

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: P452968

Luminaire Tested: **GALN-SA4A-722-U-T3R-HSS**

Issue Date: 1/4/2021

Test Information

Test Method: LM-79-08
Report Number: P452968
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-9)
Test Lab: INNOVATION CENTER
Issue Date: 1/4/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GALN-SA4A-722-U-T3R-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 2200K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10412 lumens
Efficiency: N/A
Efficacy: 86.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

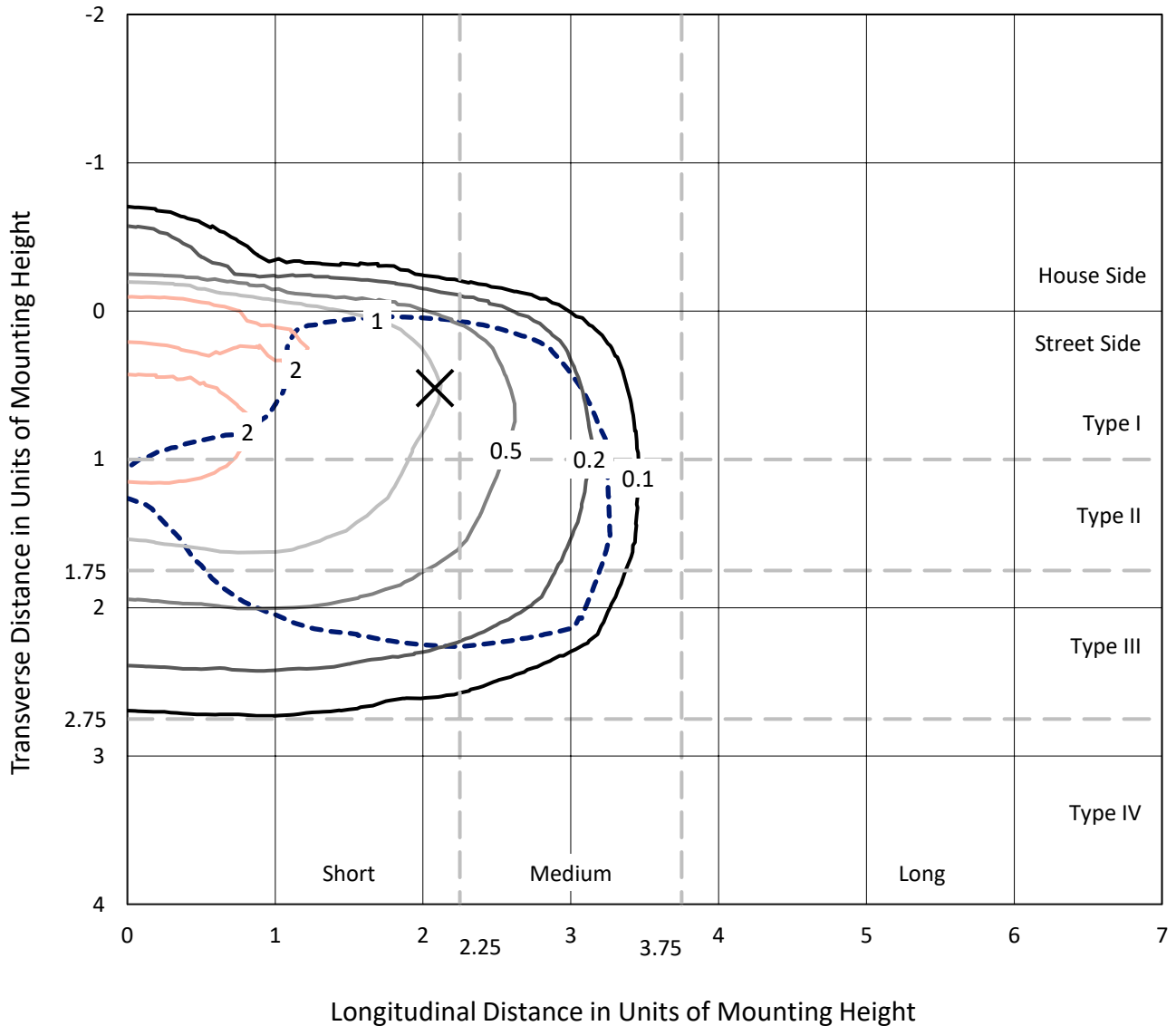
Input Watts (W): 121
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

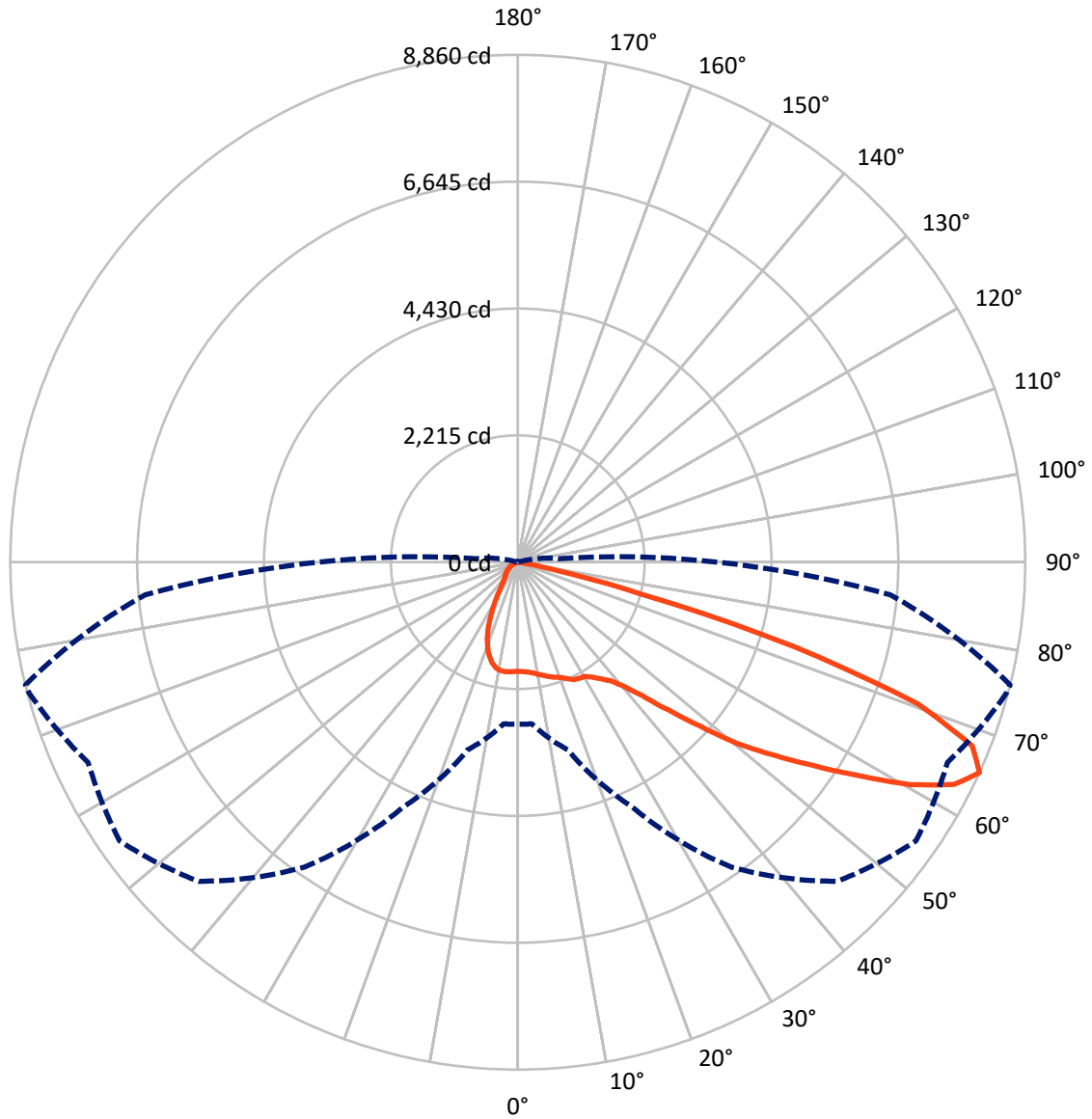
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 76-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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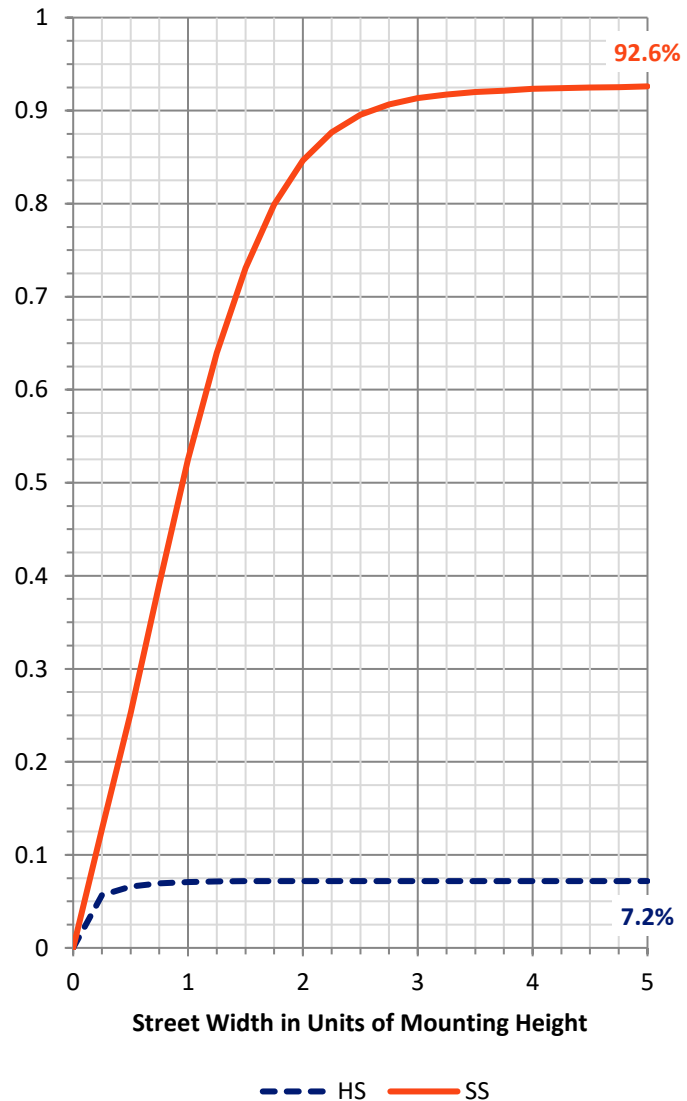
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 752.0 | 0.0 | 752.0 |
| | % Fixture | 7.2 | 0.0 | 7.2 |
| Street Side | Lumens | 9660.0 | 0.0 | 9660.0 |
| | % Fixture | 92.8 | 0.0 | 92.8 |
| Total | Lumens | 10412.0 | 0.0 | 10412.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 156.9 | 1.5 |
| 10°-20° | 349.4 | 3.4 |
| 20°-30° | 563.0 | 5.4 |
| 30°-40° | 978.8 | 9.4 |
| 40°-50° | 1617.5 | 15.5 |
| 50°-60° | 2498.6 | 24.0 |
| 60°-70° | 3051.2 | 29.3 |
| 70°-80° | 1158.0 | 11.1 |
| 80°-90° | 38.6 | 0.4 |
| 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° | 10412.0 | 100.0 |
| 0°-180° | 10412.0 | 100.0 |



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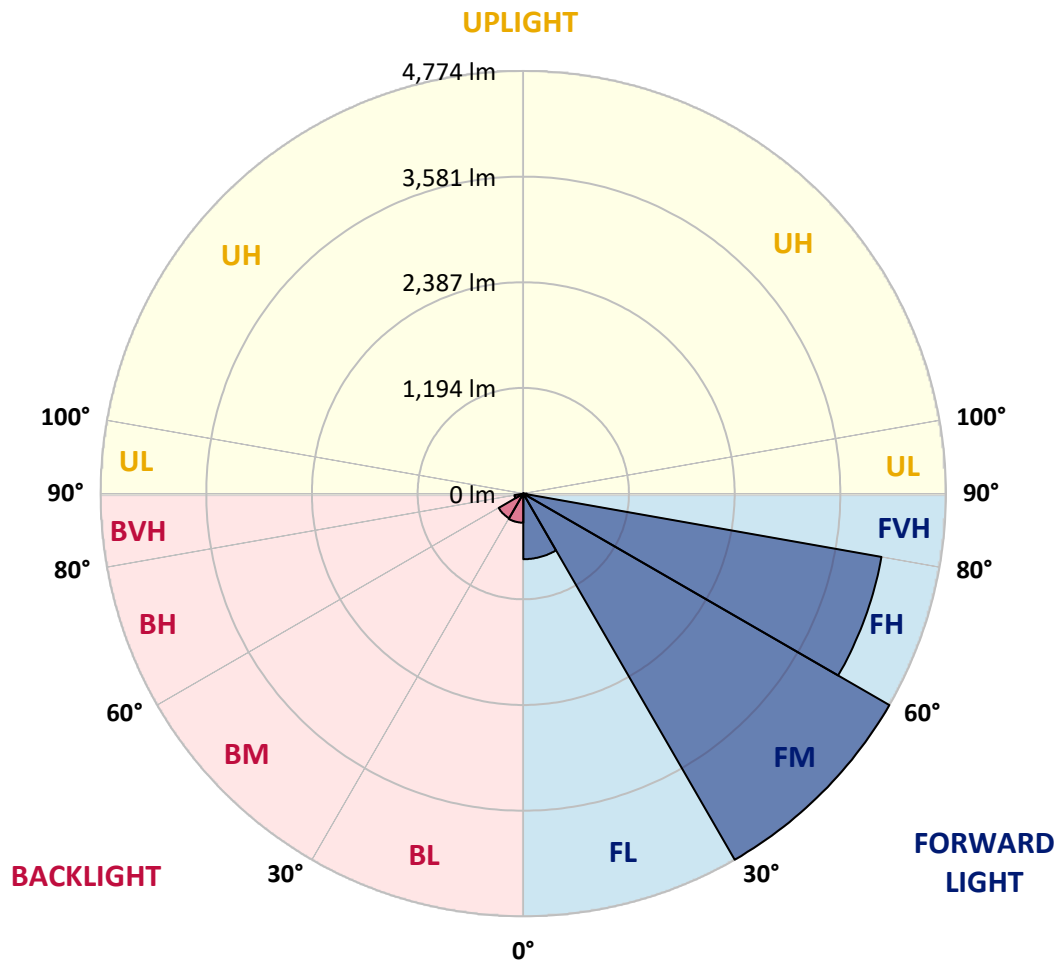
CATALOG NUMBER: GALN-SA4A-722-U-T3R-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 740.7 | 7.1 | | | |
| FM (30°-60°) | 4774.1 | 45.9 | | | |
| FH (60°-80°) | 4107.2 | 39.4 | | | G2/5000 |
| FVH (80°-90°) | 38.1 | 0.4 | | | G1/100 |
| BL (0°-30°) | 328.5 | 3.2 | B1/500 | | |
| BM (30°-60°) | 320.9 | 3.1 | B1/1000 | | |
| BH (60°-80°) | 102.0 | 1.0 | B0/110 | | G0/110 |
| BVH (80°-90°) | 0.5 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 76° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1904.7 | 1904.7 | 1904.7 | 1904.7 | 1904.7 | 1904.7 | 1904.7 | 1904.7 | 1904.7 | 1904.7 | 1904.7 |
| 2.5° | 1820.1 | 1820.9 | 1825.3 | 1836.3 | 1853.2 | 1867.2 | 1879.0 | 1898.1 | 1911.3 | 1912.8 | 1917.2 |
| 5° | 1694.4 | 1685.6 | 1694.4 | 1723.1 | 1748.8 | 1787.8 | 1835.6 | 1883.4 | 1926.0 | 1928.9 | 1949.5 |
| 7.5° | 1553.3 | 1560.7 | 1574.6 | 1604.0 | 1652.5 | 1712.1 | 1781.2 | 1866.5 | 1947.3 | 1954.7 | 1995.1 |
| 10° | 1410.0 | 1426.1 | 1448.9 | 1493.8 | 1561.4 | 1638.6 | 1732.7 | 1854.7 | 1981.1 | 1991.4 | 2061.3 |
| 12.5° | 1277.6 | 1285.0 | 1312.9 | 1373.2 | 1457.0 | 1565.8 | 1695.9 | 1848.1 | 2018.6 | 2031.1 | 2131.8 |
| 15° | 1176.2 | 1185.7 | 1210.0 | 1264.4 | 1357.8 | 1497.4 | 1665.8 | 1845.9 | 2055.4 | 2073.0 | 2202.4 |
| 17.5° | 1157.1 | 1163.0 | 1173.2 | 1210.0 | 1291.6 | 1443.0 | 1638.6 | 1845.1 | 2090.7 | 2112.0 | 2267.8 |
| 20° | 1235.7 | 1230.6 | 1220.3 | 1216.6 | 1261.5 | 1401.1 | 1618.7 | 1851.0 | 2124.5 | 2148.7 | 2336.9 |
| 22.5° | 1432.7 | 1439.4 | 1379.1 | 1307.8 | 1293.1 | 1394.5 | 1615.8 | 1879.0 | 2178.2 | 2206.8 | 2414.1 |
| 25° | 1851.0 | 1800.3 | 1706.2 | 1535.7 | 1407.0 | 1434.9 | 1648.9 | 1945.1 | 2240.6 | 2272.2 | 2484.0 |
| 27.5° | 2313.4 | 2298.0 | 2151.7 | 1870.9 | 1631.2 | 1520.2 | 1707.7 | 1995.8 | 2261.2 | 2293.6 | 2523.7 |
| 30° | 2767.7 | 2786.1 | 2618.5 | 2308.3 | 1956.9 | 1678.3 | 1762.8 | 2015.0 | 2279.6 | 2313.4 | 2574.4 |
| 32.5° | 3188.9 | 3211.0 | 3064.0 | 2756.7 | 2340.6 | 1951.7 | 1857.6 | 2089.2 | 2356.8 | 2391.3 | 2658.9 |
| 35° | 3520.5 | 3523.4 | 3412.4 | 3167.6 | 2759.6 | 2284.0 | 2062.7 | 2219.3 | 2461.2 | 2501.6 | 2748.6 |
| 37.5° | 3824.8 | 3820.4 | 3690.3 | 3479.3 | 3108.8 | 2614.1 | 2320.8 | 2369.3 | 2580.3 | 2622.2 | 2878.0 |
| 40° | 4050.5 | 4053.4 | 4011.5 | 3813.0 | 3434.5 | 2919.1 | 2525.1 | 2509.7 | 2780.2 | 2845.6 | 3066.2 |
| 42.5° | 4201.2 | 4228.4 | 4249.0 | 4148.3 | 3843.9 | 3294.8 | 2839.0 | 2810.4 | 3127.2 | 3181.6 | 3332.3 |
| 45° | 4323.2 | 4371.7 | 4474.7 | 4469.5 | 4237.2 | 3755.7 | 3269.8 | 3211.0 | 3619.0 | 3677.1 | 3671.2 |
| 47.5° | 4412.2 | 4461.4 | 4632.0 | 4734.9 | 4607.0 | 4202.7 | 3811.6 | 3760.9 | 4206.3 | 4269.6 | 4045.3 |
| 50° | 4457.7 | 4516.6 | 4734.2 | 4933.4 | 4895.9 | 4633.4 | 4429.1 | 4432.0 | 4915.7 | 4976.7 | 4479.1 |
| 52.5° | 4351.2 | 4427.6 | 4788.5 | 5147.3 | 5220.1 | 5045.8 | 5007.6 | 5104.6 | 5547.2 | 5599.4 | 4870.9 |
| 55° | 4010.8 | 4107.1 | 4714.3 | 5329.6 | 5595.7 | 5532.5 | 5664.8 | 5812.6 | 6237.5 | 6271.3 | 5273.0 |
| 57.5° | 3795.4 | 3897.6 | 4495.2 | 5484.7 | 6047.1 | 6144.1 | 6353.6 | 6461.7 | 6949.8 | 7035.8 | 5734.6 |
| 60° | 3613.8 | 3694.0 | 4315.1 | 5517.8 | 6505.8 | 6892.5 | 7096.1 | 7207.8 | 7829.0 | 7884.9 | 6242.6 |
| 62.5° | 3311.7 | 3403.6 | 4010.8 | 5287.0 | 6736.6 | 7491.6 | 7913.5 | 7863.5 | 8509.0 | 8547.9 | 6554.3 |
| 65° | 2825.8 | 2833.9 | 3393.3 | 4707.0 | 6498.4 | 7880.4 | 8487.7 | 8278.1 | 8833.9 | 8860.4 | 6530.0 |
| 67.5° | 2109.0 | 2187.0 | 2610.4 | 3699.8 | 5489.1 | 7548.2 | 8673.6 | 8289.2 | 8628.8 | 8555.3 | 6011.8 |
| 70° | 1358.5 | 1418.0 | 1769.4 | 2565.6 | 3957.9 | 6299.2 | 8056.9 | 7720.9 | 7573.2 | 7410.0 | 4920.9 |
| 72.5° | 627.1 | 703.5 | 1051.2 | 1465.8 | 2347.2 | 4487.2 | 6540.3 | 6272.7 | 5450.9 | 5048.0 | 3127.9 |
| 75° | 273.5 | 292.6 | 519.0 | 773.3 | 1100.5 | 2373.0 | 4312.2 | 3893.9 | 2461.9 | 2248.7 | 1251.9 |
| 77.5° | 166.9 | 179.4 | 272.0 | 414.6 | 432.2 | 904.2 | 2323.0 | 1698.9 | 760.8 | 671.2 | 339.6 |
| 80° | 113.2 | 127.2 | 197.7 | 216.9 | 147.8 | 252.1 | 871.8 | 453.6 | 153.6 | 147.0 | 72.8 |
| 82.5° | 55.1 | 69.8 | 146.3 | 121.3 | 64.0 | 80.9 | 253.6 | 97.0 | 44.8 | 41.9 | 25.7 |
| 85° | 8.1 | 14.0 | 82.3 | 79.4 | 28.7 | 19.1 | 44.8 | 24.3 | 15.4 | 14.7 | 11.8 |
| 87.5° | 0.0 | 0.0 | 27.9 | 12.5 | 2.9 | 2.9 | 5.1 | 5.1 | 5.9 | 5.1 | 5.9 |
| 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° | 1904.7 | 1904.7 | 1904.7 | 1904.7 | 1904.7 | 1904.7 | 1904.7 | 1904.7 | 1904.7 | 1904.7 | 1904.7 |
| 2.5° | 1919.4 | 1923.1 | 1909.1 | 1889.2 | 1867.9 | 1846.6 | 1816.5 | 1789.3 | 1773.1 | 1782.7 | 1759.1 |
| 5° | 1953.9 | 1951.0 | 1914.2 | 1854.0 | 1773.8 | 1677.5 | 1582.0 | 1500.4 | 1473.9 | 1434.2 | 1429.8 |
| 7.5° | 2001.7 | 1993.6 | 1915.7 | 1777.5 | 1596.7 | 1415.8 | 1239.4 | 1122.5 | 1055.6 | 999.0 | 1000.5 |
| 10° | 2068.6 | 2045.1 | 1898.8 | 1643.0 | 1345.3 | 1072.5 | 847.6 | 693.2 | 626.3 | 605.0 | 588.1 |
| 12.5° | 2137.7 | 2092.1 | 1851.8 | 1461.4 | 1047.5 | 732.9 | 515.3 | 421.2 | 380.1 | 366.8 | 365.4 |
| 15° | 2199.5 | 2127.4 | 1769.4 | 1243.1 | 761.6 | 468.3 | 351.4 | 320.5 | 315.4 | 316.1 | 315.4 |
| 17.5° | 2260.5 | 2155.4 | 1655.5 | 1011.5 | 517.5 | 335.9 | 302.1 | 294.8 | 297.0 | 299.9 | 299.2 |
| 20° | 2311.2 | 2161.2 | 1509.9 | 771.9 | 366.1 | 294.8 | 283.8 | 282.3 | 284.5 | 286.7 | 286.7 |
| 22.5° | 2366.3 | 2165.7 | 1337.2 | 534.4 | 299.2 | 274.2 | 268.3 | 268.3 | 271.3 | 274.2 | 274.9 |
| 25° | 2407.5 | 2141.4 | 1130.6 | 383.7 | 263.9 | 254.4 | 251.4 | 252.1 | 255.1 | 256.6 | 255.8 |
| 27.5° | 2414.1 | 2073.0 | 911.5 | 294.0 | 239.6 | 230.1 | 227.2 | 230.1 | 226.4 | 228.6 | 227.2 |
| 30° | 2420.0 | 1986.3 | 689.5 | 247.7 | 217.6 | 202.9 | 198.5 | 194.1 | 191.1 | 187.5 | 186.7 |
| 32.5° | 2438.4 | 1884.1 | 503.6 | 222.7 | 197.0 | 180.8 | 170.5 | 158.1 | 148.5 | 145.6 | 144.8 |
| 35° | 2446.5 | 1761.3 | 369.8 | 202.9 | 178.6 | 161.0 | 142.6 | 125.0 | 111.0 | 105.9 | 109.5 |
| 37.5° | 2477.3 | 1642.3 | 286.7 | 188.2 | 162.5 | 140.4 | 116.9 | 94.8 | 81.6 | 78.7 | 80.1 |
| 40° | 2540.6 | 1512.9 | 240.4 | 175.7 | 148.5 | 121.3 | 92.6 | 71.3 | 62.5 | 59.5 | 58.8 |
| 42.5° | 2642.0 | 1384.2 | 213.9 | 163.9 | 134.5 | 102.2 | 72.8 | 55.9 | 48.5 | 46.3 | 46.3 |
| 45° | 2765.5 | 1260.7 | 195.5 | 151.4 | 119.8 | 82.3 | 57.3 | 44.8 | 40.4 | 39.0 | 39.0 |
| 47.5° | 2928.0 | 1152.7 | 180.1 | 138.9 | 103.7 | 65.4 | 46.3 | 39.0 | 36.0 | 36.8 | 37.5 |
| 50° | 3092.6 | 1072.5 | 163.2 | 125.0 | 85.3 | 53.7 | 39.7 | 34.6 | 33.8 | 34.6 | 34.6 |
| 52.5° | 3216.9 | 1025.5 | 140.4 | 105.9 | 66.9 | 44.8 | 35.3 | 32.3 | 31.6 | 30.1 | 30.1 |
| 55° | 3384.5 | 1015.2 | 111.7 | 86.0 | 52.9 | 37.5 | 31.6 | 29.4 | 27.2 | 25.7 | 25.0 |
| 57.5° | 3599.9 | 1027.0 | 86.0 | 66.9 | 41.2 | 30.9 | 27.9 | 24.3 | 21.3 | 18.4 | 18.4 |
| 60° | 3733.7 | 1000.5 | 66.9 | 51.5 | 30.1 | 25.0 | 21.3 | 17.6 | 14.0 | 11.8 | 11.0 |
| 62.5° | 3691.0 | 888.8 | 52.9 | 38.2 | 21.3 | 18.4 | 14.0 | 11.8 | 8.1 | 5.9 | 5.1 |
| 65° | 3471.2 | 717.5 | 42.6 | 26.5 | 15.4 | 11.0 | 7.4 | 7.4 | 3.7 | 0.7 | 0.0 |
| 67.5° | 3038.2 | 531.5 | 33.8 | 17.6 | 8.8 | 5.1 | 3.7 | 2.2 | 0.0 | 0.0 | 0.0 |
| 70° | 2472.9 | 383.7 | 26.5 | 11.0 | 5.1 | 3.7 | 1.5 | 0.7 | 0.0 | 0.0 | 0.0 |
| 72.5° | 1570.2 | 219.8 | 20.6 | 6.6 | 3.7 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 607.2 | 86.0 | 14.0 | 4.4 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 172.0 | 40.4 | 8.1 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 44.8 | 17.6 | 4.4 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 21.3 | 7.4 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 12.5 | 2.9 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 5.9 | 0.7 | 0.0 | 0.0 | 0.0 | 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)