

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: P301943

Luminaire Tested: **GLNA-AF-04-LED-E1-SL4-7060-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301943
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-04-LED-E1-SL4-7060-600-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 5700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
w/Spill Control WITH HOUSESIDE SHEILD OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11664.4 lumens
Efficiency: N/A
Efficacy: 90.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G3

Input Watts (W): 129
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

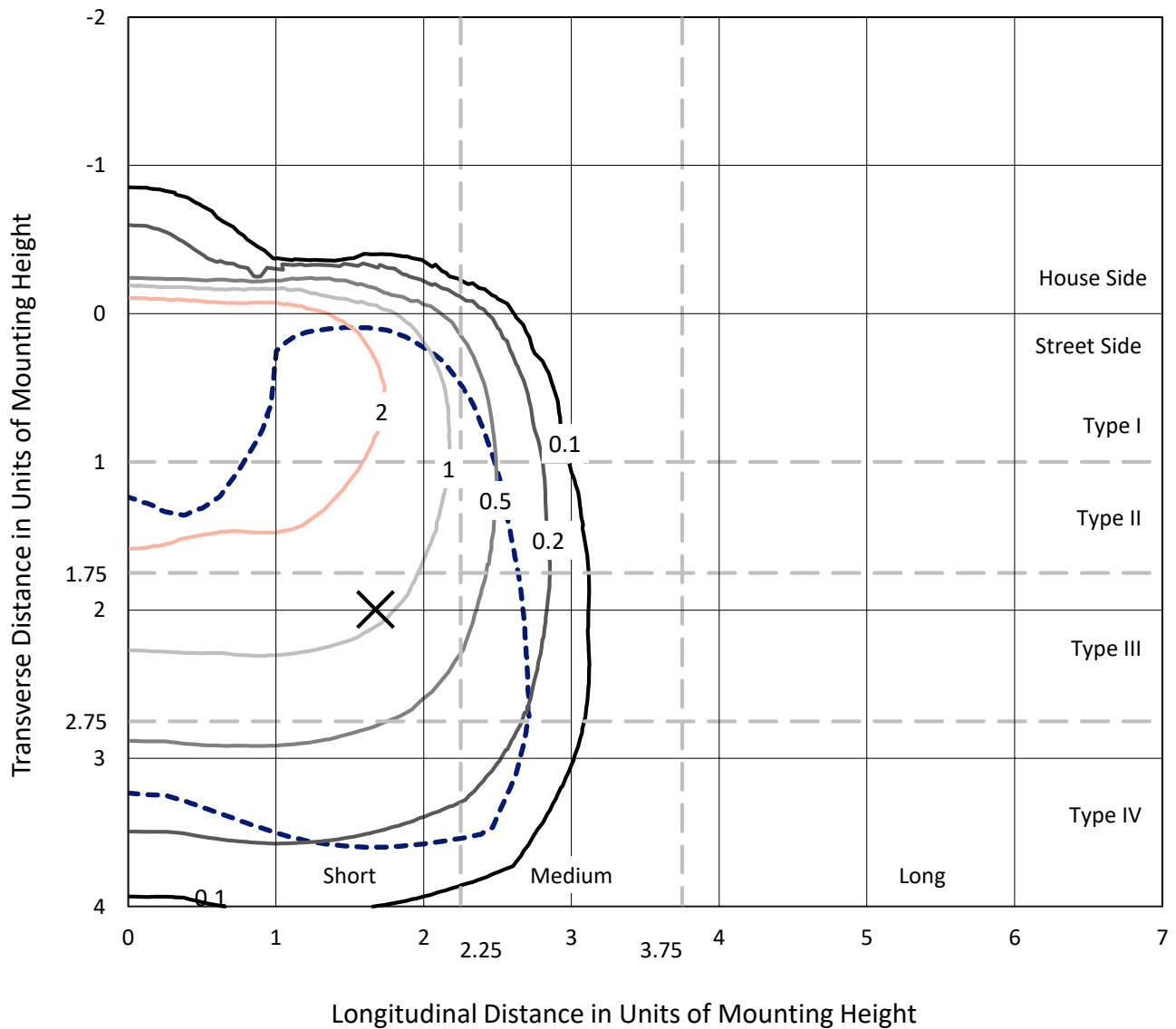


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

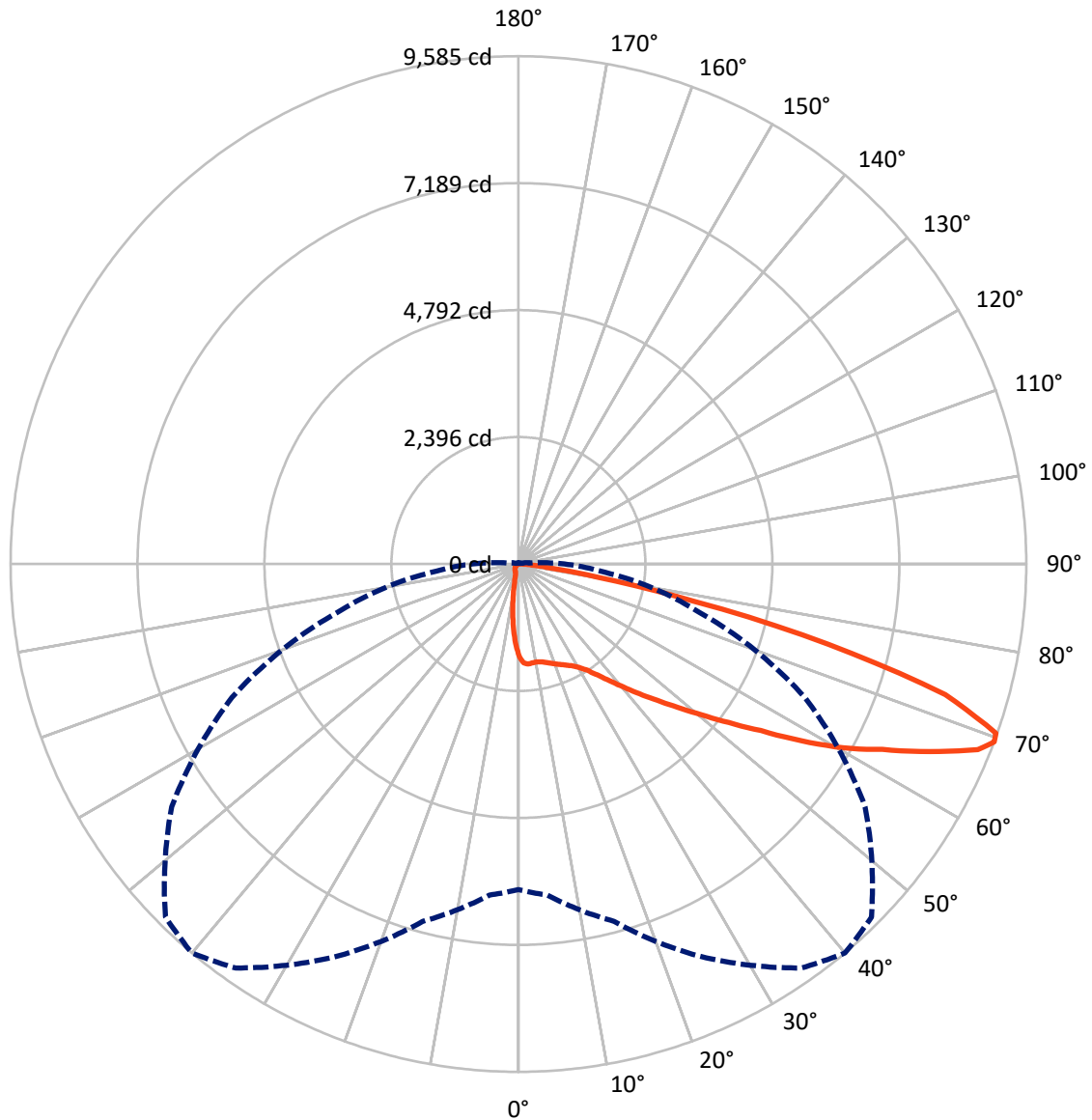


Based on 20 foot mounting height. Maximum calculated value = 4.8 fc
 Type IV - Short - Semi-Cutoff

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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 | 682.4 | 0.0 | 682.4 |
| | % Fixture | 5.9 | 0.0 | 5.9 |
| Street Side | Lumens | 10981.9 | 0.0 | 10981.9 |
| | % Fixture | 94.1 | 0.0 | 94.1 |
| Total | Lumens | 11664.4 | 0.0 | 11664.4 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 141.3 | 1.2 |
| 10°-20° | 347.5 | 3.0 |
| 20°-30° | 585.3 | 5.0 |
| 30°-40° | 958.1 | 8.2 |
| 40°-50° | 1659.0 | 14.2 |
| 50°-60° | 2613.0 | 22.4 |
| 60°-70° | 3412.5 | 29.3 |
| 70°-80° | 1757.6 | 15.1 |
| 80°-90° | 190.1 | 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° | 11664.4 | 100.0 |
| 0°-180° | 11664.4 | 100.0 |

Coefficient of Utilization



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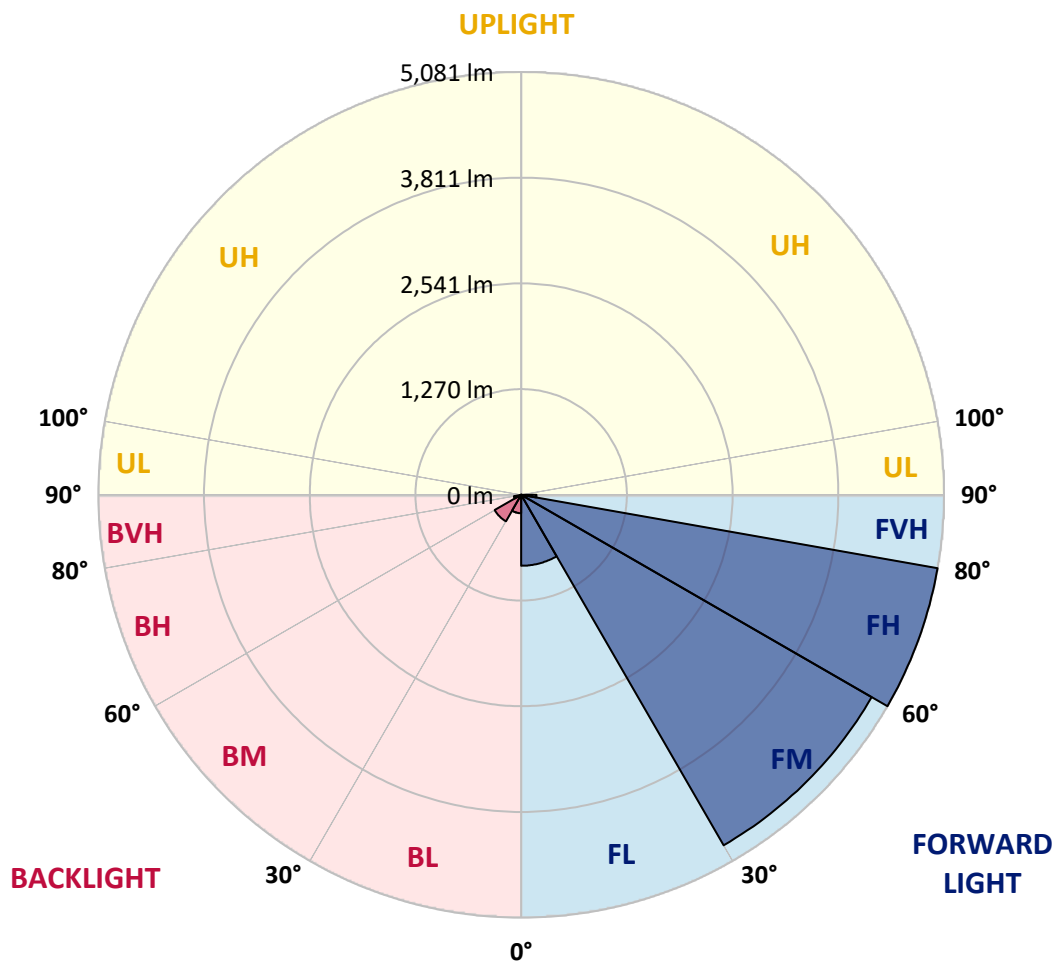
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 853.0 | 7.3 | | | |
| FM | (30°-60°) | 4863.3 | 41.7 | | | |
| FH | (60°-80°) | 5081.5 | 43.6 | | | G3/7500 |
| FVH | (80°-90°) | 184.2 | 1.6 | | | G2/225 |
| BL | (0°-30°) | 221.1 | 1.9 | B1/500 | | |
| BM | (30°-60°) | 366.8 | 3.1 | B1/1000 | | |
| BH | (60°-80°) | 88.6 | 0.8 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 6.0 | 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-G3

Type IV Short



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 40° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1742.7 | 1742.7 | 1742.7 | 1742.7 | 1742.7 | 1742.7 | 1742.7 | 1742.7 | 1742.7 | 1742.7 | 1742.7 |
| 2.5° | 1913.5 | 1903.1 | 1896.9 | 1888.5 | 1878.1 | 1869.1 | 1865.6 | 1839.9 | 1815.6 | 1782.3 | 1744.1 |
| 5° | 1948.9 | 1945.5 | 1934.3 | 1923.2 | 1910.7 | 1896.9 | 1889.2 | 1858.7 | 1824.0 | 1775.3 | 1708.7 |
| 7.5° | 1952.4 | 1948.2 | 1934.3 | 1919.1 | 1901.7 | 1885.0 | 1871.9 | 1841.3 | 1809.4 | 1760.1 | 1678.8 |
| 10° | 1946.8 | 1942.0 | 1931.6 | 1914.9 | 1893.4 | 1877.4 | 1864.2 | 1835.1 | 1808.0 | 1763.5 | 1673.3 |
| 12.5° | 1940.6 | 1935.7 | 1930.9 | 1922.5 | 1903.8 | 1892.7 | 1881.6 | 1853.8 | 1829.5 | 1792.0 | 1693.4 |
| 15° | 1946.8 | 1944.1 | 1949.6 | 1946.1 | 1935.7 | 1926.0 | 1914.9 | 1889.9 | 1867.7 | 1836.4 | 1730.2 |
| 17.5° | 1973.2 | 1973.2 | 1990.6 | 1992.7 | 1982.9 | 1969.1 | 1953.1 | 1928.1 | 1909.4 | 1883.0 | 1774.0 |
| 20° | 2035.0 | 2032.9 | 2055.2 | 2059.3 | 2035.7 | 2014.2 | 1990.6 | 1960.0 | 1945.5 | 1928.8 | 1817.0 |
| 22.5° | 2141.2 | 2131.5 | 2144.7 | 2140.6 | 2094.0 | 2060.7 | 2031.5 | 1994.1 | 1986.4 | 1978.8 | 1864.9 |
| 25° | 2279.4 | 2273.9 | 2282.9 | 2241.9 | 2160.0 | 2114.9 | 2080.2 | 2037.8 | 2037.8 | 2045.4 | 1919.1 |
| 27.5° | 2480.1 | 2459.2 | 2428.7 | 2356.5 | 2233.6 | 2176.0 | 2138.5 | 2093.3 | 2105.1 | 2133.6 | 1990.6 |
| 30° | 2685.6 | 2662.7 | 2592.6 | 2481.5 | 2323.2 | 2262.8 | 2219.0 | 2171.8 | 2199.6 | 2251.6 | 2086.4 |
| 32.5° | 2888.3 | 2862.6 | 2763.4 | 2623.1 | 2451.6 | 2391.2 | 2348.8 | 2296.8 | 2343.3 | 2430.8 | 2226.6 |
| 35° | 3084.8 | 3061.9 | 2947.3 | 2782.1 | 2622.4 | 2572.4 | 2533.5 | 2488.4 | 2548.1 | 2670.3 | 2424.5 |
| 37.5° | 3305.6 | 3280.6 | 3141.1 | 2961.9 | 2830.0 | 2793.9 | 2765.4 | 2720.3 | 2824.4 | 3003.6 | 2700.2 |
| 40° | 3577.1 | 3534.7 | 3346.6 | 3168.1 | 3070.2 | 3052.9 | 3033.4 | 3027.2 | 3189.0 | 3436.8 | 3067.5 |
| 42.5° | 3888.1 | 3818.7 | 3561.8 | 3385.5 | 3334.1 | 3346.6 | 3341.7 | 3369.5 | 3645.1 | 3975.6 | 3514.6 |
| 45° | 4199.2 | 4109.6 | 3801.3 | 3617.4 | 3624.3 | 3668.0 | 3695.1 | 3806.2 | 4216.5 | 4593.5 | 3995.7 |
| 47.5° | 4463.0 | 4374.8 | 4031.2 | 3868.0 | 3951.3 | 4037.4 | 4111.0 | 4321.4 | 4803.9 | 5201.8 | 4370.0 |
| 50° | 4688.7 | 4605.4 | 4274.9 | 4143.6 | 4331.1 | 4470.0 | 4589.4 | 4901.1 | 5435.7 | 5664.9 | 4632.4 |
| 52.5° | 4873.4 | 4817.8 | 4527.6 | 4459.5 | 4765.0 | 4968.5 | 5143.4 | 5517.0 | 5995.4 | 6041.2 | 4836.6 |
| 55° | 5053.2 | 5013.6 | 4799.1 | 4835.2 | 5274.7 | 5551.7 | 5773.2 | 6170.3 | 6477.2 | 6355.0 | 5032.4 |
| 57.5° | 5260.1 | 5224.0 | 5108.7 | 5311.5 | 5944.7 | 6293.2 | 6534.8 | 6749.4 | 6901.4 | 6675.8 | 5217.0 |
| 60° | 5471.2 | 5450.3 | 5453.1 | 5840.5 | 6714.0 | 7048.6 | 7181.9 | 7237.5 | 7318.0 | 6977.8 | 5227.5 |
| 62.5° | 5672.5 | 5712.1 | 5846.8 | 6429.3 | 7450.6 | 7707.5 | 7774.9 | 7829.7 | 7735.3 | 7025.7 | 4829.6 |
| 65° | 6013.4 | 6078.0 | 6399.4 | 7217.3 | 8260.9 | 8535.8 | 8605.3 | 8417.1 | 7801.3 | 6406.4 | 3928.4 |
| 67.5° | 6180.0 | 6298.1 | 6871.6 | 7951.9 | 9046.8 | 9352.3 | 9326.7 | 8455.3 | 7000.7 | 4885.2 | 2521.0 |
| 69° | 6145.3 | 6271.0 | 6980.6 | 8176.9 | 9307.9 | 9584.9 | 9421.8 | 7988.0 | 5964.1 | 3538.9 | 1547.6 |
| 70° | 6007.9 | 6134.9 | 6924.3 | 8168.5 | 9341.2 | 9560.6 | 9245.4 | 7411.1 | 5042.8 | 2587.7 | 967.9 |
| 72.5° | 5017.1 | 5126.8 | 6147.4 | 7383.3 | 8605.3 | 8426.8 | 7734.6 | 5134.4 | 2457.2 | 704.7 | 218.0 |
| 75° | 3088.3 | 3149.4 | 4410.9 | 5562.1 | 6499.4 | 6041.2 | 5153.2 | 2554.4 | 732.5 | 199.3 | 120.8 |
| 77.5° | 1631.6 | 1659.4 | 2414.8 | 3278.5 | 4120.0 | 3409.1 | 2641.2 | 996.3 | 337.4 | 125.0 | 87.5 |
| 80° | 964.4 | 985.2 | 1300.4 | 1499.0 | 1783.0 | 1489.3 | 1056.0 | 611.7 | 241.6 | 78.5 | 77.8 |
| 82.5° | 552.0 | 565.2 | 942.9 | 833.2 | 702.6 | 599.9 | 525.6 | 579.7 | 145.1 | 52.8 | 80.5 |
| 85° | 202.7 | 205.5 | 530.5 | 633.9 | 418.0 | 248.6 | 261.1 | 480.5 | 38.9 | 33.3 | 63.2 |
| 87.5° | 94.4 | 92.3 | 272.9 | 388.1 | 244.4 | 157.6 | 203.4 | 105.5 | 15.3 | 21.5 | 17.4 |
| 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° | 1742.7 | 1742.7 | 1742.7 | 1742.7 | 1742.7 | 1742.7 | 1742.7 | 1742.7 | 1742.7 | 1742.7 | 1742.7 |
| 2.5° | 1721.9 | 1696.2 | 1649.7 | 1601.8 | 1553.2 | 1515.7 | 1478.9 | 1449.7 | 1440.0 | 1421.9 | 1423.3 |
| 5° | 1669.1 | 1621.9 | 1524.7 | 1426.1 | 1323.4 | 1238.6 | 1158.8 | 1094.2 | 1063.0 | 1031.0 | 1031.0 |
| 7.5° | 1623.3 | 1554.6 | 1402.5 | 1242.1 | 1076.2 | 936.6 | 811.0 | 716.5 | 664.5 | 622.8 | 622.1 |
| 10° | 1605.9 | 1512.9 | 1300.4 | 1070.6 | 839.4 | 649.2 | 499.9 | 404.1 | 354.8 | 322.9 | 321.5 |
| 12.5° | 1613.6 | 1498.3 | 1222.0 | 912.3 | 622.1 | 417.3 | 289.5 | 227.7 | 206.9 | 197.2 | 197.2 |
| 15° | 1635.8 | 1494.2 | 1143.5 | 757.5 | 439.5 | 261.1 | 192.3 | 175.7 | 174.3 | 174.3 | 174.3 |
| 17.5° | 1662.9 | 1495.5 | 1063.0 | 606.8 | 299.2 | 186.8 | 165.9 | 163.9 | 165.2 | 165.2 | 165.2 |
| 20° | 1690.6 | 1496.2 | 976.2 | 467.3 | 211.1 | 162.5 | 156.2 | 155.5 | 156.9 | 156.9 | 157.6 |
| 22.5° | 1724.7 | 1499.7 | 889.4 | 349.2 | 174.3 | 153.4 | 148.6 | 148.6 | 149.3 | 149.3 | 148.6 |
| 25° | 1763.5 | 1506.7 | 799.1 | 259.0 | 159.0 | 147.2 | 143.0 | 142.3 | 143.0 | 142.3 | 141.6 |
| 27.5° | 1812.1 | 1516.4 | 698.5 | 202.7 | 152.1 | 140.9 | 137.5 | 137.5 | 136.8 | 136.1 | 135.4 |
| 30° | 1873.2 | 1527.5 | 585.3 | 172.2 | 145.1 | 135.4 | 131.9 | 131.2 | 130.5 | 129.1 | 129.1 |
| 32.5° | 1966.3 | 1551.8 | 473.5 | 156.2 | 137.5 | 127.8 | 125.0 | 125.0 | 123.6 | 122.2 | 121.5 |
| 35° | 2109.3 | 1599.7 | 373.5 | 146.5 | 129.1 | 119.4 | 115.9 | 115.9 | 114.6 | 113.9 | 113.2 |
| 37.5° | 2307.2 | 1672.6 | 290.2 | 137.5 | 120.8 | 110.4 | 106.9 | 106.2 | 104.8 | 103.5 | 102.8 |
| 40° | 2570.3 | 1762.9 | 228.4 | 129.1 | 112.5 | 101.4 | 98.6 | 97.2 | 94.4 | 92.3 | 92.3 |
| 42.5° | 2900.8 | 1865.6 | 185.4 | 120.1 | 102.8 | 93.0 | 91.0 | 88.9 | 84.0 | 81.9 | 81.2 |
| 45° | 3246.6 | 1958.0 | 156.9 | 109.7 | 93.0 | 84.7 | 83.3 | 79.8 | 73.6 | 71.5 | 71.5 |
| 47.5° | 3495.8 | 1979.5 | 138.2 | 100.0 | 84.0 | 75.7 | 75.0 | 68.7 | 63.2 | 61.8 | 61.1 |
| 50° | 3651.4 | 1937.1 | 122.9 | 90.3 | 75.7 | 67.3 | 65.3 | 57.6 | 54.2 | 52.8 | 52.1 |
| 52.5° | 3756.2 | 1861.4 | 110.4 | 81.9 | 68.0 | 59.7 | 54.9 | 49.3 | 46.5 | 45.1 | 45.1 |
| 55° | 3840.2 | 1754.5 | 97.9 | 74.3 | 61.8 | 53.5 | 46.5 | 42.4 | 39.6 | 38.2 | 38.2 |
| 57.5° | 3863.8 | 1609.4 | 85.4 | 68.0 | 55.5 | 47.2 | 39.6 | 36.8 | 33.3 | 32.6 | 32.6 |
| 60° | 3692.3 | 1347.7 | 75.7 | 60.4 | 50.0 | 41.0 | 34.7 | 31.2 | 27.8 | 27.1 | 26.4 |
| 62.5° | 3240.3 | 1042.9 | 66.7 | 53.5 | 43.7 | 35.4 | 29.9 | 25.7 | 22.9 | 22.9 | 22.9 |
| 65° | 2471.7 | 699.2 | 58.3 | 46.5 | 38.2 | 29.9 | 25.7 | 20.8 | 19.4 | 19.4 | 20.1 |
| 67.5° | 1479.6 | 380.5 | 50.0 | 39.6 | 32.6 | 25.0 | 21.5 | 18.1 | 17.4 | 18.1 | 18.1 |
| 69° | 867.2 | 223.6 | 45.1 | 35.4 | 28.5 | 22.2 | 18.7 | 16.0 | 17.4 | 18.1 | 18.1 |
| 70° | 535.3 | 150.7 | 41.7 | 31.9 | 25.7 | 20.1 | 17.4 | 15.3 | 16.7 | 17.4 | 17.4 |
| 72.5° | 149.3 | 77.8 | 33.3 | 25.0 | 20.8 | 16.7 | 13.9 | 13.9 | 16.0 | 16.7 | 16.7 |
| 75° | 97.2 | 57.6 | 25.7 | 18.7 | 16.0 | 13.2 | 11.8 | 13.2 | 15.3 | 16.0 | 16.0 |
| 77.5° | 80.5 | 47.2 | 20.8 | 15.3 | 13.2 | 12.5 | 11.1 | 11.8 | 13.9 | 14.6 | 14.6 |
| 80° | 73.6 | 33.3 | 16.7 | 13.9 | 11.8 | 11.1 | 10.4 | 9.7 | 12.5 | 13.2 | 13.2 |
| 82.5° | 70.1 | 26.4 | 14.6 | 12.5 | 11.1 | 9.7 | 9.0 | 9.7 | 11.1 | 11.8 | 12.5 |
| 85° | 43.7 | 17.4 | 13.2 | 11.8 | 9.7 | 9.0 | 9.0 | 9.0 | 10.4 | 11.1 | 11.1 |
| 87.5° | 16.0 | 13.9 | 11.8 | 9.7 | 8.3 | 8.3 | 8.3 | 8.3 | 9.0 | 10.4 | 10.4 |
| 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)