 | 3051.6 | 2751.9 | 2713.0 | 2952.4 | 3135.7 | 3181.0 |
| 42.5° | 14522.8 | 13207.2 | 11460.3 | 6411.7 | 3043.0 | 2320.5 | 2292.5 | 2501.7 | 2846.8 | 3051.6 | 3088.3 |
| 45° | 15124.5 | 13617.0 | 9519.4 | 5342.0 | 2206.2 | 1962.5 | 2178.2 | 2469.3 | 2844.6 | 3062.4 | 3084.0 |
| 47.5° | 15696.0 | 13875.8 | 9124.7 | 4175.2 | 1772.8 | 1850.4 | 2143.7 | 2469.3 | 2859.7 | 3081.8 | 3094.8 |
| 49° | 15950.5 | 14085.0 | 8758.1 | 3377.3 | 1662.8 | 1807.3 | 2124.3 | 2473.7 | 2864.0 | 3053.8 | 3060.3 |
| 50° | 16101.4 | 14203.6 | 8462.6 | 3131.4 | 1608.8 | 1779.2 | 2115.7 | 2480.1 | 2857.5 | 3021.4 | 3027.9 |
| 52.5° | 16336.5 | 14395.5 | 7783.3 | 2495.2 | 1507.5 | 1714.5 | 2102.7 | 2506.0 | 2833.8 | 2930.9 | 2926.6 |
| 55° | 13472.5 | 13455.2 | 7216.1 | 2094.1 | 1429.8 | 1656.3 | 2098.4 | 2527.6 | 2844.6 | 2943.8 | 2939.5 |
| 57.5° | 12911.8 | 11048.4 | 6079.5 | 1712.4 | 1365.1 | 1606.7 | 2102.7 | 2559.9 | 3038.7 | 3211.2 | 3189.7 |
| 60° | 12952.7 | 10880.2 | 5173.8 | 1485.9 | 1289.7 | 1565.7 | 2115.7 | 2704.4 | 3511.0 | 3685.7 | 3631.8 |
| 62.5° | 12810.4 | 10468.3 | 4630.3 | 1335.0 | 1209.9 | 1529.1 | 2124.3 | 2905.0 | 3571.4 | 3586.5 | 3493.7 |
| 65° | 12471.8 | 9950.7 | 3899.2 | 1168.9 | 1125.8 | 1494.5 | 2122.1 | 2978.3 | 3295.3 | 3172.4 | 3142.2 |
| 67.5° | 11844.2 | 9400.8 | 3086.1 | 1024.4 | 1035.2 | 1442.8 | 2171.7 | 2851.1 | 3118.5 | 3019.3 | 2974.0 |
| 70° | 11100.2 | 8227.6 | 2176.0 | 890.7 | 953.2 | 1384.6 | 2165.3 | 2820.9 | 3025.8 | 2879.1 | 2816.6 |
| 72.5° | 9776.0 | 6916.3 | 1464.4 | 767.8 | 849.7 | 1317.7 | 2055.3 | 2730.3 | 2965.4 | 2868.3 | 2782.1 |
| 75° | 7770.3 | 5175.9 | 849.7 | 662.1 | 748.4 | 1220.7 | 1947.4 | 2674.2 | 2997.7 | 2812.2 | 2633.2 |
| 77.5° | 5311.8 | 2948.1 | 634.0 | 554.3 | 644.8 | 1095.6 | 1766.3 | 2486.6 | 2898.5 | 2738.9 | 2499.5 |
| 80° | 2380.9 | 1065.4 | 485.2 | 450.7 | 541.3 | 888.5 | 1522.6 | 2199.8 | 2745.4 | 2745.4 | 2577.2 |
| 82.5° | 946.8 | 670.7 | 336.4 | 353.7 | 442.1 | 677.2 | 1205.6 | 1897.8 | 2419.7 | 2529.7 | 2704.4 |
| 85° | 534.8 | 392.5 | 215.7 | 256.6 | 338.6 | 524.1 | 877.7 | 1475.1 | 1971.2 | 2184.7 | 2368.0 |
| 87.5° | 211.3 | 148.8 | 86.3 | 144.5 | 196.3 | 269.6 | 383.9 | 722.5 | 1061.1 | 1306.9 | 1444.9 |
| 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)