

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: P651387

Luminaire Tested: **GALN-SA5D-840-U-AFL-GRSBK**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P651387
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-057-27)
Test Lab: INNOVATION CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GALN-SA5D-840-U-AFL-GRSBK
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(5) 80 CRI, 4000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE
FRONTLINE OPTICS WITH BLACK GLARE REDUCTION SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24304.9 lumens
Efficiency: N/A
Efficacy: 78.7 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G1

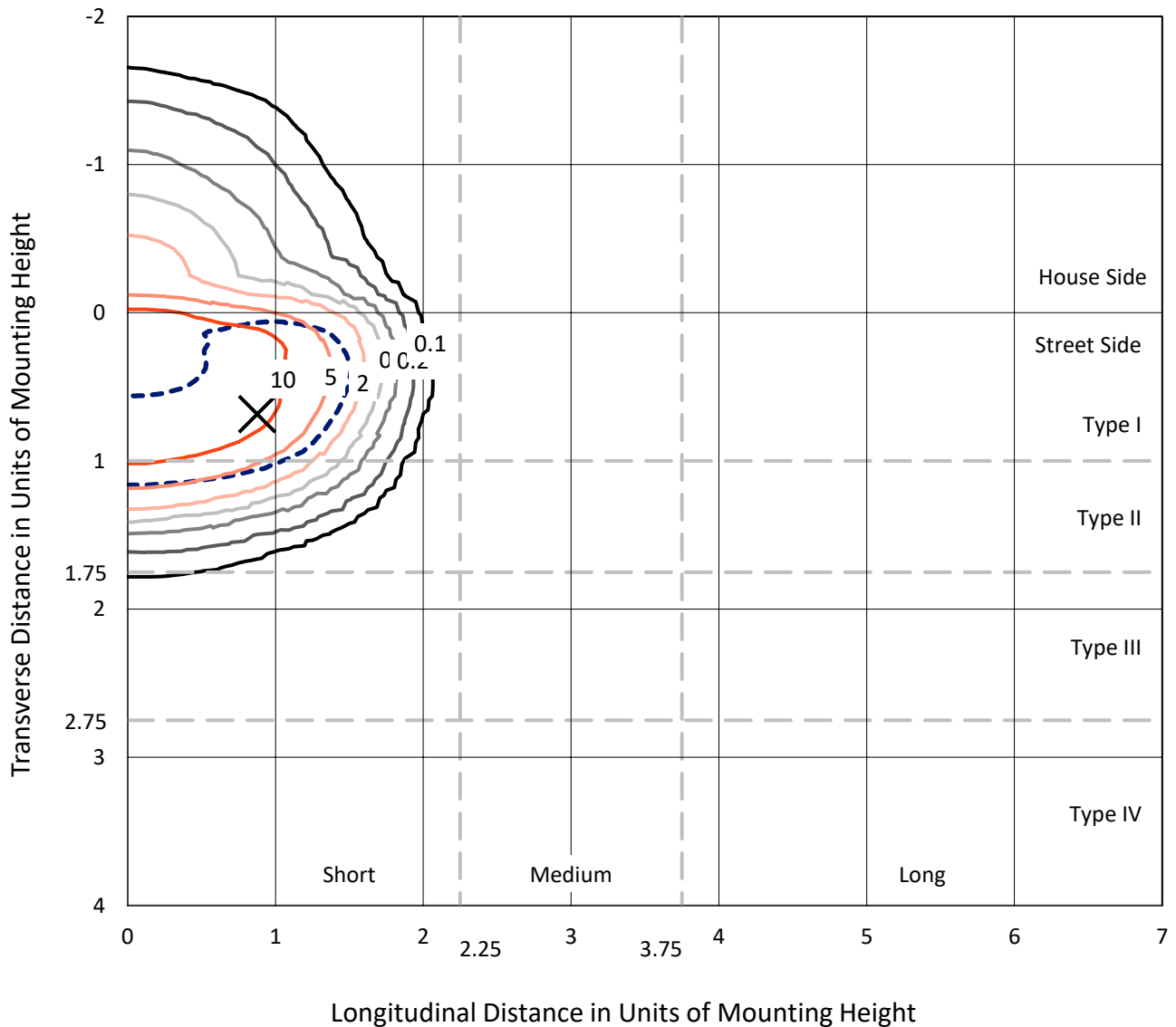
Input Watts (W): 309
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

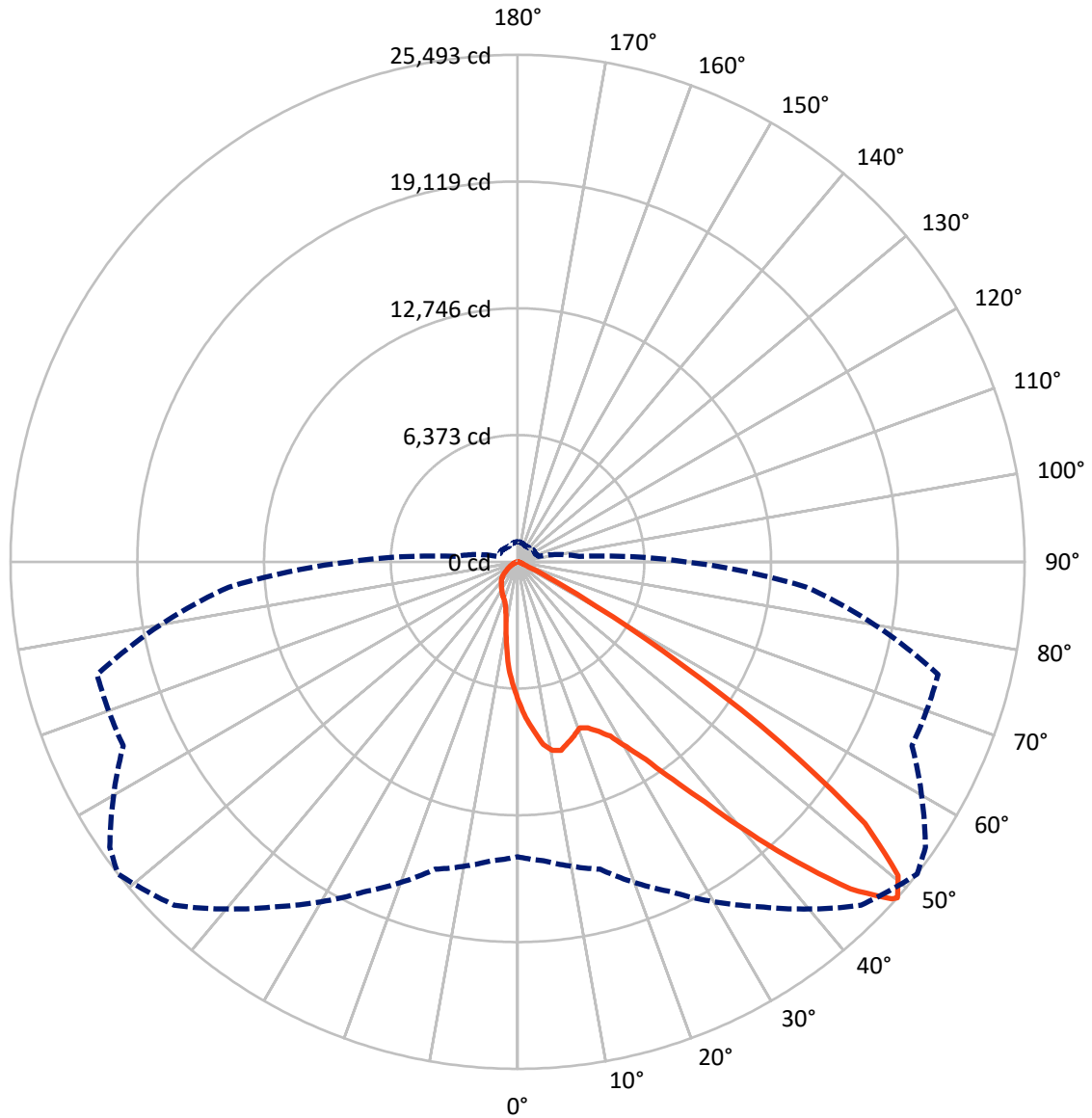
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 15.7 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 52-Deg Lateral - - - Horizontal Cone Through 48-Deg Vertical

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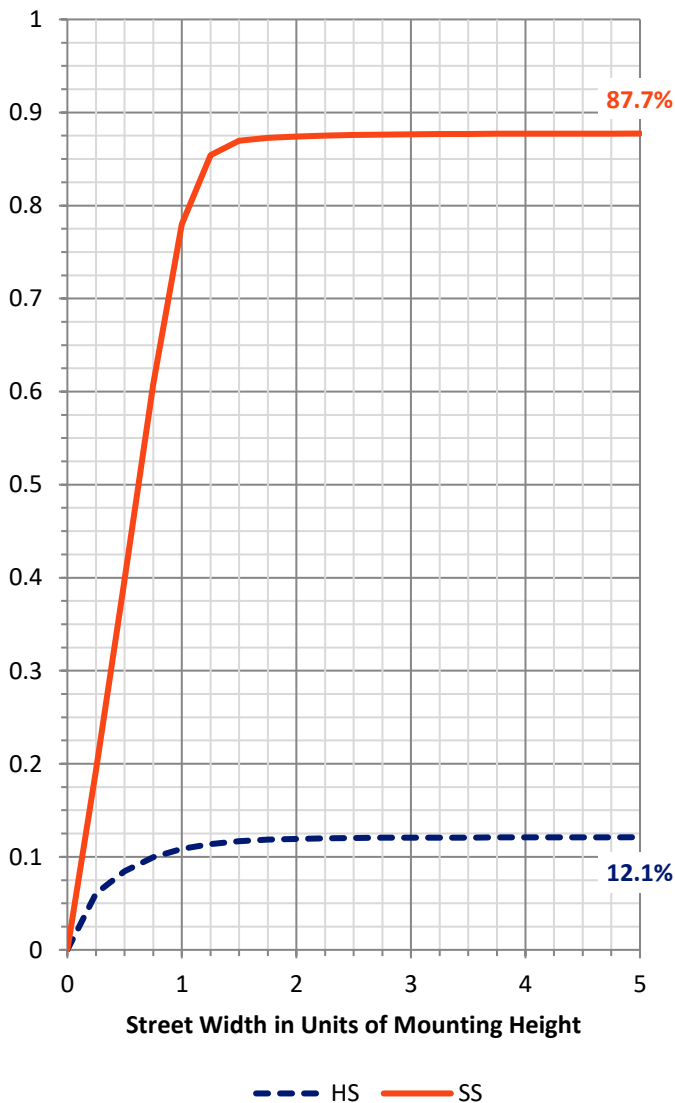
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2959.3 | 0.0 | 2959.3 |
| | % Fixture | 12.2 | 0.0 | 12.2 |
| Street Side | Lumens | 21345.6 | 0.0 | 21345.6 |
| | % Fixture | 87.8 | 0.0 | 87.8 |
| Total | Lumens | 24304.9 | 0.0 | 24304.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 642.4 | 2.6 |
| 10°-20° | 1678.9 | 6.9 |
| 20°-30° | 2866.5 | 11.8 |
| 30°-40° | 5278.8 | 21.7 |
| 40°-50° | 8197.9 | 33.7 |
| 50°-60° | 4933.7 | 20.3 |
| 60°-70° | 570.6 | 2.3 |
| 70°-80° | 110.5 | 0.5 |
| 80°-90° | 25.5 | 0.1 |
| 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° | 24304.9 | 100.0 |
| 0°-180° | 24304.9 | 100.0 |

Coefficient of Utilization



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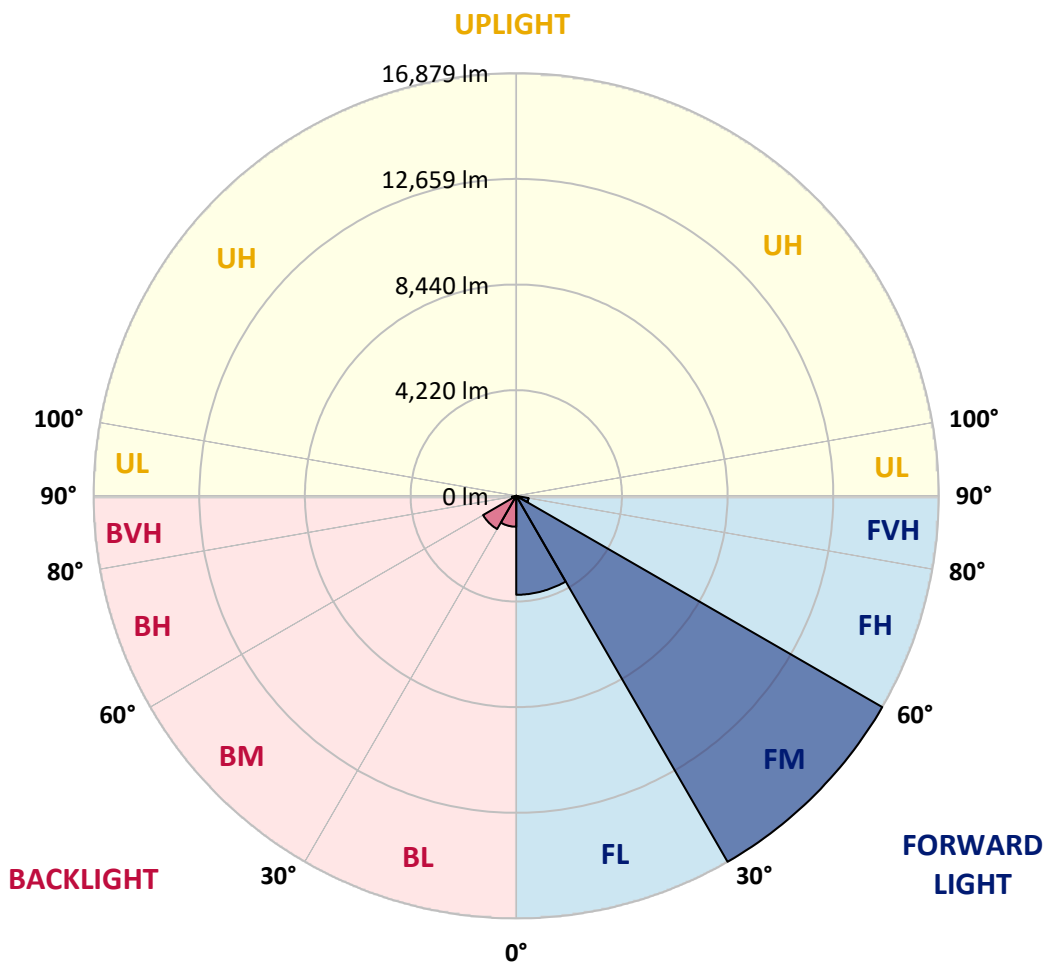
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|--------|
| | | | B | U | G |
| FL (0°-30°) | 3951.7 | 16.3 | | | |
| FM (30°-60°) | 16879.3 | 69.4 | | | |
| FH (60°-80°) | 502.5 | 2.1 | | | G0/660 |
| FVH (80°-90°) | 12.2 | 0.1 | | | G1/100 |
| BL (0°-30°) | 1236.2 | 5.1 | B3/2500 | | |
| BM (30°-60°) | 1531.1 | 6.3 | B2/2500 | | |
| BH (60°-80°) | 178.6 | 0.7 | B1/500 | | G1/500 |
| BVH (80°-90°) | 13.4 | 0.1 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 52° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 7018.8 | 7018.8 | 7018.8 | 7018.8 | 7018.8 | 7018.8 | 7018.8 | 7018.8 | 7018.8 | 7018.8 | 7018.8 |
| 2.5° | 8507.0 | 8312.1 | 8329.8 | 8202.3 | 8127.8 | 8007.4 | 7844.4 | 7812.5 | 7635.4 | 7394.4 | 7149.9 |
| 5° | 9272.3 | 9226.2 | 9286.4 | 9102.2 | 9109.3 | 8910.9 | 8528.2 | 8535.3 | 8127.8 | 7734.6 | 7355.5 |
| 7.5° | 9321.9 | 9215.6 | 9275.8 | 9438.8 | 9534.4 | 9499.0 | 9282.9 | 9095.1 | 8708.9 | 8131.4 | 7578.7 |
| 10° | 8347.5 | 8549.4 | 8613.3 | 8882.5 | 9265.1 | 9669.1 | 9644.3 | 9654.9 | 9332.5 | 8577.8 | 7770.0 |
| 12.5° | 7762.9 | 7628.3 | 7844.4 | 8007.4 | 8584.9 | 9367.9 | 9725.7 | 9803.7 | 9828.5 | 9010.1 | 7961.3 |
| 15° | 7497.2 | 7497.2 | 7532.6 | 7578.7 | 7996.7 | 8719.6 | 9449.4 | 9676.1 | 10211.2 | 9577.0 | 8262.5 |
| 17.5° | 7663.7 | 7656.6 | 7706.3 | 7610.5 | 7766.5 | 8322.7 | 9194.3 | 9452.9 | 10639.9 | 10133.2 | 8499.9 |
| 20° | 8170.3 | 8195.1 | 8163.3 | 7886.9 | 7897.5 | 8315.6 | 8910.9 | 9318.3 | 10930.4 | 10615.1 | 8815.2 |
| 22.5° | 8875.4 | 8889.6 | 8708.9 | 8407.7 | 8319.2 | 8524.6 | 9073.8 | 9385.6 | 11164.3 | 11192.6 | 8910.9 |
| 25° | 9690.3 | 9633.7 | 9598.2 | 9173.0 | 8903.8 | 9080.9 | 9442.3 | 9623.1 | 11309.5 | 11688.6 | 9183.6 |
| 27.5° | 10820.6 | 10707.2 | 10491.1 | 10111.9 | 9913.5 | 9662.0 | 9920.6 | 10218.2 | 11724.0 | 12383.1 | 9481.3 |
| 30° | 12489.4 | 12390.2 | 11968.5 | 11479.6 | 10958.7 | 10710.7 | 10792.2 | 10955.2 | 12471.7 | 13187.4 | 9874.6 |
| 32.5° | 15001.4 | 14792.3 | 14183.0 | 13251.1 | 12542.5 | 11858.7 | 11837.4 | 12011.1 | 13141.3 | 14299.9 | 10342.3 |
| 35° | 17768.6 | 17704.8 | 16808.4 | 15848.2 | 14477.1 | 13421.2 | 13438.9 | 13531.0 | 14423.9 | 15759.7 | 10955.2 |
| 37.5° | 19607.4 | 19958.2 | 19387.7 | 18356.8 | 17205.3 | 15695.8 | 15313.2 | 15345.1 | 16184.8 | 17488.7 | 12060.7 |
| 40° | 21028.2 | 20730.6 | 20797.9 | 20557.0 | 19770.4 | 18742.9 | 17896.1 | 17729.6 | 18222.1 | 19402.0 | 13159.0 |
| 42.5° | 20408.2 | 20422.3 | 20836.9 | 21407.3 | 21602.2 | 21527.7 | 20663.3 | 20347.9 | 19965.3 | 20968.0 | 14204.2 |
| 45° | 18657.9 | 19022.8 | 19561.4 | 21070.8 | 22395.8 | 23639.5 | 23469.4 | 22945.0 | 21169.9 | 22208.0 | 14806.6 |
| 47.5° | 15866.0 | 15851.8 | 16734.0 | 18696.9 | 21641.2 | 24553.6 | 25326.0 | 24957.5 | 22023.9 | 22069.9 | 14682.5 |
| 48° | 14834.9 | 15090.0 | 16000.6 | 18310.7 | 21162.8 | 24418.9 | 25492.5 | 25028.3 | 21878.5 | 21885.6 | 14576.2 |
| 50° | 10965.9 | 10919.8 | 12053.5 | 14888.1 | 18902.4 | 22945.0 | 24791.0 | 25152.4 | 21875.0 | 20953.8 | 13832.2 |
| 52.5° | 5793.0 | 5991.4 | 6816.9 | 9360.8 | 13364.5 | 18778.4 | 21867.9 | 22431.2 | 21102.6 | 19430.3 | 12762.2 |
| 55° | 2462.4 | 2225.0 | 2859.2 | 4226.9 | 7518.5 | 12546.0 | 16043.1 | 17297.4 | 17843.0 | 17194.6 | 11164.3 |
| 57.5° | 878.7 | 960.2 | 1105.4 | 1590.8 | 3160.4 | 6866.5 | 9566.3 | 10540.7 | 12361.9 | 12616.9 | 7607.0 |
| 60° | 563.4 | 574.0 | 620.1 | 729.9 | 1186.9 | 2646.7 | 4538.7 | 5314.6 | 6140.1 | 6338.6 | 3550.2 |
| 62.5° | 435.8 | 439.3 | 460.6 | 478.3 | 563.4 | 1027.5 | 1704.2 | 2019.6 | 2097.5 | 1803.4 | 931.8 |
| 65° | 364.9 | 368.4 | 375.6 | 375.6 | 400.4 | 481.9 | 595.3 | 655.5 | 637.7 | 630.7 | 527.9 |
| 67.5° | 279.9 | 286.9 | 301.2 | 301.2 | 315.4 | 294.1 | 329.5 | 350.8 | 396.8 | 481.9 | 449.9 |
| 70° | 219.7 | 223.2 | 233.9 | 240.9 | 240.9 | 212.6 | 237.4 | 258.6 | 290.6 | 357.8 | 354.3 |
| 72.5° | 170.1 | 177.1 | 184.3 | 184.3 | 173.6 | 145.2 | 170.1 | 187.8 | 209.1 | 248.0 | 240.9 |
| 75° | 131.1 | 131.1 | 134.6 | 109.8 | 85.0 | 74.4 | 102.8 | 124.0 | 155.9 | 163.0 | 134.6 |
| 77.5° | 35.4 | 38.9 | 35.4 | 31.9 | 35.4 | 53.2 | 67.3 | 78.0 | 99.2 | 99.2 | 88.6 |
| 80° | 0.0 | 3.5 | 10.6 | 21.3 | 35.4 | 49.6 | 60.2 | 67.3 | 78.0 | 85.0 | 81.5 |
| 82.5° | 0.0 | 3.5 | 10.6 | 21.3 | 31.9 | 38.9 | 53.2 | 56.7 | 63.7 | 74.4 | 74.4 |
| 85° | 0.0 | 3.5 | 7.1 | 14.2 | 21.3 | 24.8 | 24.8 | 21.3 | 21.3 | 17.7 | 14.2 |
| 87.5° | 0.0 | 0.0 | 3.5 | 7.1 | 7.1 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 |
| 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° | 7018.8 | 7018.8 | 7018.8 | 7018.8 | 7018.8 | 7018.8 | 7018.8 | 7018.8 | 7018.8 | 7018.8 | 7018.8 |
| 2.5° | 7054.3 | 6944.5 | 6778.0 | 6515.7 | 6264.2 | 6101.2 | 5945.3 | 5771.7 | 5676.0 | 5668.9 | 5615.8 |
| 5° | 7139.3 | 6891.3 | 6494.5 | 6044.5 | 5562.6 | 5148.1 | 4730.0 | 4457.2 | 4212.7 | 4078.1 | 4053.3 |
| 7.5° | 7185.3 | 6863.0 | 6221.6 | 5467.0 | 4645.0 | 3968.3 | 3500.6 | 3156.9 | 3022.2 | 2923.1 | 2919.5 |
| 10° | 7281.0 | 6813.4 | 5814.2 | 4701.7 | 3684.8 | 3001.0 | 2678.6 | 2522.7 | 2448.2 | 2419.9 | 2377.4 |
| 12.5° | 7351.9 | 6721.3 | 5396.1 | 3915.1 | 2912.4 | 2487.3 | 2345.5 | 2310.1 | 2313.7 | 2327.8 | 2310.1 |
| 15° | 7451.1 | 6639.8 | 4832.8 | 3213.5 | 2444.7 | 2239.2 | 2239.2 | 2246.3 | 2295.9 | 2303.0 | 2299.5 |
| 17.5° | 7444.0 | 6480.3 | 4251.7 | 2646.7 | 2161.3 | 2132.9 | 2143.5 | 2210.9 | 2242.8 | 2253.4 | 2228.6 |
| 20° | 7529.1 | 6331.5 | 3652.9 | 2260.5 | 2001.8 | 2044.4 | 2115.2 | 2132.9 | 2171.9 | 2179.0 | 2150.7 |
| 22.5° | 7504.2 | 5959.5 | 3096.6 | 1955.7 | 1881.4 | 1962.9 | 2033.7 | 2055.0 | 2044.4 | 2023.1 | 2019.6 |
| 25° | 7458.2 | 5640.6 | 2586.4 | 1753.8 | 1792.8 | 1881.4 | 1948.7 | 1909.7 | 1888.5 | 1892.0 | 1895.5 |
| 27.5° | 7376.7 | 5236.7 | 2164.8 | 1612.1 | 1672.3 | 1803.4 | 1799.9 | 1785.7 | 1807.0 | 1789.2 | 1807.0 |
| 30° | 7362.5 | 4832.8 | 1817.6 | 1484.5 | 1583.8 | 1679.4 | 1686.5 | 1711.4 | 1736.1 | 1704.2 | 1736.1 |
| 32.5° | 7383.8 | 4389.9 | 1569.6 | 1406.6 | 1530.6 | 1534.2 | 1612.1 | 1636.9 | 1619.2 | 1548.4 | 1555.4 |
| 35° | 7546.8 | 4049.8 | 1388.9 | 1364.1 | 1445.6 | 1449.1 | 1523.6 | 1491.6 | 1413.7 | 1371.2 | 1396.0 |
| 37.5° | 7890.4 | 3766.3 | 1303.9 | 1325.1 | 1332.2 | 1378.2 | 1381.8 | 1318.0 | 1325.1 | 1321.5 | 1335.8 |
| 40° | 8329.8 | 3550.2 | 1243.6 | 1289.7 | 1282.6 | 1314.5 | 1186.9 | 1222.4 | 1254.3 | 1264.9 | 1271.9 |
| 42.5° | 8630.9 | 3394.3 | 1204.6 | 1233.0 | 1218.9 | 1162.1 | 1091.3 | 1126.7 | 1151.5 | 1190.4 | 1197.6 |
| 45° | 8765.6 | 3270.2 | 1158.6 | 1133.8 | 1133.8 | 1031.1 | 1002.7 | 1009.8 | 1066.5 | 1109.0 | 1101.9 |
| 47.5° | 8545.9 | 3149.8 | 1077.1 | 1002.7 | 1027.5 | 942.4 | 910.6 | 910.6 | 970.8 | 1023.9 | 1013.3 |
| 48° | 8460.9 | 3100.2 | 1080.6 | 974.4 | 992.0 | 928.3 | 896.4 | 889.3 | 956.6 | 1006.3 | 1006.3 |
| 50° | 8039.3 | 2916.0 | 988.5 | 896.4 | 860.9 | 853.9 | 832.6 | 839.7 | 882.2 | 928.3 | 928.3 |
| 52.5° | 7217.3 | 2519.1 | 836.2 | 768.8 | 705.1 | 747.6 | 758.2 | 744.0 | 765.3 | 807.9 | 804.2 |
| 55° | 6023.2 | 1934.6 | 669.6 | 637.7 | 588.1 | 634.2 | 655.5 | 637.7 | 616.5 | 648.4 | 648.4 |
| 57.5° | 3858.4 | 1041.7 | 535.0 | 542.1 | 492.5 | 538.6 | 556.2 | 513.8 | 474.7 | 499.6 | 496.0 |
| 60° | 1739.7 | 623.6 | 439.3 | 428.7 | 396.8 | 449.9 | 478.3 | 428.7 | 375.6 | 393.3 | 411.0 |
| 62.5° | 651.9 | 442.9 | 333.0 | 326.0 | 318.9 | 368.4 | 382.7 | 343.7 | 290.6 | 301.2 | 304.7 |
| 65° | 478.3 | 389.7 | 265.8 | 240.9 | 255.1 | 290.6 | 283.4 | 244.5 | 209.1 | 209.1 | 216.1 |
| 67.5° | 407.5 | 340.1 | 216.1 | 187.8 | 187.8 | 191.3 | 177.1 | 155.9 | 145.2 | 152.4 | 159.5 |
| 70° | 318.9 | 269.3 | 170.1 | 145.2 | 131.1 | 116.9 | 102.8 | 99.2 | 88.6 | 99.2 | 95.6 |
| 72.5° | 205.5 | 180.7 | 131.1 | 109.8 | 99.2 | 81.5 | 67.3 | 63.7 | 53.2 | 49.6 | 49.6 |
| 75° | 109.8 | 109.8 | 102.8 | 88.6 | 78.0 | 63.7 | 53.2 | 42.6 | 28.3 | 21.3 | 21.3 |
| 77.5° | 78.0 | 85.0 | 92.1 | 85.0 | 70.9 | 53.2 | 42.6 | 28.3 | 14.2 | 7.1 | 7.1 |
| 80° | 74.4 | 85.0 | 92.1 | 81.5 | 70.9 | 53.2 | 38.9 | 21.3 | 10.6 | 3.5 | 3.5 |
| 82.5° | 67.3 | 78.0 | 85.0 | 74.4 | 63.7 | 46.1 | 35.4 | 21.3 | 10.6 | 3.5 | 3.5 |
| 85° | 14.2 | 17.7 | 21.3 | 21.3 | 24.8 | 31.9 | 24.8 | 17.7 | 7.1 | 3.5 | 3.5 |
| 87.5° | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 | 7.1 | 7.1 | 3.5 | 3.5 | 3.5 |
| 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)