

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: P300434

Luminaire Tested: **GLNA-AF-04-LED-E1-T4FT-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P300434
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24295)
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-T4FT-7027-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV Forward Throw OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13778.9 lumens
Efficiency: N/A
Efficacy: 106.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G3

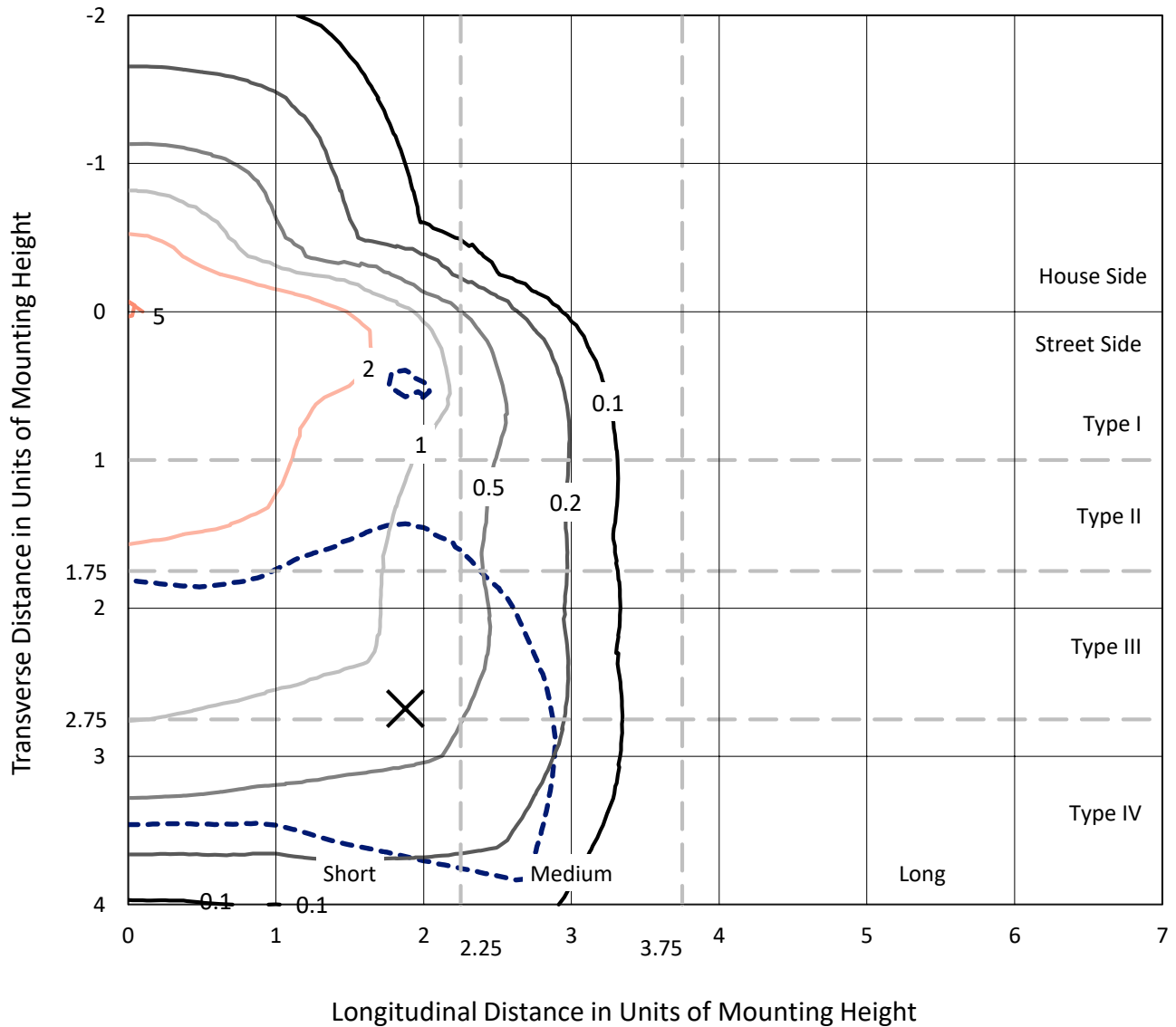
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

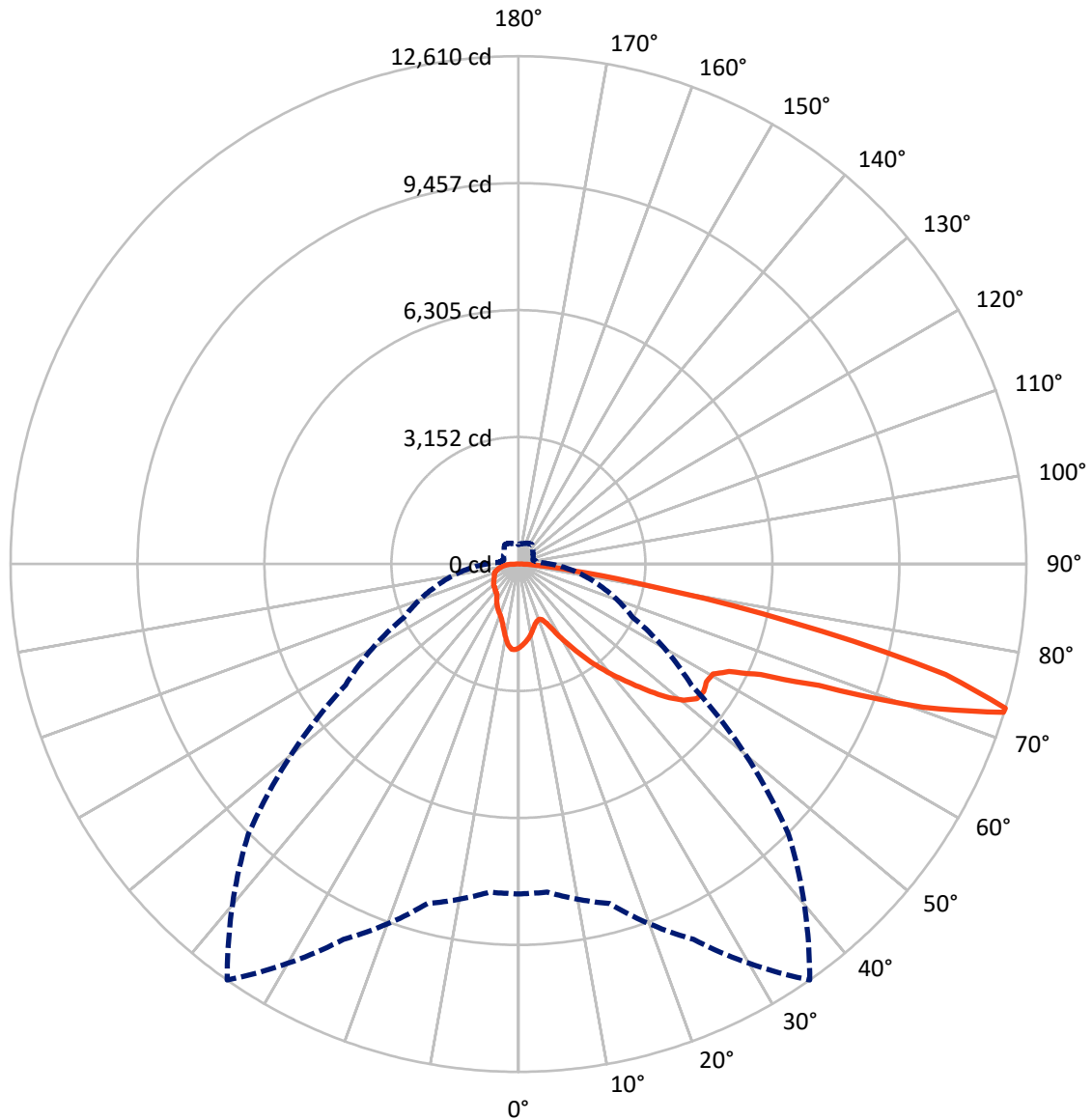
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.2 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2628.0 | 0.0 | 2628.0 |
| | % Fixture | 19.1 | 0.0 | 19.1 |
| Street Side | Lumens | 11150.9 | 0.0 | 11150.9 |
| | % Fixture | 80.9 | 0.0 | 80.9 |
| Total | Lumens | 13778.9 | 0.0 | 13778.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 188.3 | 1.4 |
| 10°-20° | 469.9 | 3.4 |
| 20°-30° | 759.6 | 5.5 |
| 30°-40° | 1273.8 | 9.2 |
| 40°-50° | 1963.5 | 14.3 |
| 50°-60° | 2634.3 | 19.1 |
| 60°-70° | 3509.4 | 25.5 |
| 70°-80° | 2676.6 | 19.4 |
| 80°-90° | 303.4 | 2.2 |
| 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° | 13778.9 | 100.0 |
| 0°-180° | 13778.9 | 100.0 |



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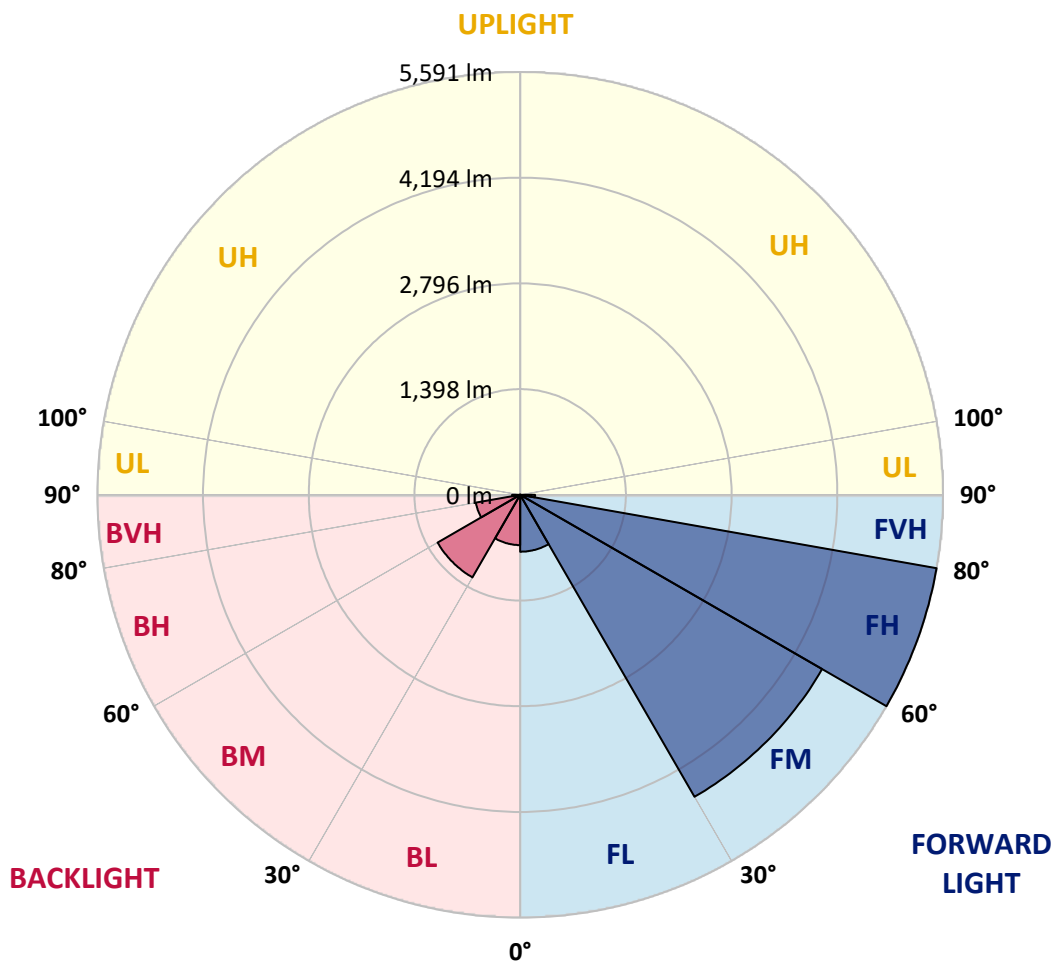
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 752.8 | 5.5 | | | |
| FM | (30°-60°) | 4610.5 | 33.5 | | | |
| FH | (60°-80°) | 5591.5 | 40.6 | | | G3/7500 |
| FVH | (80°-90°) | 196.1 | 1.4 | | | G2/225 |
| BL | (0°-30°) | 665.0 | 4.8 | B2/1000 | | |
| BM | (30°-60°) | 1261.2 | 9.2 | B2/2500 | | |
| BH | (60°-80°) | 594.6 | 4.3 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 107.3 | 0.8 | | | G2/225 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|---------|---------|--------|---------|---------|--------|--------|--------|--------|--------|--------|
| 0° | 2079.7 | 2079.7 | 2079.7 | 2079.7 | 2079.7 | 2079.7 | 2079.7 | 2079.7 | 2079.7 | 2079.7 | 2079.7 |
| 2.5° | 1997.6 | 2001.6 | 1997.0 | 2002.9 | 2012.8 | 2023.4 | 2030.7 | 2041.3 | 2053.2 | 2069.7 | 2073.7 |
| 5° | 1903.7 | 1909.6 | 1909.6 | 1920.2 | 1939.4 | 1956.6 | 1972.5 | 1989.7 | 2014.8 | 2043.3 | 2054.5 |
| 7.5° | 1800.4 | 1803.7 | 1809.7 | 1825.6 | 1853.4 | 1877.9 | 1900.4 | 1928.1 | 1962.6 | 2000.3 | 2020.1 |
| 10° | 1676.0 | 1680.7 | 1689.9 | 1712.4 | 1750.2 | 1783.9 | 1816.3 | 1854.7 | 1898.4 | 1945.3 | 1970.5 |
| 12.5° | 1588.0 | 1586.7 | 1590.7 | 1607.2 | 1640.3 | 1681.3 | 1728.3 | 1777.3 | 1830.9 | 1885.8 | 1916.2 |
| 15° | 1558.3 | 1551.0 | 1535.8 | 1531.8 | 1549.7 | 1590.7 | 1644.9 | 1705.2 | 1769.3 | 1835.5 | 1873.2 |
| 17.5° | 1576.8 | 1564.2 | 1522.5 | 1492.1 | 1489.4 | 1520.5 | 1578.1 | 1645.6 | 1719.7 | 1800.4 | 1847.4 |
| 20° | 1693.2 | 1663.5 | 1560.9 | 1490.1 | 1465.6 | 1480.8 | 1531.1 | 1602.6 | 1689.9 | 1797.1 | 1857.3 |
| 22.5° | 1971.8 | 1928.1 | 1710.5 | 1578.8 | 1496.1 | 1477.5 | 1515.3 | 1591.3 | 1693.2 | 1838.2 | 1914.9 |
| 25° | 2377.4 | 2315.2 | 1967.2 | 1799.8 | 1629.1 | 1530.5 | 1539.1 | 1617.2 | 1740.2 | 1933.4 | 2026.1 |
| 27.5° | 2697.7 | 2657.3 | 2302.7 | 2111.4 | 1871.2 | 1673.4 | 1616.5 | 1682.0 | 1836.2 | 2089.6 | 2184.2 |
| 30° | 2888.2 | 2863.8 | 2661.3 | 2464.8 | 2180.2 | 1901.0 | 1764.7 | 1803.7 | 1986.4 | 2306.0 | 2384.0 |
| 32.5° | 3109.2 | 3094.7 | 2995.4 | 2814.8 | 2513.7 | 2200.1 | 1999.6 | 1985.7 | 2187.5 | 2566.0 | 2601.7 |
| 35° | 3338.2 | 3333.6 | 3275.3 | 3145.6 | 2871.7 | 2594.5 | 2311.3 | 2217.3 | 2406.5 | 2836.0 | 2813.5 |
| 37.5° | 3551.3 | 3543.3 | 3509.6 | 3434.1 | 3246.2 | 3017.9 | 2628.9 | 2454.8 | 2642.8 | 3094.0 | 2994.1 |
| 40° | 3943.6 | 3881.4 | 3765.6 | 3708.7 | 3624.7 | 3374.6 | 2881.0 | 2676.5 | 2887.6 | 3340.2 | 3150.3 |
| 42.5° | 4422.0 | 4320.8 | 4105.1 | 4027.0 | 4015.1 | 3655.8 | 3053.0 | 2891.6 | 3134.4 | 3584.3 | 3303.8 |
| 45° | 4798.5 | 4703.2 | 4517.3 | 4418.7 | 4462.4 | 3910.5 | 3225.7 | 3121.2 | 3388.5 | 3840.4 | 3461.9 |
| 47.5° | 5200.2 | 5050.6 | 4804.5 | 4834.3 | 4929.5 | 4151.4 | 3401.7 | 3368.0 | 3667.0 | 4126.9 | 3658.4 |
| 50° | 5214.7 | 5100.3 | 4992.4 | 5170.4 | 5318.6 | 4373.1 | 3622.1 | 3626.7 | 4007.8 | 4487.5 | 3919.8 |
| 52.5° | 4912.3 | 4887.9 | 5059.2 | 5339.1 | 5552.8 | 4548.4 | 3872.8 | 3894.0 | 4443.9 | 4901.7 | 4207.0 |
| 55° | 4806.5 | 4778.7 | 4976.5 | 5280.2 | 5584.6 | 4693.3 | 4144.8 | 4183.2 | 4971.2 | 5338.5 | 4486.9 |
| 57.5° | 5064.5 | 5003.0 | 5016.2 | 5252.4 | 5507.2 | 4852.1 | 4441.2 | 4518.6 | 5544.2 | 5720.2 | 4666.9 |
| 60° | 5785.8 | 5654.1 | 5404.0 | 5398.0 | 5548.9 | 5090.3 | 4784.0 | 4878.6 | 6139.8 | 5902.9 | 4596.7 |
| 62.5° | 6797.5 | 6665.8 | 6197.3 | 5892.3 | 5869.8 | 5483.4 | 5204.8 | 5229.9 | 6483.8 | 5655.4 | 4168.6 |
| 65° | 7892.6 | 7774.8 | 7251.4 | 6820.6 | 6612.9 | 6134.5 | 5693.8 | 5386.8 | 6371.3 | 4974.5 | 3419.6 |
| 67.5° | 9221.9 | 9095.5 | 8645.6 | 8247.9 | 8048.1 | 7185.2 | 6037.2 | 5236.6 | 5657.4 | 3853.6 | 2458.2 |
| 70° | 10151.5 | 10022.5 | 9845.2 | 10167.4 | 10656.4 | 8701.1 | 6081.5 | 4625.8 | 4225.5 | 2561.4 | 1479.5 |
| 72.5° | 8938.7 | 8878.5 | 9202.0 | 10559.1 | 12595.8 | 9620.9 | 5497.3 | 3368.0 | 2454.2 | 1359.8 | 856.2 |
| 73° | 8189.7 | 8176.4 | 8728.3 | 10284.5 | 12609.7 | 9479.3 | 5241.2 | 3130.4 | 2104.8 | 1202.9 | 782.8 |
| 75° | 3698.1 | 3804.7 | 5014.2 | 7855.5 | 10955.5 | 7811.2 | 3688.9 | 1795.8 | 1189.0 | 831.1 | 590.9 |
| 77.5° | 888.6 | 925.7 | 1568.9 | 3730.6 | 6918.6 | 4654.9 | 1671.4 | 888.0 | 760.3 | 586.9 | 431.4 |
| 80° | 378.5 | 391.1 | 604.1 | 1378.3 | 3257.5 | 1874.5 | 770.2 | 594.9 | 526.0 | 409.6 | 302.4 |
| 82.5° | 210.4 | 223.6 | 342.8 | 625.3 | 1314.8 | 639.2 | 469.8 | 414.2 | 346.1 | 246.8 | 196.5 |
| 85° | 119.1 | 126.4 | 200.5 | 349.4 | 557.1 | 256.7 | 281.2 | 275.3 | 195.2 | 127.0 | 96.6 |
| 87.5° | 56.2 | 60.9 | 96.6 | 162.1 | 218.4 | 100.6 | 142.9 | 157.5 | 122.4 | 77.4 | 50.3 |
| 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):

| | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2079.7 | 2079.7 | 2079.7 | 2079.7 | 2079.7 | 2079.7 | 2079.7 | 2079.7 | 2079.7 | 2079.7 |
| 2.5° | 2078.3 | 2090.3 | 2104.2 | 2111.4 | 2118.0 | 2126.0 | 2133.9 | 2133.9 | 2135.3 | 2135.9 |
| 5° | 2063.8 | 2088.3 | 2110.1 | 2119.4 | 2121.4 | 2121.4 | 2119.4 | 2108.8 | 2099.5 | 2103.5 |
| 7.5° | 2033.4 | 2069.1 | 2087.6 | 2084.3 | 2059.2 | 2030.0 | 2005.6 | 1975.8 | 1960.6 | 1957.9 |
| 10° | 1989.7 | 2030.7 | 2034.0 | 2000.9 | 1938.7 | 1876.5 | 1824.9 | 1774.6 | 1750.8 | 1744.9 |
| 12.5° | 1941.4 | 1979.1 | 1957.9 | 1889.8 | 1789.9 | 1699.2 | 1633.7 | 1582.7 | 1560.2 | 1554.3 |
| 15° | 1902.3 | 1928.1 | 1874.5 | 1767.4 | 1641.6 | 1545.7 | 1491.4 | 1453.7 | 1437.8 | 1433.2 |
| 17.5° | 1881.8 | 1887.1 | 1789.2 | 1644.3 | 1510.6 | 1430.6 | 1396.8 | 1378.9 | 1373.0 | 1369.7 |
| 20° | 1891.8 | 1854.7 | 1707.8 | 1529.8 | 1403.4 | 1347.2 | 1339.2 | 1334.6 | 1333.3 | 1331.3 |
| 22.5° | 1941.4 | 1844.8 | 1633.0 | 1421.3 | 1309.5 | 1285.0 | 1291.6 | 1290.9 | 1289.6 | 1288.3 |
| 25° | 2030.0 | 1853.4 | 1560.2 | 1318.1 | 1230.7 | 1225.4 | 1237.3 | 1237.3 | 1232.1 | 1232.1 |
| 27.5° | 2147.2 | 1871.2 | 1478.9 | 1220.1 | 1159.3 | 1159.9 | 1169.2 | 1166.5 | 1160.6 | 1156.6 |
| 30° | 2290.1 | 1882.5 | 1383.6 | 1132.1 | 1092.4 | 1089.8 | 1092.4 | 1081.2 | 1063.3 | 1062.0 |
| 32.5° | 2436.3 | 1868.6 | 1273.1 | 1054.1 | 1021.6 | 1015.7 | 1013.7 | 997.8 | 977.3 | 971.4 |
| 35° | 2568.7 | 1817.6 | 1160.6 | 991.9 | 954.1 | 940.9 | 950.2 | 944.9 | 926.4 | 921.7 |
| 37.5° | 2665.3 | 1723.0 | 1059.4 | 936.9 | 905.8 | 902.5 | 908.5 | 910.5 | 888.6 | 884.0 |
| 40° | 2730.1 | 1594.7 | 972.7 | 890.6 | 896.6 | 884.0 | 864.2 | 850.3 | 843.6 | 841.7 |
| 42.5° | 2782.4 | 1461.0 | 899.9 | 868.8 | 898.6 | 862.2 | 819.2 | 796.7 | 808.6 | 813.9 |
| 45° | 2842.6 | 1330.6 | 839.0 | 841.7 | 888.6 | 837.0 | 788.1 | 766.2 | 770.9 | 772.2 |
| 47.5° | 2925.3 | 1171.8 | 773.5 | 798.0 | 855.6 | 819.8 | 768.9 | 737.8 | 715.9 | 706.0 |
| 50° | 3039.8 | 983.9 | 705.4 | 749.0 | 823.1 | 807.3 | 739.1 | 706.0 | 665.7 | 656.4 |
| 52.5° | 3119.2 | 808.6 | 649.1 | 708.0 | 794.0 | 782.1 | 715.3 | 672.3 | 629.9 | 622.0 |
| 55° | 3076.2 | 671.6 | 600.1 | 662.3 | 755.6 | 751.0 | 695.4 | 637.9 | 604.8 | 598.2 |
| 57.5° | 2861.1 | 584.9 | 562.4 | 619.3 | 708.7 | 724.5 | 669.0 | 608.7 | 584.9 | 580.3 |
| 60° | 2450.9 | 530.7 | 538.6 | 590.2 | 670.3 | 698.1 | 642.5 | 592.9 | 577.0 | 573.7 |
| 62.5° | 1901.7 | 494.3 | 520.7 | 569.0 | 640.5 | 679.5 | 627.9 | 590.9 | 584.9 | 581.0 |
| 65° | 1362.4 | 465.2 | 501.6 | 547.9 | 613.4 | 662.3 | 622.6 | 588.2 | 589.6 | 586.3 |
| 67.5° | 925.7 | 439.4 | 478.4 | 524.1 | 586.9 | 647.1 | 615.4 | 579.0 | 595.5 | 591.5 |
| 70° | 647.8 | 414.2 | 451.3 | 493.6 | 553.8 | 626.0 | 602.1 | 565.1 | 563.8 | 547.9 |
| 72.5° | 505.5 | 381.1 | 414.2 | 451.3 | 511.5 | 596.2 | 575.7 | 534.0 | 512.1 | 495.6 |
| 73° | 482.4 | 373.2 | 405.0 | 442.0 | 502.2 | 588.9 | 568.4 | 525.4 | 500.9 | 485.7 |
| 75° | 399.0 | 338.8 | 367.9 | 401.0 | 462.5 | 554.5 | 532.7 | 486.3 | 455.2 | 446.0 |
| 77.5° | 313.6 | 289.8 | 317.6 | 347.4 | 407.6 | 504.2 | 479.7 | 435.4 | 418.2 | 410.2 |
| 80° | 232.3 | 240.2 | 264.7 | 291.1 | 353.3 | 450.6 | 428.8 | 384.4 | 461.2 | 442.0 |
| 82.5° | 163.4 | 182.0 | 204.5 | 228.3 | 296.4 | 398.3 | 371.9 | 326.2 | 337.5 | 280.6 |
| 85° | 96.6 | 119.1 | 140.3 | 160.8 | 213.7 | 330.2 | 307.0 | 260.0 | 213.1 | 203.1 |
| 87.5° | 56.2 | 66.2 | 72.1 | 93.3 | 146.9 | 248.8 | 216.4 | 192.5 | 110.5 | 74.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)