

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: P652139

Luminaire Tested: **GALN-SA9A-840-U-T3R-GRSBK**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P652139
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-057-11)
Test Lab: INNOVATION CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GALN-SA9A-840-U-T3R-GRSBK
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(9) 80 CRI, 4000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS WITH BLACK GLARE REDUCTION SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21204.1 lumens
Efficiency: N/A
Efficacy: 77.4 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1.5' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G1

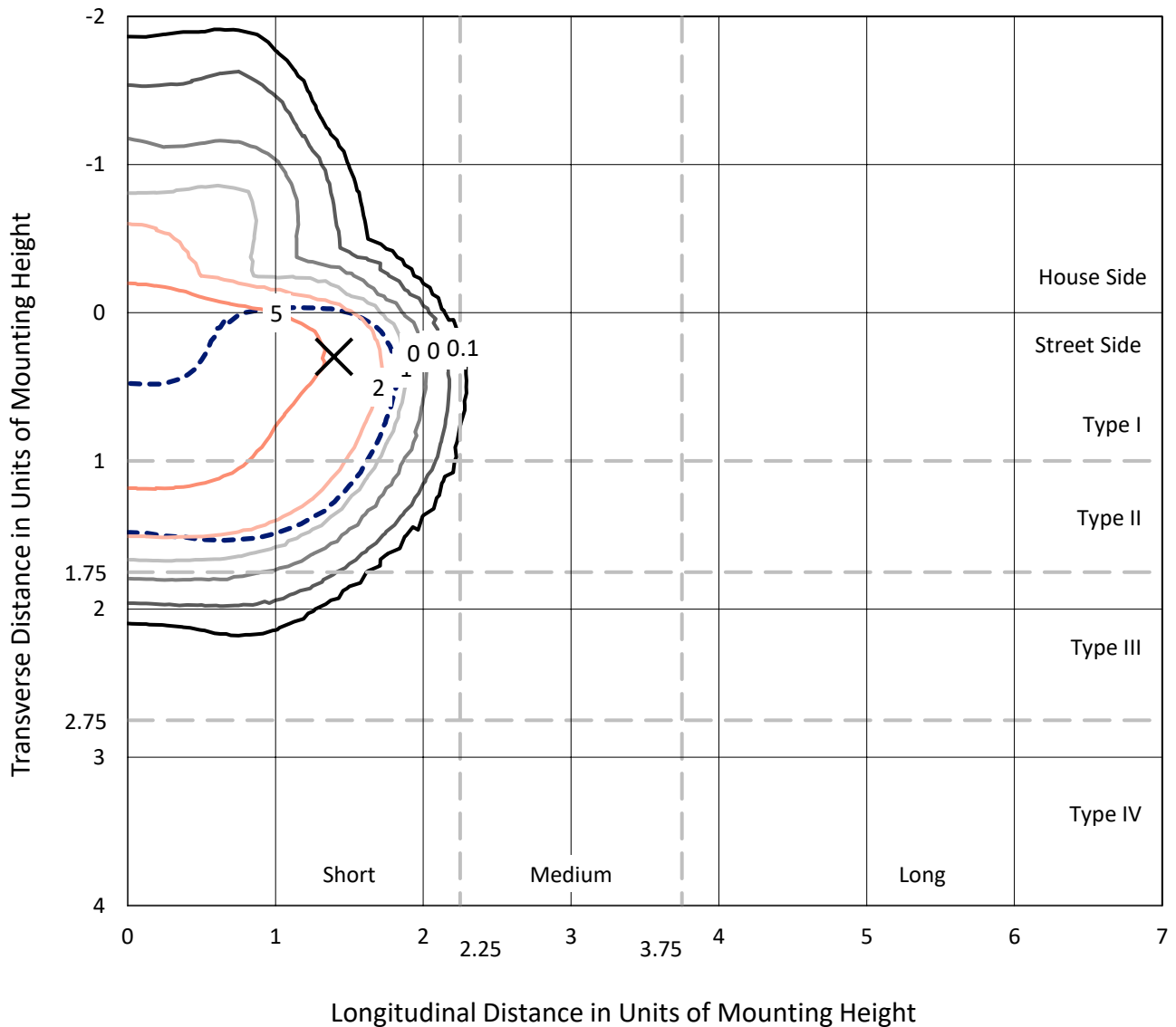
Input Watts (W): 274
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

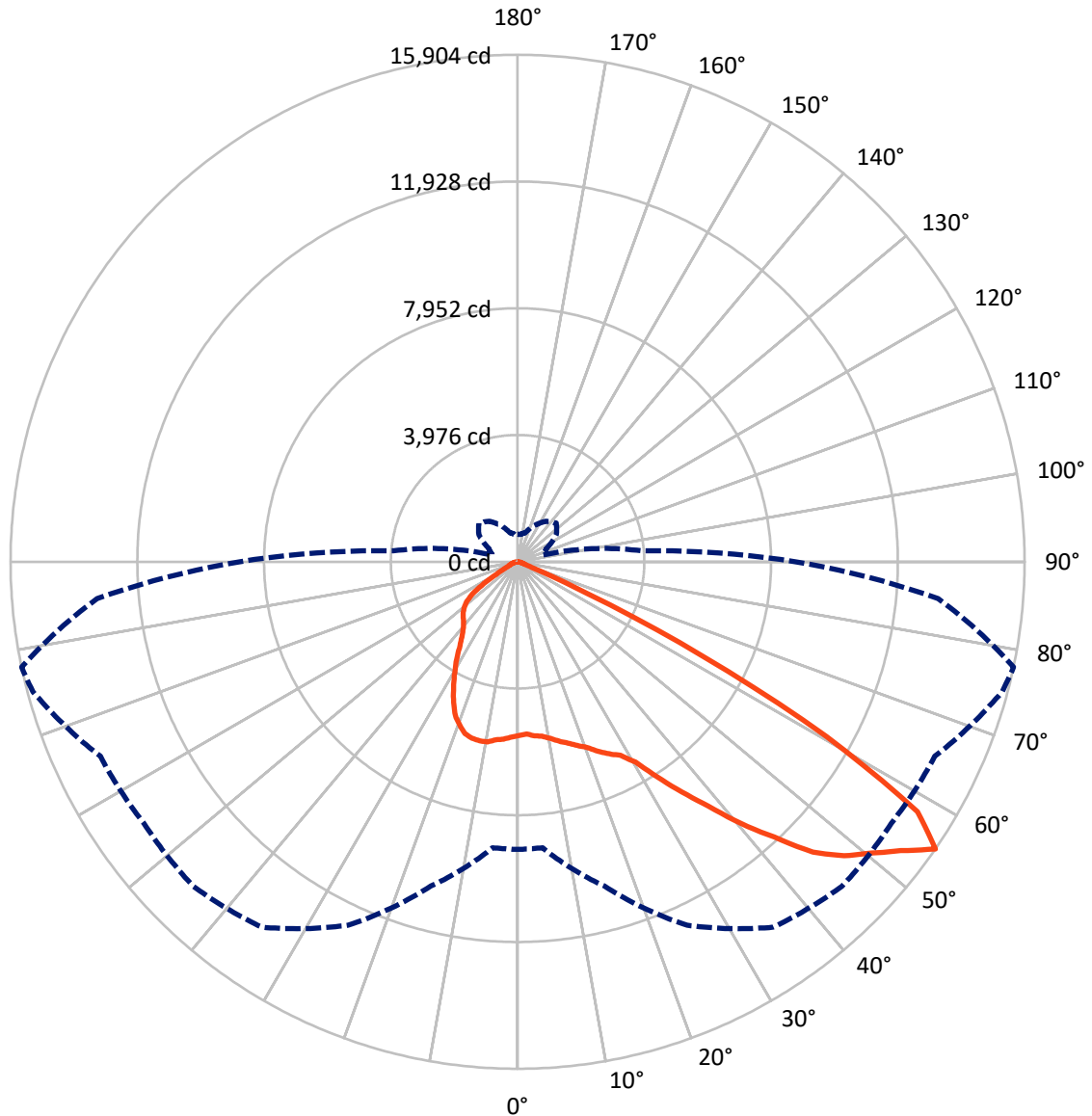
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.4 fc
 Type II - Short - N/A

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CATALOG NUMBER: GALN-SA9A-840-U-T3R-GRSBK

Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 55-Deg Vertical

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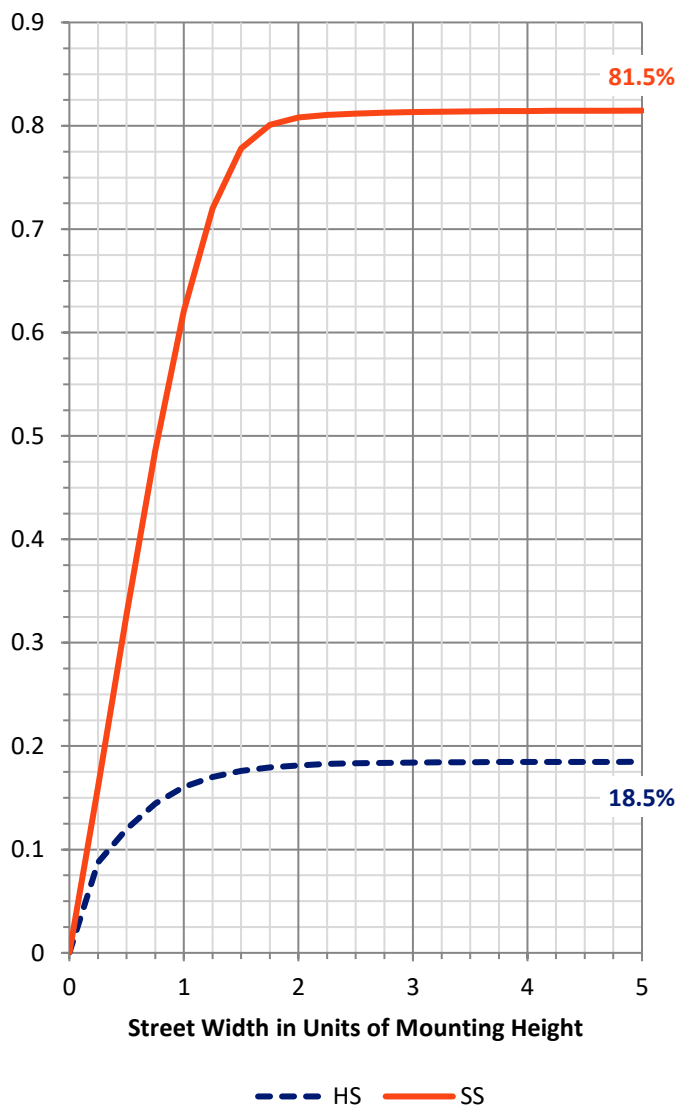
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3938.4 | 0.0 | 3938.4 |
| | % Fixture | 18.6 | 0.0 | 18.6 |
| Street Side | Lumens | 17265.7 | 0.0 | 17265.7 |
| | % Fixture | 81.4 | 0.0 | 81.4 |
| Total | Lumens | 21204.1 | 0.0 | 21204.1 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 486.1 | 2.3 |
| 10°-20° | 1286.5 | 6.1 |
| 20°-30° | 2255.0 | 10.6 |
| 30°-40° | 3718.2 | 17.5 |
| 40°-50° | 5410.5 | 25.5 |
| 50°-60° | 6130.6 | 28.9 |
| 60°-70° | 1752.8 | 8.3 |
| 70°-80° | 136.1 | 0.6 |
| 80°-90° | 28.3 | 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° | 21204.1 | 100.0 |
| 0°-180° | 21204.1 | 100.0 |

Coefficient of Utilization



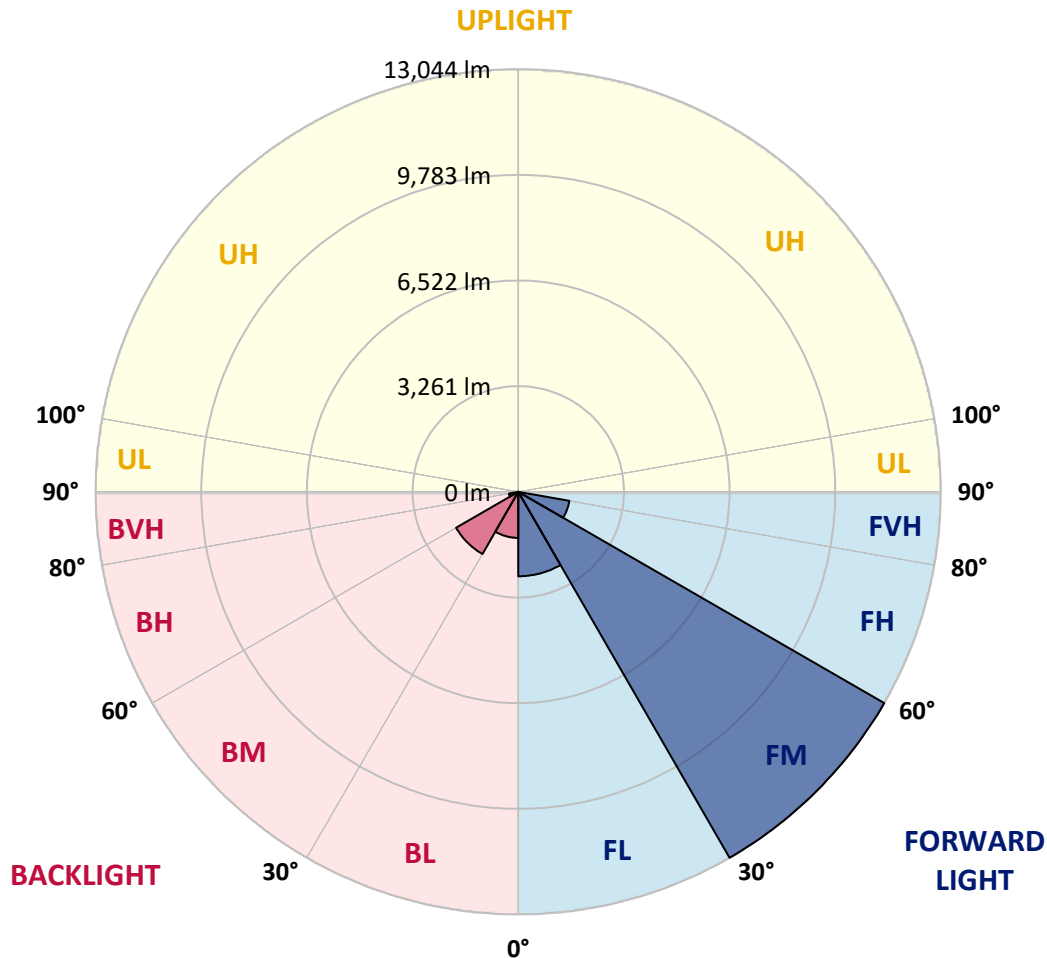
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 2606.6 | 12.3 | | | |
| FM (30°-60°) | 13043.8 | 61.5 | | | |
| FH (60°-80°) | 1601.5 | 7.6 | | | G1/1800 |
| FVH (80°-90°) | 13.8 | 0.1 | | | G1/100 |
| BL (0°-30°) | 1421.0 | 6.7 | B3/2500 | | |
| BM (30°-60°) | 2215.4 | 10.4 | B2/2500 | | |
| BH (60°-80°) | 287.5 | 1.4 | B1/500 | | G1/500 |
| BVH (80°-90°) | 14.5 | 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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CATALOG NUMBER: GALN-SA9A-840-U-T3R-GRSBK

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 78° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 5451.6 | 5451.6 | 5451.6 | 5451.6 | 5451.6 | 5451.6 | 5451.6 | 5451.6 | 5451.6 | 5451.6 | 5451.6 |
| 2.5° | 5125.6 | 5174.8 | 5182.4 | 5243.0 | 5239.3 | 5341.6 | 5372.0 | 5375.8 | 5444.0 | 5409.9 | 5497.1 |
| 5° | 4981.5 | 4954.9 | 4943.6 | 5049.7 | 5080.1 | 5171.1 | 5246.9 | 5292.3 | 5432.6 | 5481.9 | 5572.9 |
| 7.5° | 4852.6 | 4852.6 | 4860.2 | 4954.9 | 4943.6 | 5061.1 | 5140.7 | 5281.0 | 5485.7 | 5527.4 | 5637.4 |
| 10° | 4727.5 | 4682.0 | 4738.9 | 4837.4 | 4920.9 | 4973.9 | 5140.7 | 5273.4 | 5512.3 | 5633.6 | 5785.2 |
| 12.5° | 4663.0 | 4685.8 | 4693.4 | 4765.4 | 4856.4 | 5015.6 | 5106.6 | 5326.5 | 5701.8 | 5773.8 | 5936.9 |
| 15° | 5068.7 | 5023.2 | 4913.3 | 4848.8 | 4924.6 | 5000.4 | 5227.9 | 5451.6 | 5800.4 | 5902.7 | 6084.7 |
| 17.5° | 5538.8 | 5500.9 | 5409.9 | 5235.5 | 5064.9 | 5205.2 | 5383.3 | 5588.1 | 5906.5 | 6058.1 | 6327.3 |
| 20° | 6152.9 | 6092.3 | 6001.3 | 5660.1 | 5512.3 | 5360.6 | 5550.2 | 5792.8 | 6080.9 | 6217.4 | 6494.1 |
| 22.5° | 6884.6 | 6884.6 | 6679.9 | 6266.7 | 5959.6 | 5815.5 | 5895.2 | 6035.4 | 6274.3 | 6460.1 | 6733.0 |
| 25° | 7646.6 | 7623.9 | 7438.1 | 7009.7 | 6490.3 | 6319.8 | 6410.8 | 6509.3 | 6573.8 | 6676.1 | 6858.1 |
| 27.5° | 8518.6 | 8385.9 | 8150.9 | 7677.0 | 7218.2 | 6888.4 | 6987.0 | 6899.8 | 6820.2 | 6873.2 | 7134.9 |
| 30° | 9110.0 | 9193.4 | 8893.9 | 8439.0 | 8006.8 | 7639.1 | 7658.0 | 7582.2 | 7218.2 | 7294.1 | 7449.5 |
| 32.5° | 9724.1 | 9777.2 | 9610.4 | 9360.2 | 8928.1 | 8499.7 | 8344.2 | 8279.7 | 8006.8 | 8040.9 | 7889.3 |
| 35° | 10236.0 | 10338.3 | 10190.5 | 10080.6 | 9955.4 | 9610.4 | 9182.0 | 9390.5 | 8950.8 | 8867.3 | 8473.1 |
| 37.5° | 10706.0 | 10675.7 | 10850.1 | 10736.4 | 10709.9 | 10467.3 | 9997.1 | 10038.8 | 9743.2 | 9724.1 | 9269.2 |
| 40° | 11126.9 | 11134.4 | 11373.3 | 11426.3 | 11320.2 | 10888.0 | 10205.6 | 10535.5 | 10774.3 | 10797.0 | 10213.2 |
| 42.5° | 11475.6 | 11578.0 | 11782.7 | 12211.2 | 12051.9 | 11331.5 | 10421.8 | 10781.9 | 11669.0 | 11809.2 | 11107.9 |
| 45° | 11779.0 | 11987.4 | 12241.4 | 12624.3 | 12533.3 | 11960.9 | 10960.1 | 11289.9 | 12624.3 | 12992.1 | 11949.5 |
| 47.5° | 11797.9 | 12070.9 | 12347.6 | 12916.2 | 13030.0 | 12298.3 | 11517.3 | 12093.6 | 13382.6 | 13780.6 | 12563.7 |
| 50° | 11722.0 | 11866.1 | 12419.6 | 13037.6 | 13295.4 | 12848.0 | 12298.3 | 12768.4 | 14118.0 | 14368.2 | 12874.5 |
| 52.5° | 10823.6 | 10933.5 | 12044.3 | 13151.3 | 13773.1 | 13469.8 | 13333.3 | 13708.6 | 14868.7 | 15054.4 | 13166.4 |
| 55° | 9022.8 | 9003.8 | 10531.7 | 12578.8 | 13992.9 | 14391.0 | 14307.6 | 14440.3 | 15736.9 | 15903.6 | 13238.5 |
| 57.5° | 6171.9 | 6516.9 | 7836.2 | 10474.8 | 12647.1 | 14174.9 | 14262.1 | 14042.2 | 14724.6 | 14789.1 | 11540.1 |
| 60° | 3328.6 | 3472.7 | 4534.2 | 6990.8 | 9629.4 | 11551.5 | 11779.0 | 11380.8 | 11327.8 | 11145.9 | 8238.0 |
| 62.5° | 1323.1 | 1395.1 | 1997.9 | 3461.3 | 5246.9 | 7021.1 | 7510.1 | 7347.1 | 6998.4 | 6520.7 | 4265.0 |
| 65° | 629.3 | 674.8 | 993.3 | 1618.8 | 2327.7 | 2926.8 | 3415.8 | 3567.4 | 2631.0 | 2369.4 | 1406.5 |
| 67.5° | 428.4 | 462.6 | 724.1 | 925.0 | 830.2 | 868.2 | 1129.7 | 1050.2 | 618.0 | 527.0 | 390.5 |
| 70° | 326.1 | 348.8 | 580.0 | 629.3 | 371.6 | 261.6 | 291.9 | 273.0 | 254.0 | 257.8 | 254.0 |
| 72.5° | 231.3 | 250.2 | 424.6 | 371.6 | 163.0 | 121.4 | 155.4 | 185.8 | 185.8 | 185.8 | 182.0 |
| 75° | 140.3 | 159.2 | 246.4 | 144.1 | 64.4 | 64.4 | 98.6 | 125.1 | 132.7 | 136.5 | 128.9 |
| 77.5° | 72.0 | 91.0 | 83.4 | 41.7 | 41.7 | 49.3 | 72.0 | 87.2 | 94.8 | 94.8 | 91.0 |
| 80° | 15.1 | 15.1 | 15.1 | 22.7 | 41.7 | 53.1 | 72.0 | 79.6 | 91.0 | 91.0 | 83.4 |
| 82.5° | 0.0 | 3.8 | 11.4 | 22.7 | 37.9 | 49.3 | 68.2 | 79.6 | 91.0 | 94.8 | 87.2 |
| 85° | 0.0 | 3.8 | 7.6 | 15.1 | 26.6 | 30.4 | 26.6 | 22.7 | 22.7 | 22.7 | 22.7 |
| 87.5° | 0.0 | 0.0 | 3.8 | 3.8 | 3.8 | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 |
| 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° | 5451.6 | 5451.6 | 5451.6 | 5451.6 | 5451.6 | 5451.6 | 5451.6 | 5451.6 | 5451.6 | 5451.6 | 5451.6 |
| 2.5° | 5504.7 | 5516.0 | 5497.1 | 5493.3 | 5478.1 | 5523.6 | 5413.7 | 5387.1 | 5455.4 | 5391.0 | 5406.1 |
| 5° | 5576.7 | 5603.2 | 5569.1 | 5512.3 | 5428.8 | 5300.0 | 5190.0 | 5045.9 | 4977.7 | 4928.4 | 4920.9 |
| 7.5° | 5629.7 | 5648.7 | 5614.6 | 5432.6 | 5182.4 | 4856.4 | 4613.7 | 4435.6 | 4295.3 | 4253.6 | 4185.4 |
| 10° | 5845.9 | 5849.7 | 5679.0 | 5277.2 | 4788.1 | 4359.7 | 3988.3 | 3715.3 | 3575.0 | 3487.8 | 3449.9 |
| 12.5° | 5989.9 | 5982.4 | 5637.4 | 4970.1 | 4318.0 | 3749.4 | 3324.8 | 2995.0 | 2866.0 | 2824.3 | 2797.8 |
| 15° | 6171.9 | 6130.2 | 5538.8 | 4655.4 | 3711.5 | 3097.3 | 2714.4 | 2486.9 | 2475.6 | 2449.1 | 2475.6 |
| 17.5° | 6316.0 | 6198.4 | 5394.8 | 4083.0 | 3131.5 | 2551.4 | 2301.2 | 2316.4 | 2346.7 | 2373.2 | 2377.0 |
| 20° | 6551.1 | 6308.3 | 5064.9 | 3582.6 | 2593.1 | 2187.4 | 2183.7 | 2251.9 | 2327.7 | 2358.1 | 2388.4 |
| 22.5° | 6729.2 | 6353.8 | 4712.3 | 3048.0 | 2153.4 | 2039.6 | 2104.1 | 2206.4 | 2263.3 | 2293.6 | 2339.1 |
| 25° | 6793.7 | 6228.8 | 4242.3 | 2513.5 | 1941.0 | 1971.4 | 2070.0 | 2138.2 | 2210.2 | 2244.3 | 2225.4 |
| 27.5° | 6858.1 | 6164.4 | 3681.1 | 2070.0 | 1827.3 | 1925.9 | 2009.3 | 2077.5 | 2100.2 | 2145.7 | 2176.1 |
| 30° | 7013.5 | 5940.7 | 3177.0 | 1789.4 | 1770.5 | 1895.5 | 1956.2 | 1979.0 | 2039.6 | 2066.2 | 2066.2 |
| 32.5° | 7138.7 | 5853.4 | 2642.4 | 1656.7 | 1762.8 | 1910.8 | 1918.3 | 1918.3 | 1925.9 | 1906.9 | 1899.3 |
| 35° | 7396.4 | 5554.0 | 2164.7 | 1577.1 | 1759.0 | 1914.5 | 1933.5 | 1869.0 | 1694.6 | 1626.4 | 1607.4 |
| 37.5° | 7714.9 | 5360.6 | 1812.1 | 1558.1 | 1785.6 | 1960.0 | 1990.3 | 1747.7 | 1520.2 | 1410.3 | 1391.4 |
| 40° | 8101.6 | 5224.1 | 1580.9 | 1550.6 | 1846.2 | 2066.2 | 1975.2 | 1652.9 | 1357.2 | 1198.0 | 1190.4 |
| 42.5° | 8552.7 | 5099.0 | 1425.4 | 1546.8 | 1922.1 | 2176.1 | 1960.0 | 1573.3 | 1190.4 | 1084.2 | 1099.4 |
| 45° | 8912.8 | 5030.8 | 1319.3 | 1520.2 | 1948.6 | 2240.5 | 1971.4 | 1433.1 | 1122.1 | 1053.9 | 1061.5 |
| 47.5° | 9193.4 | 4886.7 | 1232.1 | 1474.8 | 1944.8 | 2263.3 | 1869.0 | 1376.1 | 1088.1 | 1107.0 | 1125.9 |
| 50° | 9201.0 | 4693.4 | 1122.1 | 1376.1 | 1888.0 | 2221.6 | 1751.5 | 1323.1 | 1080.4 | 1160.1 | 1198.0 |
| 52.5° | 9098.6 | 4420.4 | 1004.7 | 1235.9 | 1755.3 | 2077.5 | 1645.3 | 1300.4 | 1046.4 | 1038.7 | 1084.2 |
| 55° | 8734.7 | 3908.6 | 807.5 | 1000.9 | 1482.3 | 1713.5 | 1550.6 | 1258.6 | 944.0 | 856.8 | 864.4 |
| 57.5° | 7059.0 | 2801.6 | 595.2 | 716.5 | 1050.2 | 1254.9 | 1398.9 | 1239.7 | 849.2 | 727.9 | 731.7 |
| 60° | 4371.1 | 1588.5 | 436.0 | 489.0 | 648.2 | 762.0 | 1133.5 | 1152.5 | 758.2 | 614.2 | 606.6 |
| 62.5° | 2244.3 | 784.7 | 337.4 | 345.0 | 398.0 | 447.3 | 777.2 | 966.7 | 686.2 | 583.8 | 583.8 |
| 65° | 750.7 | 386.7 | 295.7 | 265.3 | 265.3 | 276.8 | 470.1 | 671.0 | 580.0 | 489.0 | 489.0 |
| 67.5° | 322.3 | 288.1 | 257.8 | 231.3 | 212.3 | 200.9 | 265.3 | 390.5 | 432.2 | 371.6 | 356.3 |
| 70° | 250.2 | 242.6 | 223.7 | 193.3 | 166.8 | 151.6 | 155.4 | 200.9 | 246.4 | 238.8 | 231.3 |
| 72.5° | 185.8 | 185.8 | 178.2 | 151.6 | 128.9 | 109.9 | 102.3 | 106.1 | 117.5 | 121.4 | 125.1 |
| 75° | 128.9 | 132.7 | 132.7 | 117.5 | 94.8 | 79.6 | 68.2 | 56.9 | 45.5 | 37.9 | 34.1 |
| 77.5° | 87.2 | 91.0 | 98.6 | 87.2 | 72.0 | 53.1 | 41.7 | 30.4 | 18.9 | 7.6 | 7.6 |
| 80° | 75.9 | 87.2 | 94.8 | 87.2 | 75.9 | 56.9 | 41.7 | 22.7 | 11.4 | 0.0 | 0.0 |
| 82.5° | 79.6 | 87.2 | 98.6 | 83.4 | 72.0 | 53.1 | 41.7 | 26.6 | 11.4 | 3.8 | 0.0 |
| 85° | 18.9 | 18.9 | 22.7 | 26.6 | 34.1 | 37.9 | 30.4 | 18.9 | 11.4 | 3.8 | 0.0 |
| 87.5° | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 3.8 | 3.8 | 3.8 | 3.8 | 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)