

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: P299647

Luminaire Tested: **GLNA-AF-03-LED-E1-SL2-7027-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299647
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24287)
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-SL2-7027-800-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(3) 70 CRI, 2700K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
w/Spill Control WITH HOUSESIDE SHEILD OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9597 lumens
Efficiency: N/A
Efficacy: 77.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 124
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

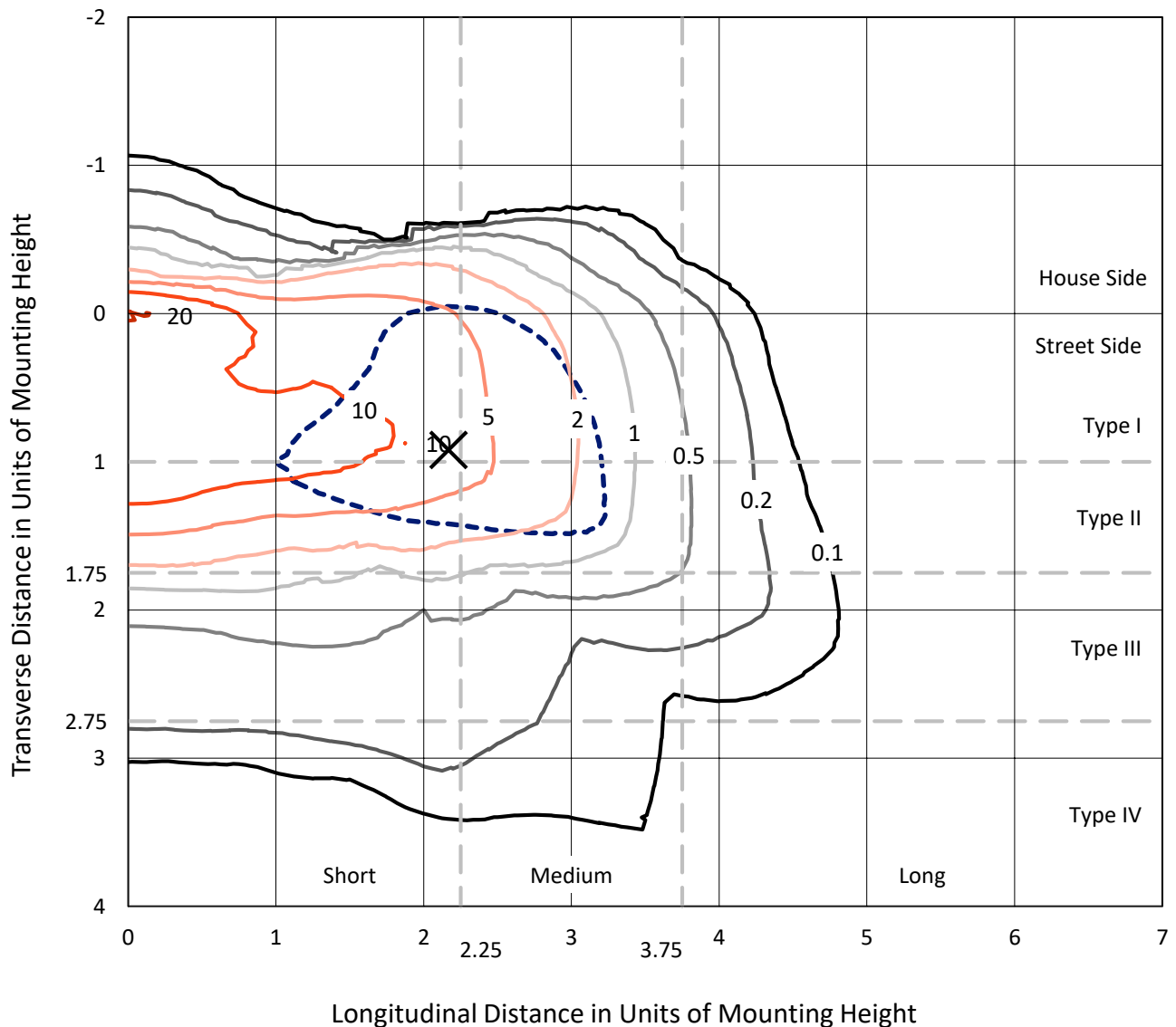


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

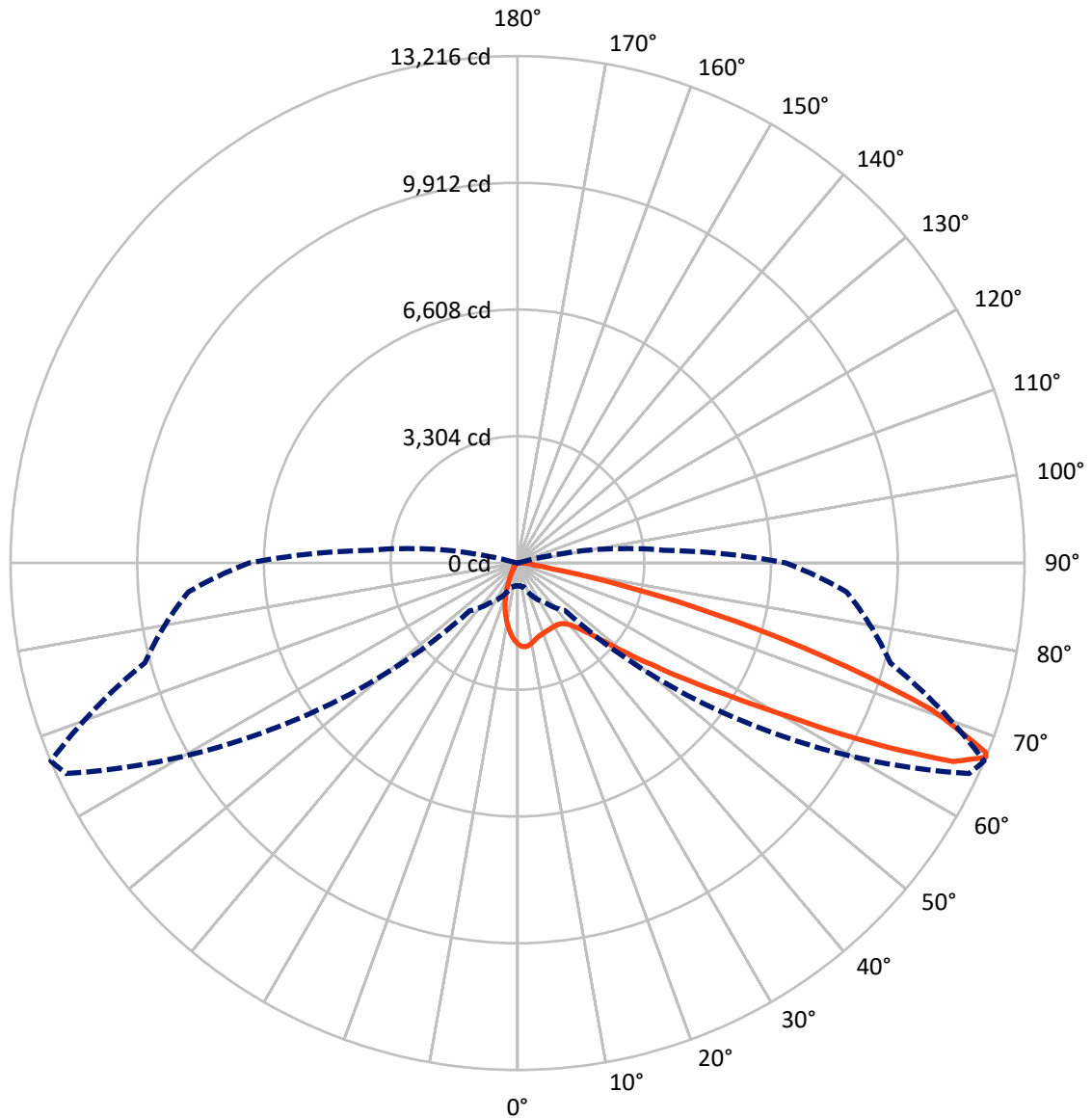


Based on 10 foot mounting height. Maximum calculated value = 21.2 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 996.5 | 0.0 | 996.5 |
| | % Fixture | 10.4 | 0.0 | 10.4 |
| Street Side | Lumens | 8600.5 | 0.0 | 8600.5 |
| | % Fixture | 89.6 | 0.0 | 89.6 |
| Total | Lumens | 9597.0 | 0.0 | 9597.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 172.2 | 1.8 |
| 10°-20° | 366.5 | 3.8 |
| 20°-30° | 532.9 | 5.6 |
| 30°-40° | 831.4 | 8.7 |
| 40°-50° | 1472.7 | 15.3 |
| 50°-60° | 2330.5 | 24.3 |
| 60°-70° | 2669.2 | 27.8 |
| 70°-80° | 1107.2 | 11.5 |
| 80°-90° | 114.4 | 1.2 |
| 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° | 9597.0 | 100.0 |
| 0°-180° | 9597.0 | 100.0 |



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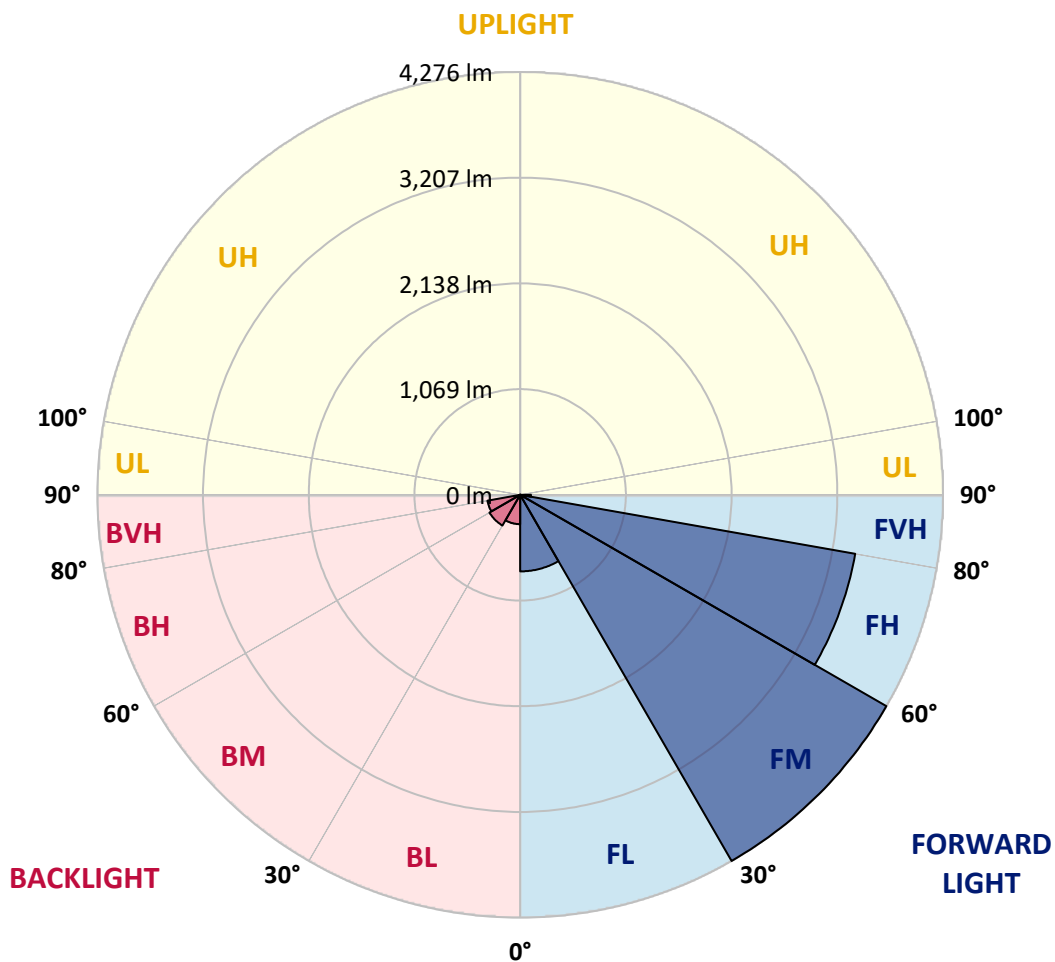
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 774.3 | 8.1 | | | |
| FM (30°-60°) | 4276.4 | 44.6 | | | |
| FH (60°-80°) | 3440.5 | 35.9 | | | G2/5000 |
| FVH (80°-90°) | 109.2 | 1.1 | | | G2/225 |
| BL (0°-30°) | 297.3 | 3.1 | B1/500 | | |
| BM (30°-60°) | 358.1 | 3.7 | B1/1000 | | |
| BH (60°-80°) | 335.8 | 3.5 | B1/500 | | G1/500 |
| BVH (80°-90°) | 5.1 | 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 II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 67° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|--------|
| 0° | 2116.5 | 2116.5 | 2116.5 | 2116.5 | 2116.5 | 2116.5 | 2116.5 | 2116.5 | 2116.5 | 2116.5 | 2116.5 |
| 2.5° | 2188.1 | 2192.6 | 2192.1 | 2195.4 | 2203.3 | 2203.8 | 2196.0 | 2180.9 | 2177.5 | 2157.9 | 2123.8 |
| 5° | 2018.0 | 2030.8 | 2038.7 | 2070.6 | 2106.4 | 2149.5 | 2182.0 | 2193.7 | 2192.1 | 2178.1 | 2126.6 |
| 7.5° | 1823.7 | 1836.6 | 1845.6 | 1883.1 | 1930.6 | 2004.5 | 2089.1 | 2158.5 | 2164.6 | 2179.7 | 2124.3 |
| 10° | 1694.4 | 1696.7 | 1709.0 | 1744.8 | 1794.6 | 1870.2 | 1971.0 | 2092.4 | 2110.9 | 2166.3 | 2118.7 |
| 12.5° | 1588.1 | 1589.7 | 1606.0 | 1644.6 | 1697.8 | 1773.9 | 1879.7 | 2020.2 | 2048.8 | 2149.5 | 2117.6 |
| 15° | 1512.5 | 1518.7 | 1533.2 | 1573.5 | 1630.1 | 1705.6 | 1814.2 | 1967.0 | 2001.2 | 2143.4 | 2127.7 |
| 17.5° | 1487.3 | 1494.0 | 1498.5 | 1527.6 | 1579.1 | 1653.0 | 1764.4 | 1932.3 | 1971.0 | 2146.7 | 2147.3 |
| 20° | 1513.6 | 1518.7 | 1508.6 | 1515.9 | 1547.8 | 1613.8 | 1722.4 | 1902.7 | 1948.6 | 2150.6 | 2172.5 |
| 22.5° | 1611.6 | 1613.8 | 1586.4 | 1554.5 | 1548.9 | 1585.3 | 1689.4 | 1879.1 | 1928.4 | 2161.3 | 2202.1 |
| 25° | 1779.5 | 1775.6 | 1730.8 | 1662.0 | 1597.0 | 1580.2 | 1669.8 | 1864.6 | 1918.3 | 2172.5 | 2232.9 |
| 27.5° | 1982.1 | 1987.7 | 1926.2 | 1826.0 | 1702.3 | 1613.8 | 1667.0 | 1858.4 | 1913.9 | 2180.3 | 2259.8 |
| 30° | 2228.4 | 2236.3 | 2165.8 | 2039.8 | 1862.4 | 1696.7 | 1692.7 | 1857.3 | 1911.1 | 2175.3 | 2262.0 |
| 32.5° | 2479.8 | 2489.3 | 2433.9 | 2304.0 | 2076.2 | 1835.5 | 1751.0 | 1869.6 | 1916.7 | 2157.9 | 2249.2 |
| 35° | 2742.9 | 2756.3 | 2719.4 | 2608.0 | 2366.1 | 2035.9 | 1853.4 | 1907.1 | 1943.0 | 2156.2 | 2236.3 |
| 37.5° | 3106.2 | 3118.5 | 3049.1 | 2931.0 | 2717.1 | 2304.6 | 2018.0 | 1977.7 | 2005.1 | 2183.1 | 2239.6 |
| 40° | 3648.6 | 3646.9 | 3467.8 | 3287.0 | 3102.8 | 2646.0 | 2249.2 | 2105.3 | 2119.3 | 2264.3 | 2281.1 |
| 42.5° | 4239.7 | 4236.9 | 3972.1 | 3697.3 | 3531.0 | 3066.4 | 2553.1 | 2325.8 | 2316.3 | 2413.7 | 2388.5 |
| 45° | 4695.4 | 4694.8 | 4478.7 | 4169.2 | 4046.6 | 3548.9 | 2946.1 | 2632.6 | 2618.0 | 2656.7 | 2586.7 |
| 47.5° | 4889.6 | 4893.0 | 4784.4 | 4566.6 | 4618.1 | 4201.6 | 3441.5 | 3077.1 | 3055.2 | 3039.6 | 2933.2 |
| 50° | 4738.5 | 4745.2 | 4754.1 | 4711.6 | 5037.4 | 5078.8 | 4105.9 | 3703.4 | 3692.8 | 3622.8 | 3456.6 |
| 52.5° | 4244.7 | 4278.9 | 4384.1 | 4519.0 | 5182.9 | 5920.7 | 5147.6 | 4481.5 | 4424.4 | 4350.0 | 4166.9 |
| 55° | 3412.9 | 3450.4 | 3650.3 | 3977.7 | 4966.3 | 6473.7 | 6607.5 | 5484.6 | 5389.5 | 5167.2 | 4903.0 |
| 57.5° | 2258.7 | 2316.9 | 2606.9 | 3023.3 | 4337.1 | 6562.7 | 8064.1 | 6876.8 | 6545.4 | 5936.9 | 5639.1 |
| 60° | 1244.4 | 1300.3 | 1614.9 | 1992.2 | 3132.5 | 6122.8 | 9043.6 | 8689.3 | 8103.8 | 6797.3 | 6533.1 |
| 62.5° | 766.3 | 796.6 | 1028.9 | 1379.8 | 1878.6 | 4832.5 | 9246.3 | 10967.0 | 10289.1 | 7905.1 | 7612.9 |
| 65° | 610.1 | 623.0 | 736.7 | 1127.9 | 1346.8 | 2874.4 | 8591.9 | 12703.4 | 12477.3 | 9246.3 | 8579.6 |
| 67° | 592.2 | 597.3 | 651.0 | 968.4 | 1269.6 | 1762.2 | 7198.1 | 12986.1 | 13215.6 | 10058.0 | 8609.8 |
| 67.5° | 596.2 | 601.8 | 652.7 | 924.2 | 1267.3 | 1619.4 | 6717.8 | 12874.7 | 13164.7 | 10122.3 | 8476.0 |
| 70° | 574.9 | 592.2 | 747.3 | 923.6 | 1205.2 | 1345.7 | 4023.1 | 11155.1 | 11456.8 | 9405.3 | 7191.9 |
| 72.5° | 203.8 | 204.9 | 323.0 | 747.3 | 1310.4 | 1360.2 | 2020.2 | 8177.7 | 8401.0 | 7194.7 | 5185.2 |
| 75° | 120.9 | 103.0 | 107.5 | 212.7 | 1252.2 | 1321.1 | 1165.4 | 5225.5 | 5308.9 | 4122.7 | 2625.9 |
| 77.5° | 83.4 | 72.8 | 75.0 | 94.0 | 476.9 | 1302.6 | 925.9 | 2725.0 | 2636.0 | 1445.9 | 559.2 |
| 80° | 47.6 | 42.0 | 44.8 | 82.3 | 173.5 | 1215.3 | 873.2 | 1105.0 | 942.1 | 245.2 | 154.5 |
| 82.5° | 25.2 | 21.3 | 25.7 | 67.7 | 120.9 | 757.4 | 874.9 | 534.0 | 423.2 | 82.8 | 105.2 |
| 85° | 9.0 | 7.3 | 12.3 | 46.5 | 80.6 | 232.3 | 811.1 | 448.9 | 352.7 | 40.3 | 80.0 |
| 87.5° | 1.7 | 1.7 | 5.0 | 19.0 | 32.5 | 71.1 | 479.7 | 266.5 | 178.6 | 24.1 | 54.9 |
| 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° | 2116.5 | 2116.5 | 2116.5 | 2116.5 | 2116.5 | 2116.5 | 2116.5 | 2116.5 | 2116.5 | 2116.5 | 2116.5 |
| 2.5° | 2109.8 | 2085.7 | 2053.2 | 2013.5 | 1966.5 | 1925.1 | 1894.3 | 1862.4 | 1855.6 | 1844.4 | 1842.8 |
| 5° | 2095.8 | 2054.4 | 1973.8 | 1881.4 | 1782.9 | 1693.9 | 1621.7 | 1557.3 | 1528.7 | 1504.1 | 1501.3 |
| 7.5° | 2075.1 | 2012.9 | 1875.8 | 1726.9 | 1573.0 | 1433.0 | 1314.3 | 1230.4 | 1153.1 | 1116.2 | 1110.6 |
| 10° | 2051.0 | 1962.0 | 1765.5 | 1559.0 | 1346.2 | 1148.6 | 972.3 | 824.5 | 735.0 | 681.8 | 675.1 |
| 12.5° | 2028.6 | 1912.2 | 1653.0 | 1384.9 | 1102.2 | 838.0 | 611.3 | 470.2 | 376.2 | 338.1 | 333.6 |
| 15° | 2018.0 | 1871.9 | 1547.8 | 1206.9 | 846.9 | 533.5 | 334.2 | 258.6 | 227.8 | 218.9 | 218.3 |
| 17.5° | 2016.9 | 1837.7 | 1444.8 | 1022.7 | 593.4 | 310.1 | 217.8 | 198.7 | 192.6 | 190.3 | 190.3 |
| 20° | 2016.3 | 1805.3 | 1341.8 | 831.8 | 376.7 | 206.6 | 181.4 | 176.9 | 172.4 | 169.6 | 169.6 |
| 22.5° | 2022.5 | 1776.2 | 1234.3 | 637.0 | 237.3 | 167.4 | 159.5 | 155.1 | 149.5 | 145.5 | 145.0 |
| 25° | 2028.6 | 1753.8 | 1124.6 | 453.4 | 171.8 | 145.5 | 137.7 | 131.5 | 123.7 | 118.7 | 118.1 |
| 27.5° | 2029.7 | 1725.8 | 1007.0 | 303.4 | 143.9 | 127.1 | 117.0 | 107.5 | 98.5 | 93.5 | 92.9 |
| 30° | 2012.9 | 1678.8 | 876.6 | 204.9 | 127.1 | 110.3 | 96.8 | 86.8 | 78.4 | 74.4 | 74.4 |
| 32.5° | 1979.9 | 1620.5 | 733.3 | 154.5 | 113.1 | 94.6 | 80.0 | 70.5 | 64.9 | 63.3 | 62.7 |
| 35° | 1950.2 | 1557.8 | 586.1 | 131.0 | 101.3 | 80.0 | 65.5 | 59.3 | 56.0 | 55.4 | 54.9 |
| 37.5° | 1932.9 | 1507.5 | 447.8 | 118.7 | 90.1 | 67.2 | 55.4 | 50.9 | 49.3 | 48.1 | 48.7 |
| 40° | 1946.3 | 1465.5 | 330.8 | 108.6 | 78.9 | 56.0 | 47.0 | 44.8 | 43.1 | 42.5 | 42.5 |
| 42.5° | 2005.1 | 1458.2 | 245.7 | 99.6 | 68.3 | 46.5 | 40.9 | 39.2 | 38.1 | 37.5 | 38.1 |
| 45° | 2159.6 | 1503.0 | 190.9 | 91.2 | 57.7 | 39.2 | 34.7 | 34.1 | 33.6 | 33.6 | 33.6 |
| 47.5° | 2391.9 | 1595.3 | 159.0 | 81.7 | 48.1 | 33.6 | 30.2 | 29.7 | 29.1 | 29.7 | 29.7 |
| 50° | 2785.4 | 1764.4 | 142.2 | 72.2 | 39.7 | 28.5 | 25.7 | 25.7 | 25.7 | 25.7 | 26.3 |
| 52.5° | 3383.8 | 2096.9 | 131.0 | 62.7 | 32.5 | 24.1 | 21.8 | 21.8 | 22.4 | 22.4 | 23.0 |
| 55° | 4050.5 | 2538.0 | 120.9 | 53.2 | 27.4 | 20.2 | 17.9 | 18.5 | 19.0 | 19.6 | 19.6 |
| 57.5° | 4773.7 | 3026.7 | 112.5 | 43.7 | 23.5 | 16.2 | 15.1 | 15.7 | 16.2 | 17.4 | 17.4 |
| 60° | 5646.4 | 3555.7 | 100.2 | 34.1 | 19.6 | 12.9 | 11.8 | 12.9 | 14.6 | 15.7 | 16.2 |
| 62.5° | 6604.7 | 4067.3 | 84.5 | 26.9 | 16.2 | 10.1 | 9.5 | 11.8 | 14.0 | 15.1 | 15.7 |
| 65° | 7259.7 | 4227.9 | 64.9 | 21.8 | 12.3 | 7.3 | 7.8 | 10.6 | 13.4 | 15.1 | 15.1 |
| 67° | 6994.3 | 3833.3 | 53.2 | 18.5 | 10.1 | 5.6 | 7.3 | 10.6 | 13.4 | 14.6 | 15.1 |
| 67.5° | 6810.2 | 3678.8 | 50.9 | 17.9 | 9.5 | 5.6 | 7.3 | 10.6 | 13.4 | 15.1 | 15.1 |
| 70° | 5541.2 | 2763.6 | 42.5 | 13.4 | 7.8 | 5.0 | 6.2 | 10.1 | 12.9 | 14.6 | 14.6 |
| 72.5° | 3850.1 | 1703.9 | 38.1 | 9.5 | 6.7 | 4.5 | 5.6 | 9.5 | 12.3 | 14.0 | 14.6 |
| 75° | 1830.4 | 616.9 | 32.5 | 7.3 | 6.2 | 3.9 | 5.0 | 9.5 | 12.3 | 14.0 | 14.0 |
| 77.5° | 373.4 | 143.3 | 26.3 | 6.2 | 5.0 | 3.9 | 4.5 | 9.0 | 11.8 | 13.4 | 13.4 |
| 80° | 122.6 | 55.4 | 19.6 | 5.6 | 5.0 | 3.9 | 4.5 | 8.4 | 11.8 | 12.9 | 13.4 |
| 82.5° | 88.4 | 28.0 | 12.9 | 5.6 | 5.0 | 3.9 | 3.9 | 8.4 | 11.2 | 12.9 | 12.9 |
| 85° | 67.7 | 19.6 | 8.4 | 5.6 | 5.0 | 3.9 | 3.9 | 7.8 | 10.6 | 12.3 | 12.3 |
| 87.5° | 44.8 | 7.8 | 6.7 | 5.6 | 5.0 | 3.9 | 3.9 | 7.8 | 10.1 | 11.8 | 12.3 |
| 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)