

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: P300973

Luminaire Tested: **GLNA-AF-03-LED-E1-SL4-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P300973
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24301)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-03-LED-E1-SL4-7030-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(3) 70 CRI, 3000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V
Square Wide OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10964.6 lumens
Efficiency: N/A
Efficacy: 114.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

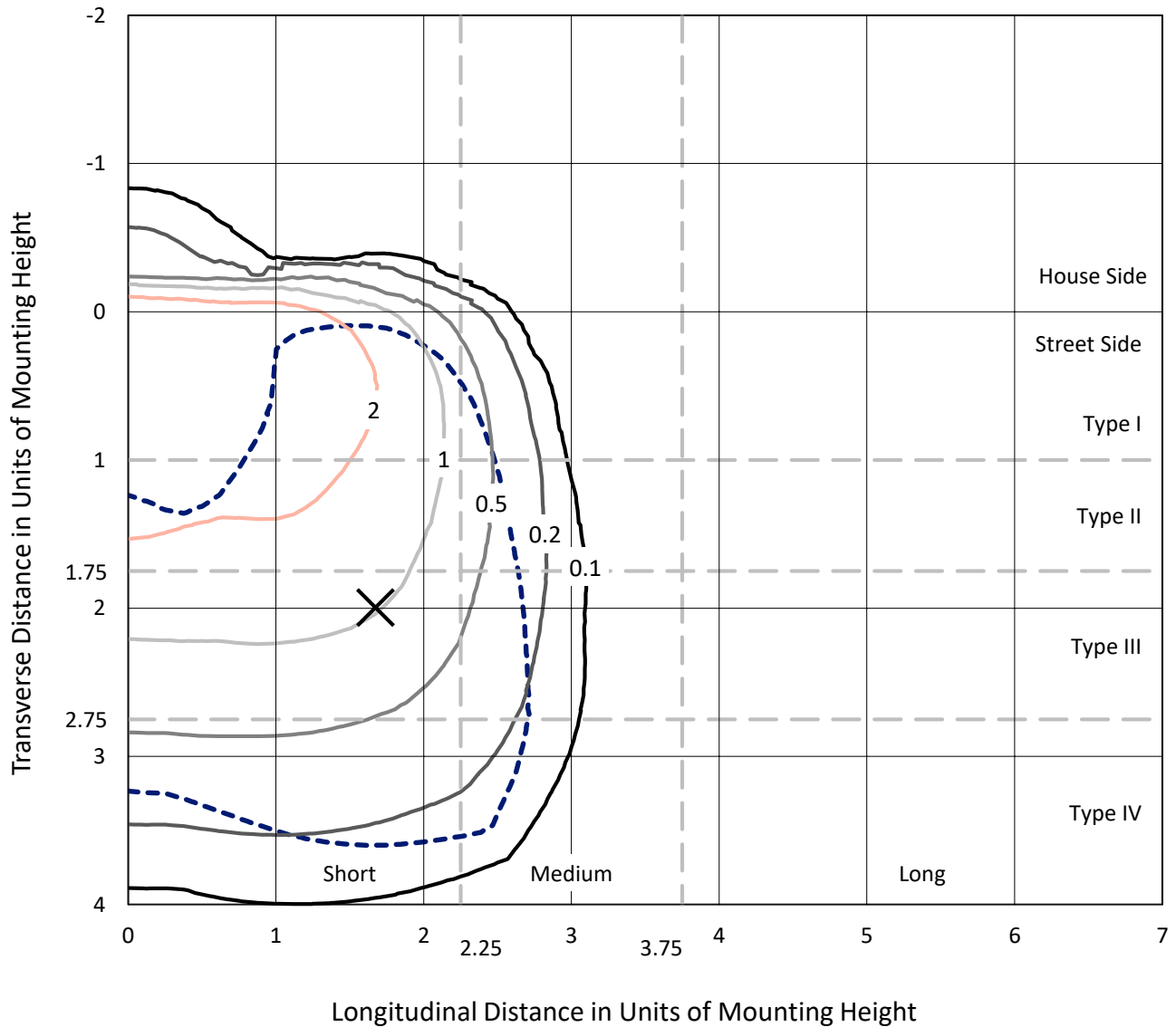
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

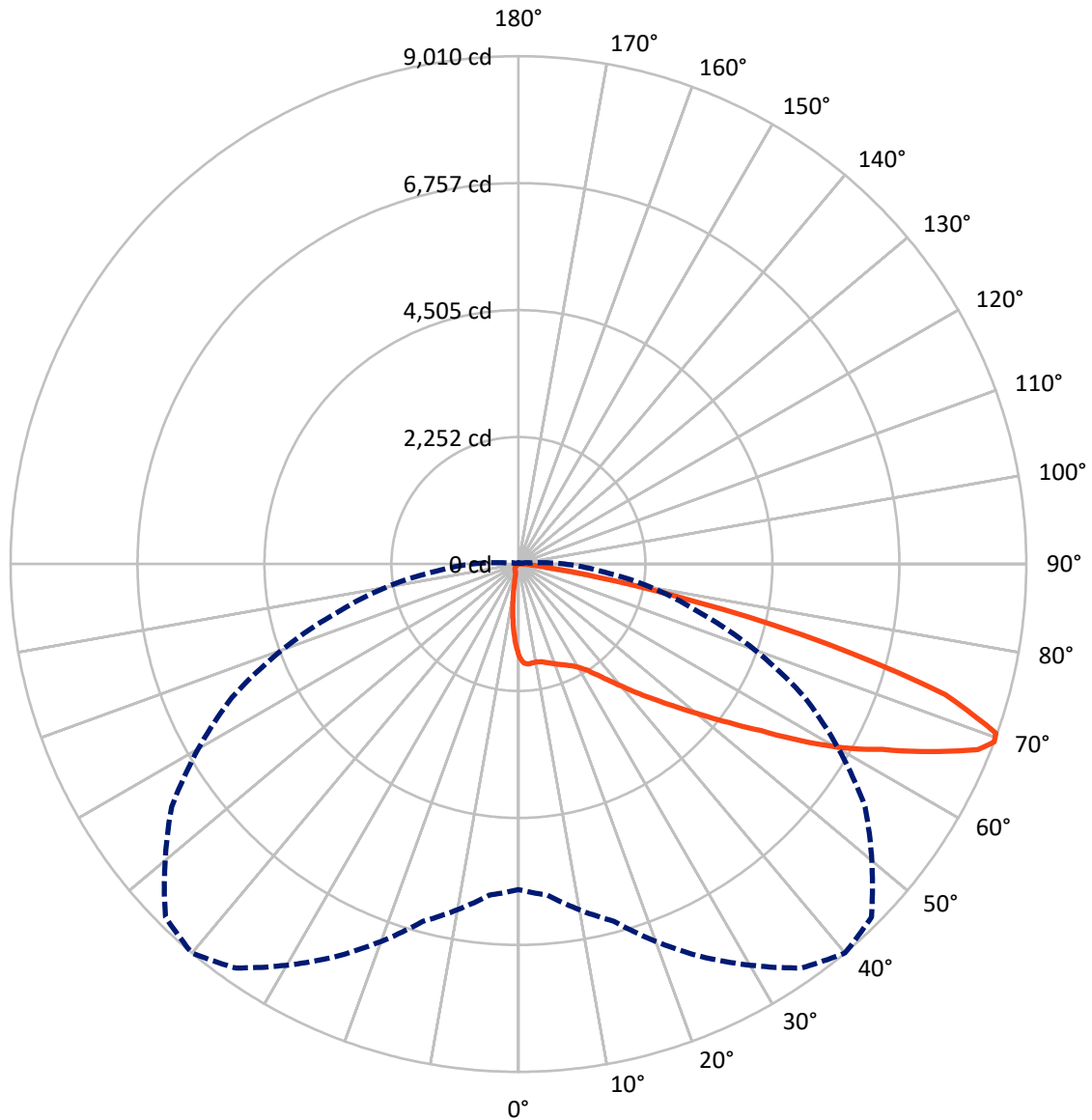
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.5 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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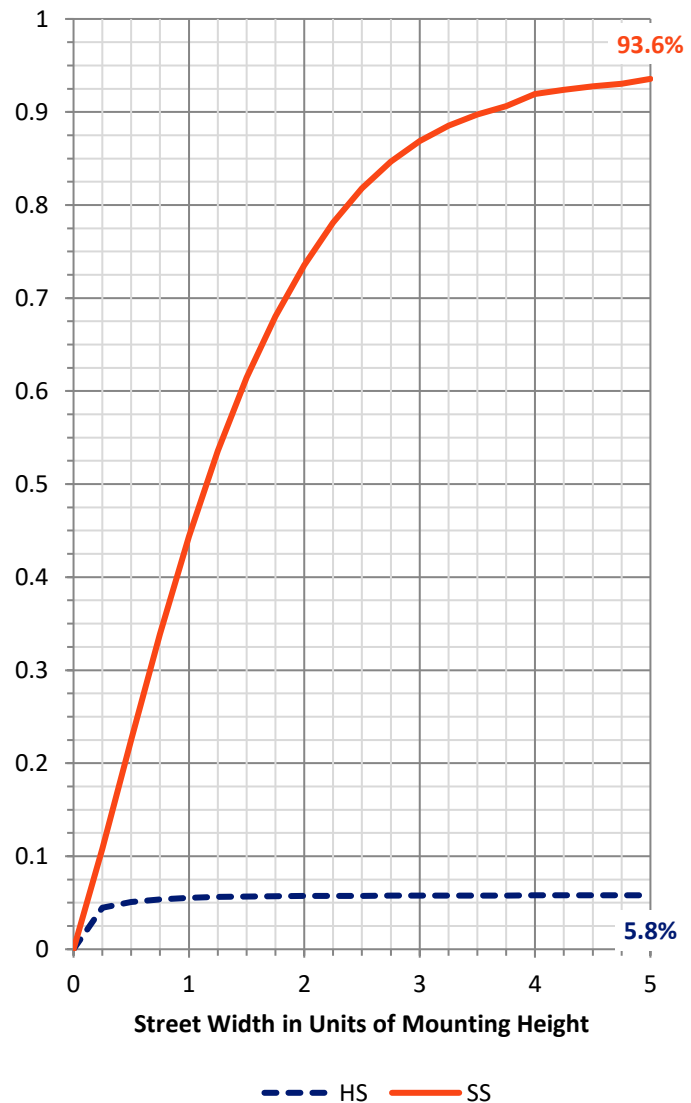
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 641.5 | 0.0 | 641.5 |
| | % Fixture | 5.9 | 0.0 | 5.9 |
| Street Side | Lumens | 10323.1 | 0.0 | 10323.1 |
| | % Fixture | 94.1 | 0.0 | 94.1 |
| Total | Lumens | 10964.6 | 0.0 | 10964.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 132.8 | 1.2 |
| 10°-20° | 326.6 | 3.0 |
| 20°-30° | 550.2 | 5.0 |
| 30°-40° | 900.6 | 8.2 |
| 40°-50° | 1559.4 | 14.2 |
| 50°-60° | 2456.3 | 22.4 |
| 60°-70° | 3207.8 | 29.3 |
| 70°-80° | 1652.1 | 15.1 |
| 80°-90° | 178.7 | 1.6 |
| 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° | 10964.6 | 100.0 |
| 0°-180° | 10964.6 | 100.0 |

Coefficient of Utilization



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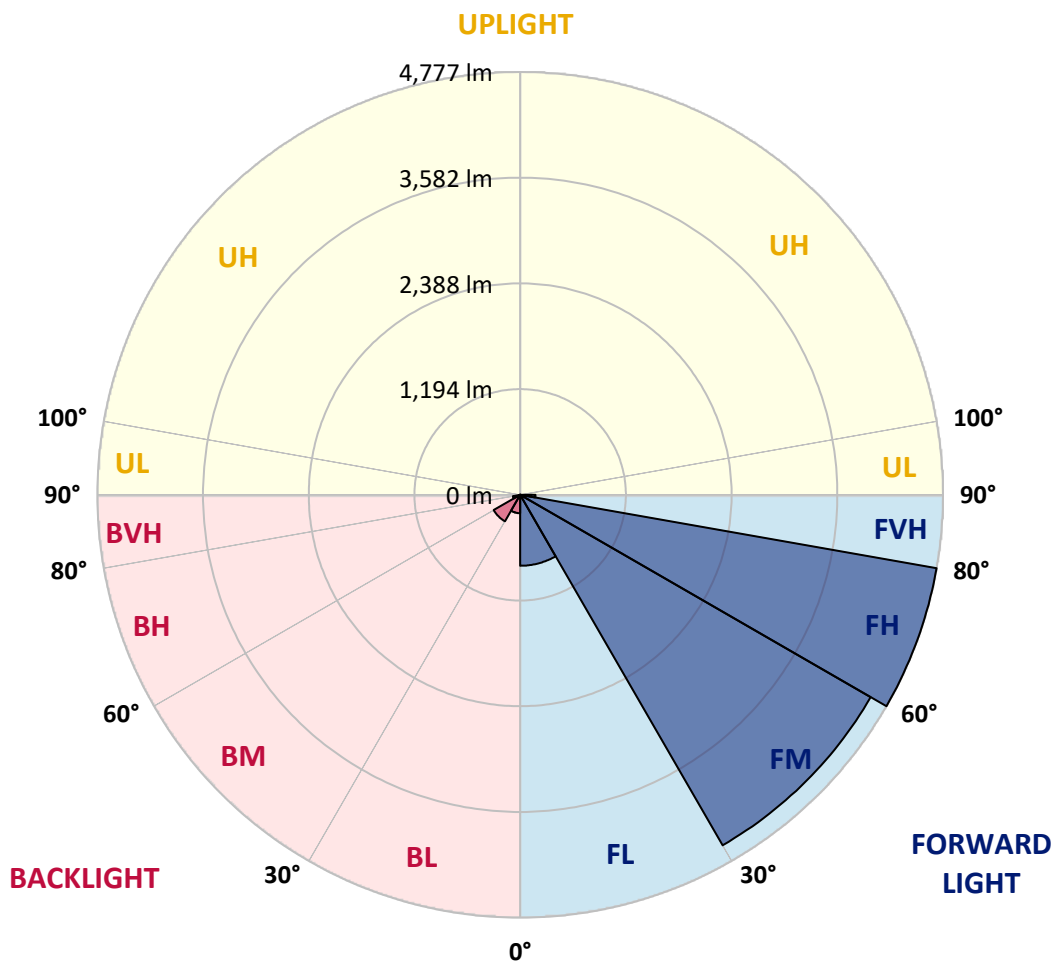
CATALOG NUMBER: GLNA-AF-03-LED-E1-SL4-7030-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 801.8 | 7.3 | | | |
| FM | (30°-60°) | 4571.5 | 41.7 | | | |
| FH | (60°-80°) | 4776.6 | 43.6 | | | G2/5000 |
| FVH | (80°-90°) | 173.1 | 1.6 | | | G2/225 |
| BL | (0°-30°) | 207.8 | 1.9 | B1/500 | | |
| BM | (30°-60°) | 344.8 | 3.1 | B1/1000 | | |
| BH | (60°-80°) | 83.3 | 0.8 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 5.6 | 0.1 | | | 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 IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 40° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1638.2 | 1638.2 | 1638.2 | 1638.2 | 1638.2 | 1638.2 | 1638.2 | 1638.2 | 1638.2 | 1638.2 | 1638.2 |
| 2.5° | 1798.7 | 1788.9 | 1783.1 | 1775.2 | 1765.4 | 1756.9 | 1753.7 | 1729.5 | 1706.7 | 1675.4 | 1639.5 |
| 5° | 1832.0 | 1828.7 | 1818.3 | 1807.9 | 1796.1 | 1783.1 | 1775.9 | 1747.2 | 1714.5 | 1668.8 | 1606.2 |
| 7.5° | 1835.3 | 1831.3 | 1818.3 | 1803.9 | 1787.6 | 1772.0 | 1759.6 | 1730.8 | 1700.8 | 1654.5 | 1578.1 |
| 10° | 1830.0 | 1825.5 | 1815.7 | 1800.0 | 1779.8 | 1764.8 | 1752.4 | 1725.0 | 1699.5 | 1657.7 | 1572.9 |
| 12.5° | 1824.2 | 1819.6 | 1815.0 | 1807.2 | 1789.6 | 1779.1 | 1768.7 | 1742.6 | 1719.7 | 1684.5 | 1591.8 |
| 15° | 1830.0 | 1827.4 | 1832.7 | 1829.4 | 1819.6 | 1810.5 | 1800.0 | 1776.5 | 1755.6 | 1726.3 | 1626.4 |
| 17.5° | 1854.8 | 1854.8 | 1871.2 | 1873.1 | 1864.0 | 1850.9 | 1835.9 | 1812.4 | 1794.8 | 1770.0 | 1667.5 |
| 20° | 1912.9 | 1911.0 | 1931.9 | 1935.8 | 1913.6 | 1893.4 | 1871.2 | 1842.4 | 1828.7 | 1813.1 | 1708.0 |
| 22.5° | 2012.8 | 2003.6 | 2016.0 | 2012.1 | 1968.4 | 1937.1 | 1909.7 | 1874.4 | 1867.2 | 1860.1 | 1753.0 |
| 25° | 2142.7 | 2137.4 | 2145.9 | 2107.4 | 2030.4 | 1988.0 | 1955.4 | 1915.5 | 1915.5 | 1922.7 | 1803.9 |
| 27.5° | 2331.3 | 2311.7 | 2283.0 | 2215.1 | 2099.6 | 2045.4 | 2010.2 | 1967.8 | 1978.8 | 2005.6 | 1871.2 |
| 30° | 2524.5 | 2502.9 | 2437.0 | 2332.6 | 2183.8 | 2127.0 | 2085.9 | 2041.5 | 2067.6 | 2116.6 | 1961.2 |
| 32.5° | 2715.0 | 2690.9 | 2597.6 | 2465.7 | 2304.5 | 2247.7 | 2207.9 | 2159.0 | 2202.7 | 2284.9 | 2093.1 |
| 35° | 2899.7 | 2878.2 | 2770.5 | 2615.2 | 2465.1 | 2418.1 | 2381.5 | 2339.1 | 2395.2 | 2510.1 | 2279.1 |
| 37.5° | 3107.3 | 3083.8 | 2952.6 | 2784.2 | 2660.2 | 2626.3 | 2599.5 | 2557.1 | 2655.0 | 2823.4 | 2538.2 |
| 40° | 3362.5 | 3322.7 | 3145.8 | 2978.1 | 2886.0 | 2869.7 | 2851.4 | 2845.6 | 2997.6 | 3230.6 | 2883.4 |
| 42.5° | 3654.9 | 3589.6 | 3348.1 | 3182.3 | 3134.0 | 3145.8 | 3141.2 | 3167.3 | 3426.4 | 3737.1 | 3303.7 |
| 45° | 3947.3 | 3863.1 | 3573.3 | 3400.3 | 3406.9 | 3448.0 | 3473.4 | 3577.9 | 3963.6 | 4318.0 | 3756.0 |
| 47.5° | 4195.3 | 4112.4 | 3789.3 | 3635.9 | 3714.3 | 3795.2 | 3864.4 | 4062.1 | 4515.7 | 4889.7 | 4107.8 |
| 50° | 4407.4 | 4329.1 | 4018.4 | 3895.0 | 4071.3 | 4201.8 | 4314.0 | 4607.1 | 5109.6 | 5325.0 | 4354.5 |
| 52.5° | 4581.0 | 4528.8 | 4256.0 | 4192.0 | 4479.2 | 4670.4 | 4834.9 | 5186.0 | 5635.7 | 5678.7 | 4546.4 |
| 55° | 4750.0 | 4712.8 | 4511.1 | 4545.1 | 4958.2 | 5218.6 | 5426.8 | 5800.1 | 6088.6 | 5973.7 | 4730.4 |
| 57.5° | 4944.5 | 4910.6 | 4802.2 | 4992.8 | 5588.0 | 5915.7 | 6142.8 | 6344.5 | 6487.4 | 6275.3 | 4904.0 |
| 60° | 5142.9 | 5123.3 | 5125.9 | 5490.1 | 6311.2 | 6625.7 | 6751.1 | 6803.3 | 6879.0 | 6559.2 | 4913.8 |
| 62.5° | 5332.2 | 5369.4 | 5496.0 | 6043.6 | 7003.6 | 7245.1 | 7308.4 | 7360.0 | 7271.2 | 6604.2 | 4539.9 |
| 65° | 5652.6 | 5713.3 | 6015.5 | 6784.3 | 7765.3 | 8023.7 | 8089.0 | 7912.1 | 7333.2 | 6022.0 | 3692.7 |
| 67.5° | 5809.3 | 5920.2 | 6459.3 | 7474.9 | 8504.1 | 8791.3 | 8767.1 | 7948.0 | 6580.7 | 4592.1 | 2369.8 |
| 69° | 5776.6 | 5894.8 | 6561.8 | 7686.3 | 8749.5 | 9009.9 | 8856.5 | 7508.8 | 5606.3 | 3326.6 | 1454.8 |
| 70° | 5647.4 | 5766.9 | 6508.9 | 7678.5 | 8780.8 | 8987.1 | 8690.7 | 6966.4 | 4740.2 | 2432.4 | 909.8 |
| 72.5° | 4716.1 | 4819.2 | 5778.6 | 6940.3 | 8089.0 | 7921.3 | 7270.6 | 4826.4 | 2309.7 | 662.4 | 204.9 |
| 75° | 2903.0 | 2960.4 | 4146.3 | 5228.4 | 6109.5 | 5678.7 | 4844.0 | 2401.1 | 688.6 | 187.3 | 113.6 |
| 77.5° | 1533.7 | 1559.8 | 2269.9 | 3081.8 | 3872.9 | 3204.5 | 2482.7 | 936.6 | 317.2 | 117.5 | 82.2 |
| 80° | 906.5 | 926.1 | 1222.4 | 1409.1 | 1676.0 | 1399.9 | 992.7 | 575.0 | 227.1 | 73.7 | 73.1 |
| 82.5° | 518.9 | 531.3 | 886.3 | 783.2 | 660.5 | 563.9 | 494.1 | 545.0 | 136.4 | 49.6 | 75.7 |
| 85° | 190.6 | 193.2 | 498.6 | 595.9 | 392.9 | 233.7 | 245.4 | 451.6 | 36.5 | 31.3 | 59.4 |
| 87.5° | 88.8 | 86.8 | 256.5 | 364.8 | 229.7 | 148.2 | 191.2 | 99.2 | 14.4 | 20.2 | 16.3 |
| 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° | 1638.2 | 1638.2 | 1638.2 | 1638.2 | 1638.2 | 1638.2 | 1638.2 | 1638.2 | 1638.2 | 1638.2 | 1638.2 |
| 2.5° | 1618.6 | 1594.4 | 1550.7 | 1505.7 | 1460.0 | 1424.7 | 1390.2 | 1362.7 | 1353.6 | 1336.6 | 1337.9 |
| 5° | 1569.0 | 1524.6 | 1433.2 | 1340.6 | 1244.0 | 1164.3 | 1089.3 | 1028.6 | 999.2 | 969.2 | 969.2 |
| 7.5° | 1525.9 | 1461.3 | 1318.4 | 1167.6 | 1011.6 | 880.4 | 762.3 | 673.5 | 624.6 | 585.4 | 584.8 |
| 10° | 1509.6 | 1422.1 | 1222.4 | 1006.4 | 789.1 | 610.2 | 469.9 | 379.8 | 333.5 | 303.5 | 302.2 |
| 12.5° | 1516.8 | 1408.4 | 1148.7 | 857.6 | 584.8 | 392.2 | 272.2 | 214.1 | 194.5 | 185.4 | 185.4 |
| 15° | 1537.7 | 1404.5 | 1074.9 | 712.0 | 413.1 | 245.4 | 180.8 | 165.1 | 163.8 | 163.8 | 163.8 |
| 17.5° | 1563.1 | 1405.8 | 999.2 | 570.4 | 281.3 | 175.6 | 156.0 | 154.0 | 155.3 | 155.3 | 155.3 |
| 20° | 1589.2 | 1406.5 | 917.6 | 439.2 | 198.4 | 152.7 | 146.8 | 146.2 | 147.5 | 147.5 | 148.2 |
| 22.5° | 1621.2 | 1409.7 | 836.1 | 328.3 | 163.8 | 144.2 | 139.7 | 139.7 | 140.3 | 140.3 | 139.7 |
| 25° | 1657.7 | 1416.3 | 751.2 | 243.4 | 149.5 | 138.4 | 134.4 | 133.8 | 134.4 | 133.8 | 133.1 |
| 27.5° | 1703.4 | 1425.4 | 656.6 | 190.6 | 142.9 | 132.5 | 129.2 | 129.2 | 128.6 | 127.9 | 127.3 |
| 30° | 1760.9 | 1435.8 | 550.2 | 161.9 | 136.4 | 127.3 | 124.0 | 123.4 | 122.7 | 121.4 | 121.4 |
| 32.5° | 1848.3 | 1458.7 | 445.1 | 146.8 | 129.2 | 120.1 | 117.5 | 117.5 | 116.2 | 114.9 | 114.2 |
| 35° | 1982.8 | 1503.7 | 351.1 | 137.7 | 121.4 | 112.3 | 109.0 | 109.0 | 107.7 | 107.0 | 106.4 |
| 37.5° | 2168.8 | 1572.2 | 272.8 | 129.2 | 113.6 | 103.8 | 100.5 | 99.9 | 98.6 | 97.2 | 96.6 |
| 40° | 2416.1 | 1657.1 | 214.7 | 121.4 | 105.7 | 95.3 | 92.7 | 91.4 | 88.8 | 86.8 | 86.8 |
| 42.5° | 2726.8 | 1753.7 | 174.3 | 112.9 | 96.6 | 87.5 | 85.5 | 83.5 | 79.0 | 77.0 | 76.4 |
| 45° | 3051.8 | 1840.5 | 147.5 | 103.1 | 87.5 | 79.6 | 78.3 | 75.1 | 69.2 | 67.2 | 67.2 |
| 47.5° | 3286.1 | 1860.7 | 129.9 | 94.0 | 79.0 | 71.1 | 70.5 | 64.6 | 59.4 | 58.1 | 57.4 |
| 50° | 3432.3 | 1820.9 | 115.5 | 84.8 | 71.1 | 63.3 | 61.3 | 54.2 | 50.9 | 49.6 | 48.9 |
| 52.5° | 3530.9 | 1749.8 | 103.8 | 77.0 | 64.0 | 56.1 | 51.6 | 46.3 | 43.7 | 42.4 | 42.4 |
| 55° | 3609.8 | 1649.3 | 92.0 | 69.8 | 58.1 | 50.3 | 43.7 | 39.8 | 37.2 | 35.9 | 35.9 |
| 57.5° | 3632.0 | 1512.9 | 80.3 | 64.0 | 52.2 | 44.4 | 37.2 | 34.6 | 31.3 | 30.7 | 30.7 |
| 60° | 3470.8 | 1266.8 | 71.1 | 56.8 | 47.0 | 38.5 | 32.6 | 29.4 | 26.1 | 25.5 | 24.8 |
| 62.5° | 3045.9 | 980.3 | 62.7 | 50.3 | 41.1 | 33.3 | 28.1 | 24.1 | 21.5 | 21.5 | 21.5 |
| 65° | 2323.4 | 657.2 | 54.8 | 43.7 | 35.9 | 28.1 | 24.1 | 19.6 | 18.3 | 18.3 | 18.9 |
| 67.5° | 1390.8 | 357.7 | 47.0 | 37.2 | 30.7 | 23.5 | 20.2 | 17.0 | 16.3 | 17.0 | 17.0 |
| 69° | 815.2 | 210.2 | 42.4 | 33.3 | 26.8 | 20.9 | 17.6 | 15.0 | 16.3 | 17.0 | 17.0 |
| 70° | 503.2 | 141.6 | 39.2 | 30.0 | 24.1 | 18.9 | 16.3 | 14.4 | 15.7 | 16.3 | 16.3 |
| 72.5° | 140.3 | 73.1 | 31.3 | 23.5 | 19.6 | 15.7 | 13.1 | 13.1 | 15.0 | 15.7 | 15.7 |
| 75° | 91.4 | 54.2 | 24.1 | 17.6 | 15.0 | 12.4 | 11.1 | 12.4 | 14.4 | 15.0 | 15.0 |
| 77.5° | 75.7 | 44.4 | 19.6 | 14.4 | 12.4 | 11.7 | 10.4 | 11.1 | 13.1 | 13.7 | 13.7 |
| 80° | 69.2 | 31.3 | 15.7 | 13.1 | 11.1 | 10.4 | 9.8 | 9.1 | 11.7 | 12.4 | 12.4 |
| 82.5° | 65.9 | 24.8 | 13.7 | 11.7 | 10.4 | 9.1 | 8.5 | 9.1 | 10.4 | 11.1 | 11.7 |
| 85° | 41.1 | 16.3 | 12.4 | 11.1 | 9.1 | 8.5 | 8.5 | 8.5 | 9.8 | 10.4 | 10.4 |
| 87.5° | 15.0 | 13.1 | 11.1 | 9.1 | 7.8 | 7.8 | 7.8 | 7.8 | 8.5 | 9.8 | 9.8 |
| 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)