

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: P458464

Luminaire Tested: **GALN-SA9D-827-U-SL3**

Issue Date: 1/4/2021

Test Information

Test Method: LM-79-08
Report Number: P458464
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-16)
Test Lab: INNOVATION CENTER
Issue Date: 1/4/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GALN-SA9D-827-U-SL3
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(9) 80 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 51099 lumens
Efficiency: N/A
Efficacy: 92.6 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G5

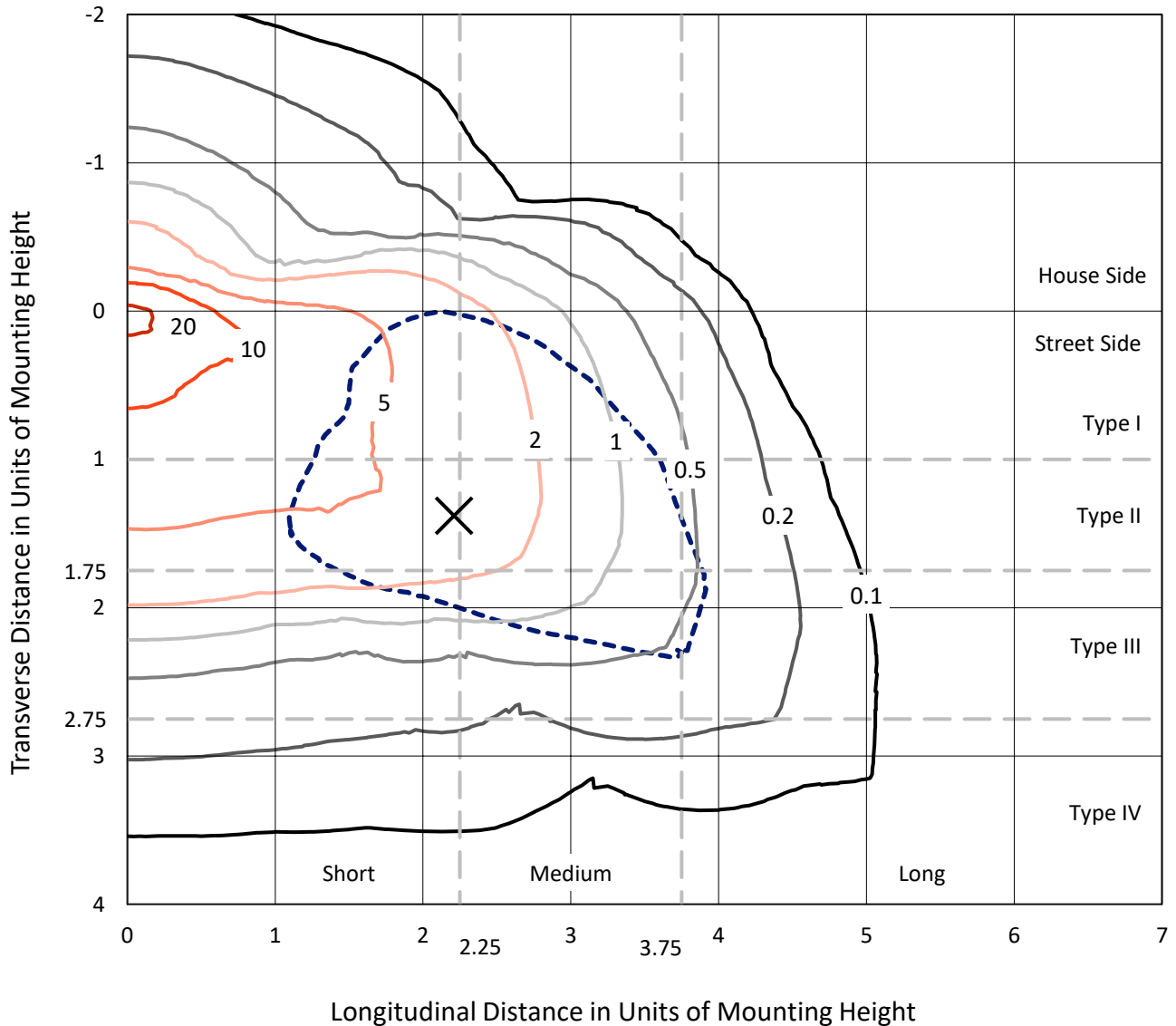
Input Watts (W): 552
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

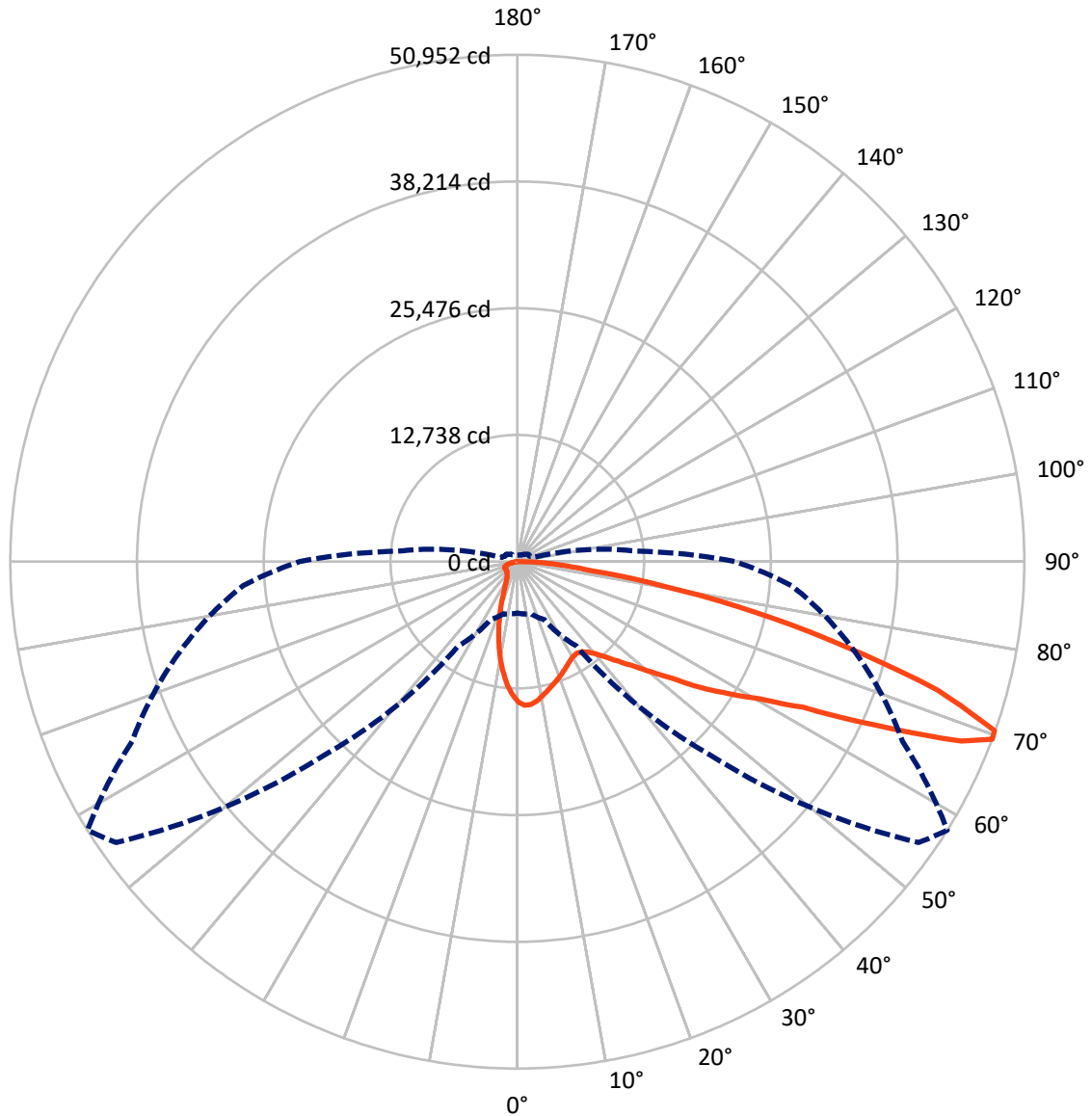
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 22.6 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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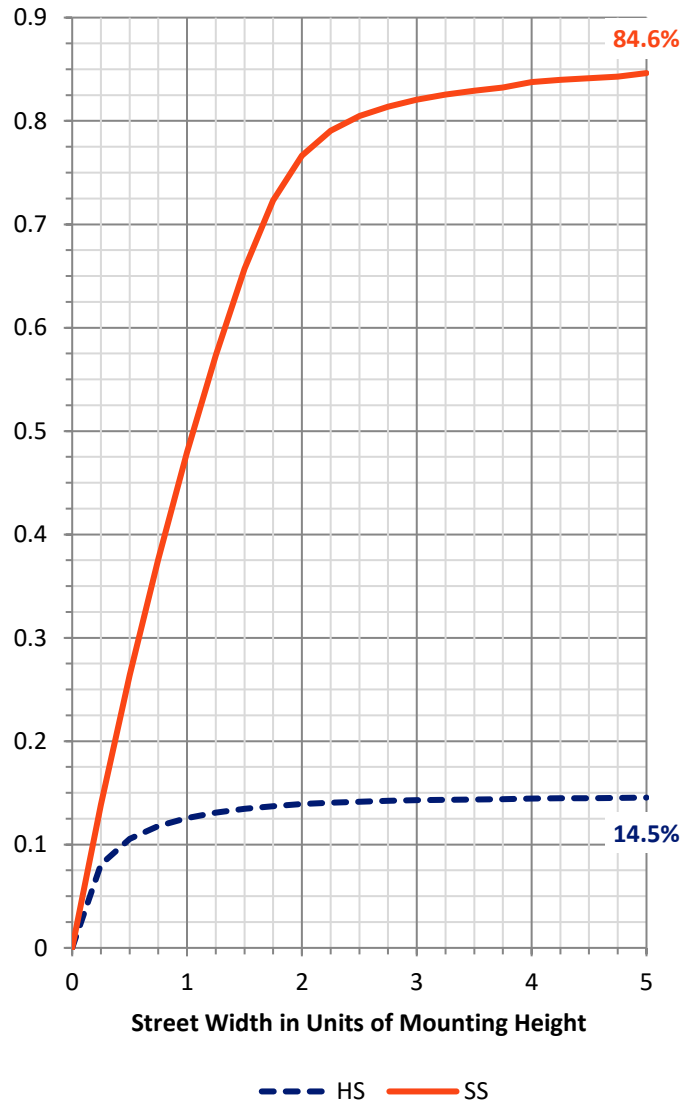
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 7488.6 | 0.0 | 7488.6 |
| | % Fixture | 14.7 | 0.0 | 14.7 |
| Street Side | Lumens | 43610.5 | 0.0 | 43610.5 |
| | % Fixture | 85.3 | 0.0 | 85.3 |
| Total | Lumens | 51099.0 | 0.0 | 51099.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 1199.2 | 2.3 |
| 10°-20° | 2633.2 | 5.2 |
| 20°-30° | 3402.2 | 6.7 |
| 30°-40° | 4418.8 | 8.6 |
| 40°-50° | 6424.2 | 12.6 |
| 50°-60° | 10251.0 | 20.1 |
| 60°-70° | 13694.0 | 26.8 |
| 70°-80° | 7894.1 | 15.4 |
| 80°-90° | 1182.4 | 2.3 |
| 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° | 51099.0 | 100.0 |
| 0°-180° | 51099.0 | 100.0 |



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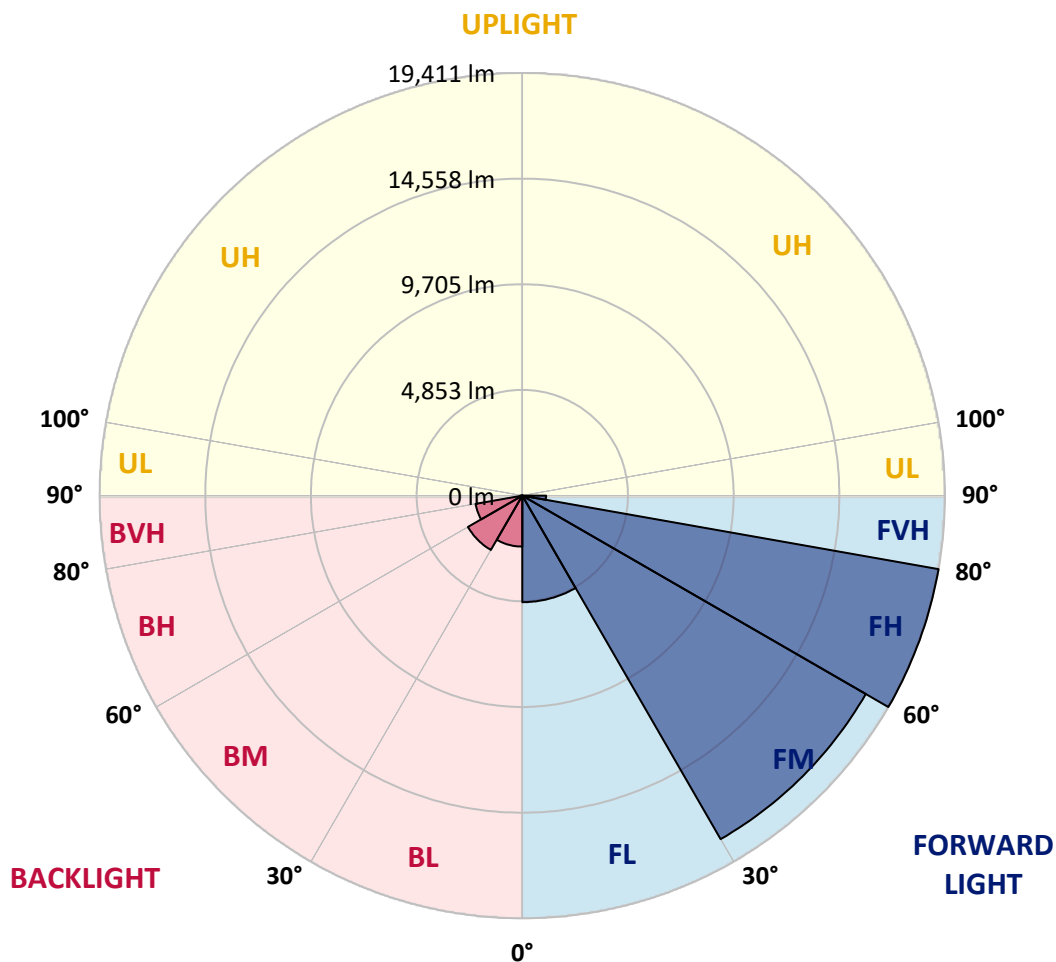
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 4894.0 | 9.6 | | | |
| FM (30°-60°) | 18214.1 | 35.6 | | | |
| FH (60°-80°) | 19410.6 | 38.0 | | | G5 |
| FVH (80°-90°) | 1091.8 | 2.1 | | | G5 |
| BL (0°-30°) | 2340.6 | 4.6 | B3/2500 | | |
| BM (30°-60°) | 2879.8 | 5.6 | B3/5000 | | |
| BH (60°-80°) | 2177.5 | 4.3 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 90.6 | 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 III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 58° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 14120.8 | 14120.8 | 14120.8 | 14120.8 | 14120.8 | 14120.8 | 14120.8 | 14120.8 | 14120.8 | 14120.8 | 14120.8 |
| 2.5° | 14645.1 | 14685.0 | 14673.6 | 14659.4 | 14636.6 | 14573.9 | 14471.3 | 14454.2 | 14388.7 | 14249.0 | 14075.2 |
| 5° | 14420.0 | 14454.2 | 14457.0 | 14477.0 | 14505.5 | 14494.1 | 14420.0 | 14411.5 | 14314.6 | 14126.5 | 13835.8 |
| 7.5° | 13647.7 | 13693.3 | 13793.0 | 13904.2 | 14003.9 | 14098.0 | 14120.8 | 14135.0 | 14075.2 | 13858.6 | 13471.0 |
| 10° | 12778.5 | 12824.1 | 12869.7 | 13035.0 | 13280.1 | 13513.8 | 13707.6 | 13733.2 | 13747.4 | 13548.0 | 13074.9 |
| 12.5° | 11815.3 | 11909.3 | 12006.2 | 12251.3 | 12579.0 | 12946.7 | 13288.6 | 13342.8 | 13439.7 | 13288.6 | 12732.9 |
| 15° | 10997.4 | 11094.3 | 11233.9 | 11453.4 | 11849.5 | 12379.5 | 12861.2 | 12949.5 | 13140.4 | 13063.5 | 12413.7 |
| 17.5° | 10430.3 | 10464.5 | 10561.4 | 10812.2 | 11239.6 | 11798.2 | 12442.2 | 12618.9 | 12923.9 | 12903.9 | 12140.2 |
| 20° | 9982.9 | 10025.6 | 10085.5 | 10239.3 | 10683.9 | 11273.8 | 12051.8 | 12279.8 | 12693.0 | 12761.4 | 11869.4 |
| 22.5° | 9794.8 | 9826.1 | 9817.6 | 9900.2 | 10202.3 | 10795.1 | 11655.7 | 11926.4 | 12487.8 | 12664.5 | 11618.6 |
| 25° | 9806.2 | 9834.7 | 9791.9 | 9772.0 | 9951.5 | 10373.3 | 11242.5 | 11587.3 | 12322.5 | 12599.0 | 11390.7 |
| 27.5° | 9997.1 | 10017.1 | 9937.3 | 9857.5 | 9871.7 | 10111.1 | 10900.5 | 11282.4 | 12182.9 | 12627.5 | 11199.7 |
| 30° | 10253.6 | 10290.6 | 10239.3 | 10142.4 | 10037.0 | 10048.4 | 10681.1 | 11057.2 | 12117.4 | 12727.2 | 11108.5 |
| 32.5° | 10584.2 | 10618.4 | 10595.6 | 10518.6 | 10381.8 | 10230.8 | 10626.9 | 10974.6 | 12123.1 | 12929.6 | 11088.6 |
| 35° | 10931.8 | 11000.2 | 11037.3 | 11031.6 | 10920.4 | 10658.3 | 10840.6 | 11128.5 | 12259.9 | 13268.7 | 11205.4 |
| 37.5° | 11325.1 | 11382.1 | 11541.7 | 11644.3 | 11541.7 | 11236.8 | 11322.3 | 11521.8 | 12561.9 | 13758.8 | 11461.9 |
| 40° | 11707.0 | 11792.5 | 12026.2 | 12345.3 | 12305.4 | 12037.6 | 12057.5 | 12188.6 | 13094.8 | 14488.4 | 11963.5 |
| 42.5° | 12106.0 | 12208.6 | 12616.1 | 13089.1 | 13183.2 | 12975.2 | 13029.3 | 13146.1 | 13852.9 | 15500.1 | 12824.1 |
| 45° | 12618.9 | 12741.5 | 13243.0 | 13832.9 | 14203.4 | 14075.2 | 14229.1 | 14286.1 | 14867.4 | 16816.7 | 13958.3 |
| 47.5° | 13280.1 | 13422.6 | 14041.0 | 14776.2 | 15300.6 | 15417.4 | 15685.3 | 15651.1 | 16124.2 | 18375.5 | 15428.8 |
| 50° | 14394.4 | 14474.1 | 15058.4 | 15807.9 | 16528.9 | 17056.1 | 17346.7 | 17400.9 | 17683.0 | 19891.6 | 17073.2 |
| 52.5° | 15719.5 | 15790.8 | 16212.5 | 16868.0 | 17771.4 | 18888.5 | 19606.6 | 19430.0 | 19498.3 | 21738.3 | 18996.8 |
| 55° | 17210.0 | 17329.6 | 17597.5 | 18033.6 | 19204.8 | 20849.2 | 22291.2 | 22333.9 | 21575.9 | 23505.2 | 20840.6 |
| 57.5° | 18364.1 | 18566.5 | 19025.3 | 19646.5 | 21131.3 | 23029.3 | 24967.1 | 24995.6 | 24026.7 | 25391.7 | 22875.4 |
| 60° | 17782.8 | 18022.2 | 19070.9 | 20584.1 | 23659.1 | 26833.7 | 28164.6 | 28002.2 | 26412.0 | 27540.5 | 25357.5 |
| 62.5° | 15274.9 | 15317.7 | 16842.3 | 19207.7 | 24437.1 | 31923.5 | 32923.8 | 32237.0 | 29595.2 | 30264.9 | 27879.6 |
| 65° | 9886.0 | 10165.2 | 11373.6 | 14687.9 | 21880.8 | 34747.6 | 41262.3 | 39675.0 | 34058.0 | 33356.9 | 29991.3 |
| 67.5° | 6241.1 | 6169.8 | 6671.4 | 8387.0 | 15049.8 | 32259.8 | 48378.2 | 48127.5 | 39894.4 | 35309.1 | 29486.9 |
| 69° | 5175.2 | 5255.0 | 5426.0 | 6429.2 | 10356.2 | 27543.3 | 49218.9 | 50951.6 | 42724.2 | 35155.2 | 27654.5 |
| 70° | 4693.6 | 4730.7 | 4910.2 | 5699.6 | 7990.8 | 23069.2 | 47839.6 | 50874.7 | 43835.7 | 34511.1 | 26326.5 |
| 72.5° | 3724.7 | 3721.8 | 4029.6 | 4742.1 | 5973.2 | 13168.9 | 39281.7 | 44169.1 | 42593.2 | 31513.1 | 21752.5 |
| 75° | 2829.9 | 2875.5 | 3214.6 | 4012.5 | 5503.0 | 7195.8 | 27412.3 | 34015.2 | 34018.1 | 24890.2 | 13573.6 |
| 77.5° | 2040.5 | 2069.0 | 2465.1 | 3368.5 | 5183.8 | 5833.5 | 18258.7 | 24397.2 | 22935.2 | 11404.9 | 4266.2 |
| 80° | 1336.6 | 1353.7 | 1655.7 | 2667.4 | 4673.7 | 5503.0 | 10826.4 | 14933.0 | 10817.9 | 3026.5 | 1410.7 |
| 82.5° | 732.4 | 817.9 | 1011.7 | 1727.0 | 3750.3 | 5084.0 | 6580.2 | 7557.7 | 4058.1 | 1348.0 | 735.2 |
| 85° | 367.6 | 390.4 | 570.0 | 1008.8 | 2450.8 | 4206.3 | 4582.5 | 4334.5 | 2094.6 | 669.7 | 381.9 |
| 87.5° | 108.3 | 136.8 | 236.5 | 390.4 | 994.6 | 2191.5 | 2550.6 | 2288.4 | 806.5 | 242.2 | 79.8 |
| 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° | 14120.8 | 14120.8 | 14120.8 | 14120.8 | 14120.8 | 14120.8 | 14120.8 | 14120.8 | 14120.8 | 14120.8 | 14120.8 |
| 2.5° | 14003.9 | 13952.6 | 13724.6 | 13519.5 | 13331.4 | 13131.9 | 12963.8 | 12815.6 | 12829.8 | 12832.7 | 12681.6 |
| 5° | 13684.8 | 13567.9 | 13134.7 | 12730.1 | 12388.1 | 11954.9 | 11584.4 | 11345.1 | 11225.4 | 11065.8 | 11122.8 |
| 7.5° | 13251.6 | 13026.4 | 12425.1 | 11752.6 | 11122.8 | 10561.4 | 9951.5 | 9532.6 | 9264.7 | 9005.4 | 9039.6 |
| 10° | 12804.2 | 12442.2 | 11567.3 | 10678.2 | 9863.2 | 8965.5 | 8187.5 | 7520.6 | 7024.8 | 6839.5 | 6717.0 |
| 12.5° | 12345.3 | 11869.4 | 10758.0 | 9575.3 | 8449.7 | 7375.3 | 6272.4 | 5557.1 | 5010.0 | 4719.3 | 4756.3 |
| 15° | 11926.4 | 11347.9 | 9914.5 | 8472.5 | 7010.5 | 5731.0 | 4630.9 | 3949.8 | 3568.0 | 3488.2 | 3533.8 |
| 17.5° | 11538.9 | 10780.8 | 9125.1 | 7400.9 | 5693.9 | 4297.5 | 3479.6 | 3094.9 | 2941.0 | 2898.2 | 2895.4 |
| 20° | 11139.9 | 10299.2 | 8238.8 | 6255.3 | 4437.1 | 3331.4 | 2855.5 | 2676.0 | 2647.5 | 2664.6 | 2667.4 |
| 22.5° | 10735.2 | 9703.6 | 7326.8 | 5118.2 | 3533.8 | 2724.4 | 2496.4 | 2448.0 | 2470.8 | 2510.7 | 2516.4 |
| 25° | 10361.9 | 9179.2 | 6449.1 | 4120.8 | 2821.3 | 2393.8 | 2282.7 | 2282.7 | 2334.0 | 2393.8 | 2396.7 |
| 27.5° | 10054.1 | 8671.9 | 5574.2 | 3271.6 | 2362.5 | 2154.5 | 2117.4 | 2137.4 | 2208.6 | 2254.2 | 2257.0 |
| 30° | 9800.5 | 8198.9 | 4747.8 | 2621.8 | 2077.5 | 1963.5 | 1955.0 | 1989.2 | 2040.5 | 2083.2 | 2086.1 |
| 32.5° | 9609.5 | 7782.8 | 3975.5 | 2202.9 | 1880.9 | 1818.2 | 1815.3 | 1841.0 | 1869.5 | 1880.9 | 1892.3 |
| 35° | 9535.4 | 7438.0 | 3268.7 | 1937.9 | 1749.8 | 1709.9 | 1709.9 | 1707.0 | 1718.4 | 1724.1 | 1729.8 |
| 37.5° | 9595.3 | 7173.0 | 2721.6 | 1766.9 | 1652.9 | 1624.4 | 1607.3 | 1590.2 | 1584.5 | 1584.5 | 1587.3 |
| 40° | 9848.9 | 7033.3 | 2314.0 | 1655.7 | 1584.5 | 1541.7 | 1510.4 | 1490.4 | 1470.5 | 1476.2 | 1481.9 |
| 42.5° | 10387.5 | 7059.0 | 2037.6 | 1581.6 | 1524.6 | 1464.8 | 1419.2 | 1396.4 | 1382.2 | 1399.3 | 1396.4 |
| 45° | 11245.3 | 7315.4 | 1860.9 | 1530.3 | 1464.8 | 1387.9 | 1345.1 | 1322.3 | 1322.3 | 1348.0 | 1356.5 |
| 47.5° | 12445.1 | 7805.6 | 1766.9 | 1490.4 | 1419.2 | 1328.0 | 1285.3 | 1268.2 | 1273.9 | 1316.6 | 1319.5 |
| 50° | 13909.9 | 8657.7 | 1749.8 | 1470.5 | 1396.4 | 1285.3 | 1236.8 | 1219.7 | 1234.0 | 1279.6 | 1285.3 |
| 52.5° | 15525.7 | 9754.9 | 1832.4 | 1473.3 | 1376.5 | 1259.6 | 1196.9 | 1171.3 | 1185.5 | 1222.6 | 1234.0 |
| 55° | 17440.8 | 11128.5 | 2046.2 | 1484.7 | 1348.0 | 1245.4 | 1168.4 | 1111.4 | 1128.5 | 1154.2 | 1157.0 |
| 57.5° | 19395.8 | 12861.2 | 2422.3 | 1487.6 | 1325.2 | 1219.7 | 1120.0 | 1045.9 | 1045.9 | 1063.0 | 1071.5 |
| 60° | 21783.9 | 14747.7 | 2918.2 | 1490.4 | 1328.0 | 1182.7 | 1054.4 | 971.8 | 960.4 | 968.9 | 971.8 |
| 62.5° | 24154.9 | 16326.5 | 3000.8 | 1481.9 | 1356.5 | 1145.6 | 983.2 | 897.7 | 877.7 | 874.9 | 869.2 |
| 65° | 25200.8 | 16033.0 | 2459.4 | 1442.0 | 1387.9 | 1122.8 | 926.2 | 826.4 | 792.2 | 780.8 | 780.8 |
| 67.5° | 23496.6 | 13562.2 | 1849.5 | 1387.9 | 1367.9 | 1100.0 | 872.0 | 766.6 | 726.7 | 703.9 | 703.9 |
| 69° | 21895.0 | 12063.2 | 1661.4 | 1350.8 | 1316.6 | 1063.0 | 837.8 | 735.2 | 686.8 | 661.2 | 652.6 |
| 70° | 20658.2 | 11031.6 | 1581.6 | 1319.5 | 1268.2 | 1020.2 | 812.2 | 712.5 | 658.3 | 629.8 | 624.1 |
| 72.5° | 16486.1 | 8654.9 | 1385.0 | 1199.8 | 1080.1 | 857.8 | 721.0 | 641.2 | 589.9 | 558.6 | 550.0 |
| 75° | 9501.2 | 4690.8 | 1148.5 | 1043.0 | 869.2 | 666.9 | 609.9 | 558.6 | 518.7 | 490.2 | 481.6 |
| 77.5° | 2923.9 | 1812.5 | 832.1 | 823.6 | 638.4 | 515.8 | 487.3 | 467.4 | 438.9 | 407.5 | 401.8 |
| 80° | 1231.1 | 923.3 | 564.3 | 555.7 | 424.6 | 359.1 | 350.5 | 347.7 | 336.3 | 310.6 | 302.1 |
| 82.5° | 675.4 | 521.5 | 393.3 | 342.0 | 256.5 | 208.0 | 216.6 | 219.4 | 210.9 | 185.2 | 168.1 |
| 85° | 330.6 | 285.0 | 190.9 | 153.9 | 116.8 | 74.1 | 71.2 | 85.5 | 79.8 | 57.0 | 62.7 |
| 87.5° | 65.5 | 79.8 | 51.3 | 22.8 | 11.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 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)