

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: P300613

Luminaire Tested: **GLNA-AF-04-LED-E1-RW-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P300613
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24166)
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-RW-7027-800
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 2700K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Rectangular
Wide Type I OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17169.3 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B4 - U0 - G4

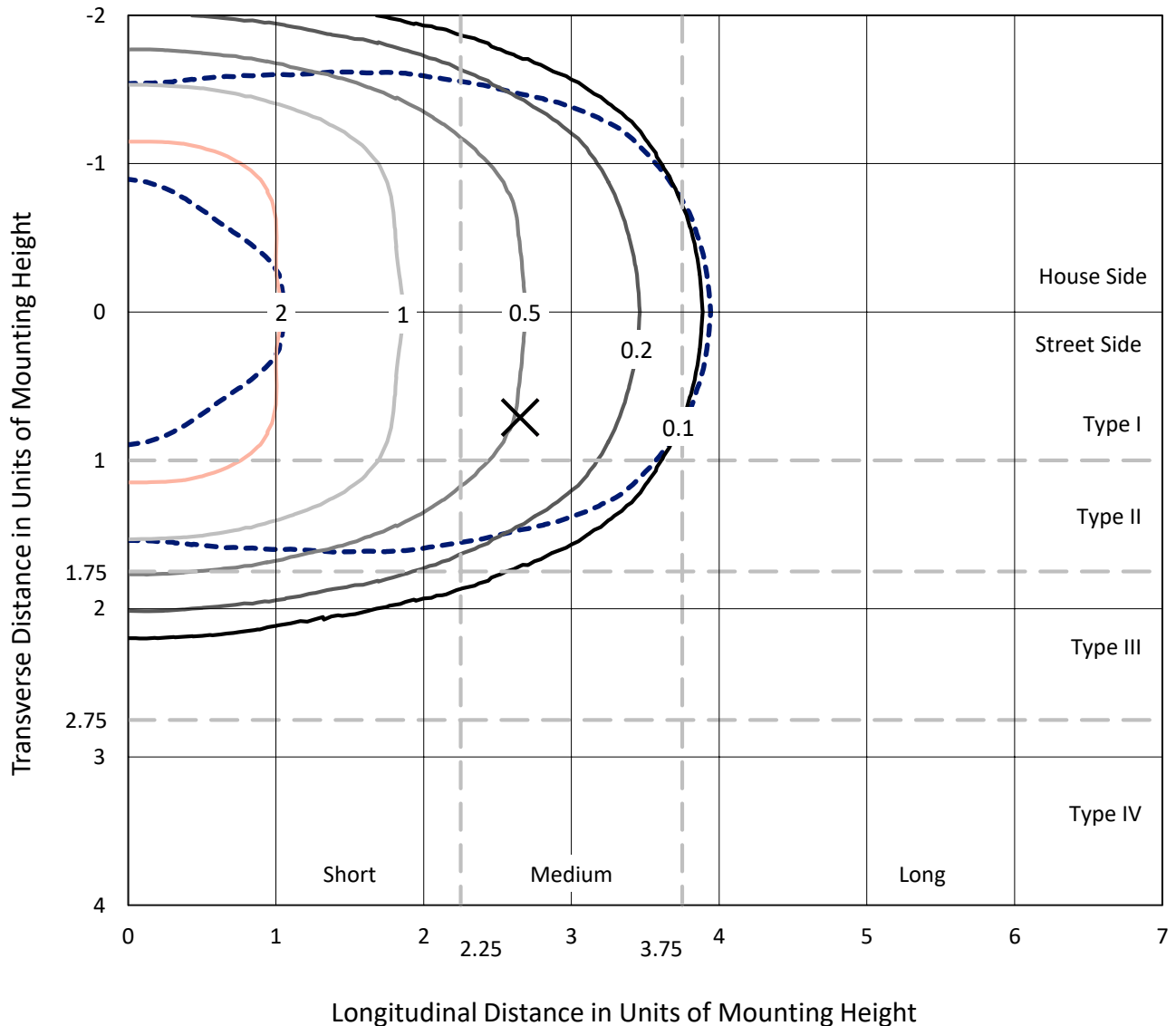
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

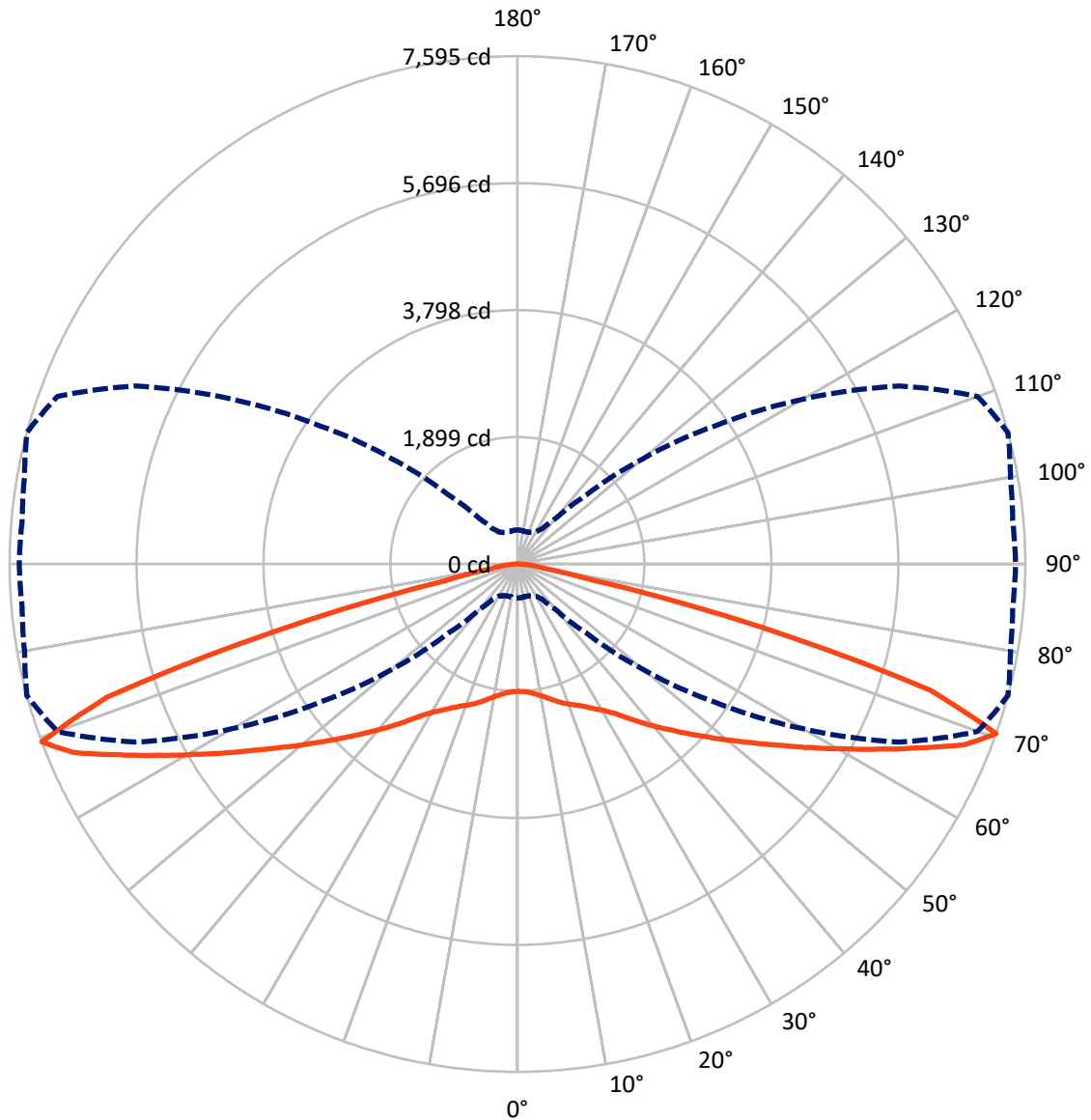
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 8584.7 | 0.0 | 8584.7 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 8584.7 | 0.0 | 8584.7 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 17169.3 | 0.0 | 17169.3 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 182.7 | 1.1 |
| 10°-20° | 567.5 | 3.3 |
| 20°-30° | 1068.2 | 6.2 |
| 30°-40° | 1891.5 | 11.0 |
| 40°-50° | 3163.3 | 18.4 |
| 50°-60° | 4408.0 | 25.7 |
| 60°-70° | 4087.7 | 23.8 |
| 70°-80° | 1629.1 | 9.5 |
| 80°-90° | 171.2 | 1.0 |
| 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° | 17169.3 | 100.0 |
| 0°-180° | 17169.3 | 100.0 |

Coefficient of Utilization



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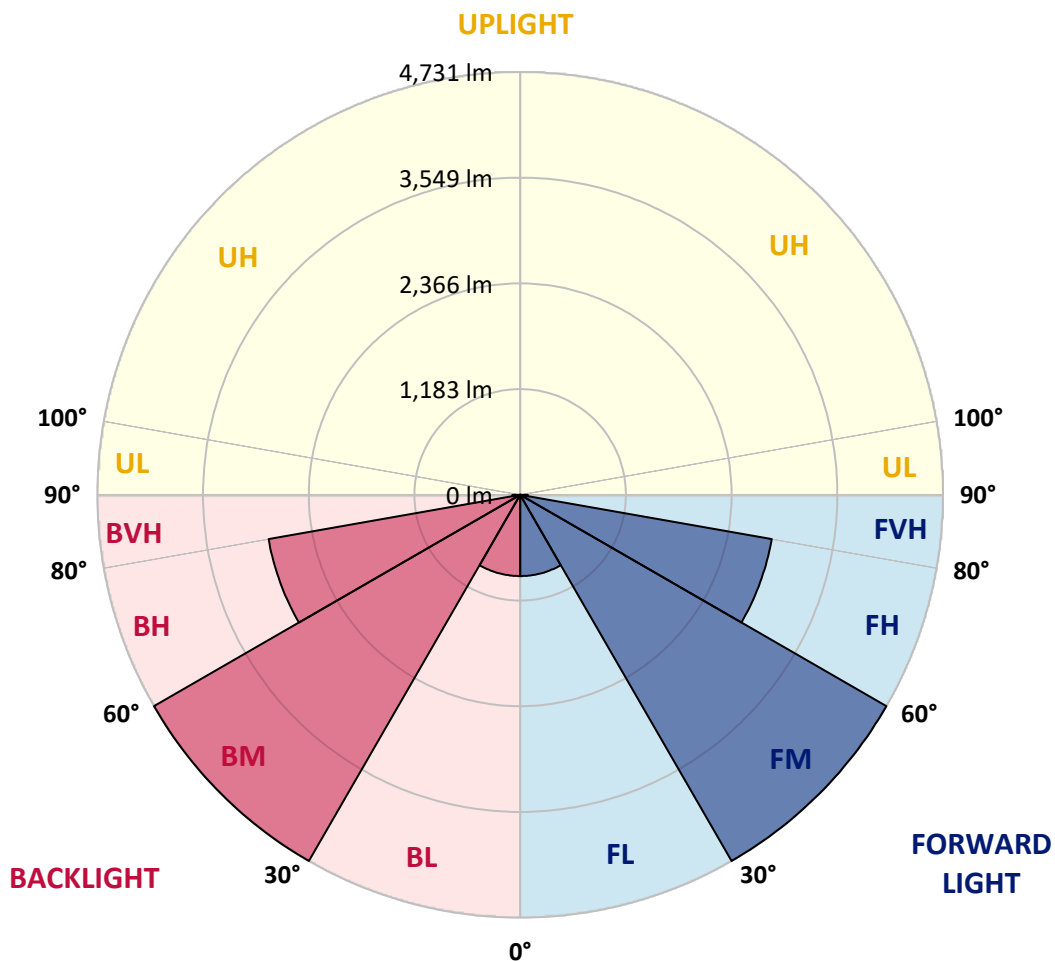
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 909.2 | 5.3 | | | |
| FM | (30°-60°) | 4731.4 | 27.6 | | | |
| FH | (60°-80°) | 2858.4 | 16.6 | | | G2/5000 |
| FVH | (80°-90°) | 85.6 | 0.5 | | | G1/100 |
| BL | (0°-30°) | 909.2 | 5.3 | B2/1000 | | |
| BM | (30°-60°) | 4731.4 | 27.6 | B3/5000 | | |
| BH | (60°-80°) | 2858.4 | 16.6 | B4/5000 | | G4/5000 |
| BVH | (80°-90°) | 85.6 | 0.5 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B4-U0-G4

Type II Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1904.5 | 1904.5 | 1904.5 | 1904.5 | 1904.5 | 1904.5 | 1904.5 | 1904.5 | 1904.5 | 1904.5 | 1904.5 |
| 2.5° | 1901.2 | 1899.6 | 1901.2 | 1900.4 | 1902.0 | 1902.0 | 1903.7 | 1906.9 | 1906.9 | 1909.3 | 1908.5 |
| 5° | 1882.6 | 1881.8 | 1884.2 | 1886.6 | 1889.1 | 1893.9 | 1898.8 | 1906.1 | 1911.8 | 1915.8 | 1919.9 |
| 7.5° | 1846.1 | 1846.1 | 1849.3 | 1855.0 | 1860.7 | 1871.2 | 1882.6 | 1897.2 | 1911.8 | 1924.0 | 1934.5 |
| 10° | 1816.0 | 1817.7 | 1821.7 | 1831.4 | 1841.2 | 1857.4 | 1872.8 | 1893.9 | 1914.2 | 1934.5 | 1950.7 |
| 12.5° | 1798.2 | 1800.6 | 1807.9 | 1822.5 | 1838.7 | 1860.7 | 1884.2 | 1911.0 | 1933.7 | 1958.0 | 1974.3 |
| 15° | 1803.9 | 1805.5 | 1816.0 | 1833.9 | 1855.0 | 1882.6 | 1914.2 | 1945.9 | 1972.6 | 1998.6 | 2020.5 |
| 17.5° | 1835.5 | 1837.9 | 1850.1 | 1870.4 | 1892.3 | 1924.8 | 1958.8 | 1994.5 | 2027.8 | 2057.0 | 2083.8 |
| 20° | 1892.3 | 1894.7 | 1910.2 | 1932.1 | 1958.0 | 1991.3 | 2025.4 | 2062.7 | 2100.0 | 2130.9 | 2160.9 |
| 22.5° | 1972.6 | 1976.7 | 1991.3 | 2013.2 | 2042.4 | 2078.1 | 2118.7 | 2158.5 | 2194.2 | 2222.6 | 2249.3 |
| 25° | 2078.1 | 2087.1 | 2100.8 | 2125.2 | 2156.0 | 2188.5 | 2232.3 | 2272.9 | 2307.0 | 2333.7 | 2353.2 |
| 27.5° | 2227.4 | 2239.6 | 2250.2 | 2273.7 | 2303.7 | 2334.5 | 2378.4 | 2414.1 | 2446.5 | 2472.5 | 2487.1 |
| 30° | 2425.4 | 2437.6 | 2448.1 | 2470.9 | 2498.5 | 2527.7 | 2569.1 | 2600.7 | 2621.0 | 2641.3 | 2640.5 |
| 32.5° | 2665.6 | 2678.6 | 2682.7 | 2707.0 | 2735.4 | 2767.0 | 2804.4 | 2822.2 | 2838.5 | 2840.9 | 2826.3 |
| 35° | 2934.2 | 2940.7 | 2956.9 | 2989.4 | 3021.8 | 3047.8 | 3083.5 | 3092.4 | 3092.4 | 3080.3 | 3047.8 |
| 37.5° | 3228.8 | 3232.8 | 3255.5 | 3292.1 | 3325.3 | 3352.1 | 3376.4 | 3394.3 | 3385.4 | 3359.4 | 3305.0 |
| 40° | 3551.7 | 3559.0 | 3591.5 | 3623.9 | 3661.3 | 3686.4 | 3712.4 | 3715.6 | 3706.7 | 3668.6 | 3594.7 |
| 42.5° | 3860.1 | 3866.6 | 3899.0 | 3950.1 | 3998.8 | 4033.7 | 4058.1 | 4062.9 | 4034.5 | 3999.6 | 3907.9 |
| 45° | 4125.4 | 4142.5 | 4184.7 | 4244.7 | 4315.3 | 4364.8 | 4398.1 | 4411.9 | 4386.7 | 4341.3 | 4235.0 |
| 47.5° | 4335.6 | 4352.6 | 4412.7 | 4484.1 | 4571.7 | 4652.1 | 4707.2 | 4736.4 | 4729.9 | 4695.9 | 4579.8 |
| 50° | 4489.8 | 4506.0 | 4570.9 | 4658.5 | 4760.8 | 4860.6 | 4954.7 | 5024.5 | 5048.9 | 5033.4 | 4927.1 |
| 52.5° | 4507.6 | 4534.4 | 4610.7 | 4728.3 | 4861.4 | 4997.7 | 5131.6 | 5250.1 | 5330.4 | 5342.6 | 5263.9 |
| 55° | 4258.5 | 4285.3 | 4390.8 | 4565.2 | 4763.2 | 4985.6 | 5199.8 | 5399.4 | 5557.6 | 5638.8 | 5597.4 |
| 57.5° | 3671.0 | 3718.9 | 3830.1 | 4034.5 | 4325.8 | 4658.5 | 5000.2 | 5354.8 | 5676.9 | 5891.9 | 5933.3 |
| 60° | 2813.3 | 2870.1 | 2982.1 | 3199.6 | 3524.1 | 3920.9 | 4377.0 | 4901.2 | 5470.0 | 5953.6 | 6242.5 |
| 62.5° | 1804.7 | 1858.2 | 1975.9 | 2165.0 | 2429.5 | 2859.6 | 3348.9 | 3971.2 | 4735.6 | 5499.2 | 6187.3 |
| 65° | 927.5 | 956.7 | 1018.4 | 1132.8 | 1338.9 | 1660.2 | 2099.2 | 2720.0 | 3593.9 | 4536.0 | 5530.9 |
| 67.5° | 587.5 | 593.2 | 607.0 | 623.2 | 675.9 | 787.1 | 991.6 | 1378.7 | 2097.6 | 3080.3 | 4244.7 |
| 70° | 508.0 | 508.0 | 501.5 | 499.0 | 505.5 | 521.0 | 552.6 | 642.7 | 885.3 | 1462.2 | 2448.1 |
| 72.5° | 465.0 | 460.1 | 448.7 | 439.8 | 438.2 | 438.2 | 444.7 | 458.5 | 497.4 | 595.6 | 958.3 |
| 75° | 428.4 | 414.7 | 399.2 | 388.7 | 384.6 | 380.6 | 379.8 | 382.2 | 390.3 | 405.7 | 457.7 |
| 77.5° | 383.8 | 366.0 | 348.1 | 337.6 | 332.7 | 327.0 | 322.1 | 316.5 | 312.4 | 317.3 | 340.0 |
| 80° | 330.3 | 310.0 | 296.2 | 289.7 | 284.8 | 276.7 | 266.2 | 256.4 | 247.5 | 245.9 | 259.7 |
| 82.5° | 266.2 | 242.6 | 243.4 | 245.9 | 236.9 | 225.6 | 214.2 | 203.7 | 188.3 | 180.1 | 188.3 |
| 85° | 215.0 | 202.9 | 197.2 | 212.6 | 199.6 | 182.6 | 164.7 | 146.1 | 121.7 | 102.2 | 111.2 |
| 87.5° | 83.6 | 83.6 | 125.0 | 192.3 | 172.8 | 141.2 | 120.9 | 103.1 | 64.1 | 49.5 | 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):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1904.5 | 1904.5 | 1904.5 | 1904.5 | 1904.5 | 1904.5 | 1904.5 | 1904.5 |
| 2.5° | 1907.7 | 1909.3 | 1908.5 | 1907.7 | 1907.7 | 1906.9 | 1907.7 | 1907.7 |
| 5° | 1922.3 | 1926.4 | 1926.4 | 1928.0 | 1928.0 | 1928.8 | 1929.6 | 1928.8 |
| 7.5° | 1944.2 | 1951.5 | 1956.4 | 1962.1 | 1962.9 | 1963.7 | 1965.3 | 1963.7 |
| 10° | 1966.1 | 1980.8 | 1991.3 | 2001.9 | 2006.7 | 2008.3 | 2010.0 | 2010.0 |
| 12.5° | 1993.7 | 2014.0 | 2032.7 | 2051.3 | 2060.3 | 2065.1 | 2065.1 | 2068.4 |
| 15° | 2039.2 | 2059.5 | 2081.4 | 2106.5 | 2121.9 | 2130.1 | 2132.5 | 2132.5 |
| 17.5° | 2103.3 | 2121.1 | 2139.8 | 2164.1 | 2183.6 | 2194.2 | 2196.6 | 2195.8 |
| 20° | 2177.9 | 2195.0 | 2205.5 | 2220.9 | 2238.0 | 2250.2 | 2253.4 | 2253.4 |
| 22.5° | 2263.1 | 2272.9 | 2274.5 | 2279.4 | 2293.2 | 2309.4 | 2316.7 | 2318.3 |
| 25° | 2357.3 | 2359.7 | 2353.2 | 2353.2 | 2362.1 | 2377.6 | 2384.9 | 2385.7 |
| 27.5° | 2479.0 | 2466.8 | 2450.6 | 2444.9 | 2450.6 | 2468.4 | 2477.4 | 2480.6 |
| 30° | 2630.7 | 2601.5 | 2564.2 | 2543.9 | 2540.7 | 2564.2 | 2580.4 | 2582.8 |
| 32.5° | 2804.4 | 2762.2 | 2712.7 | 2671.3 | 2660.7 | 2675.4 | 2694.8 | 2694.0 |
| 35° | 3010.5 | 2960.2 | 2900.1 | 2847.4 | 2823.0 | 2837.6 | 2865.2 | 2868.5 |
| 37.5° | 3248.2 | 3182.5 | 3113.5 | 3047.0 | 3008.9 | 3012.9 | 3042.1 | 3051.9 |
| 40° | 3513.6 | 3428.4 | 3341.6 | 3252.3 | 3197.9 | 3187.4 | 3223.1 | 3228.8 |
| 42.5° | 3797.6 | 3688.0 | 3578.5 | 3468.1 | 3398.4 | 3382.1 | 3423.5 | 3421.1 |
| 45° | 4100.3 | 3960.7 | 3832.5 | 3710.8 | 3628.0 | 3603.7 | 3637.7 | 3637.7 |
| 47.5° | 4425.7 | 4253.6 | 4101.1 | 3963.1 | 3873.1 | 3838.2 | 3870.6 | 3873.1 |
| 50° | 4770.5 | 4587.9 | 4408.6 | 4255.3 | 4147.3 | 4102.7 | 4144.9 | 4151.4 |
| 52.5° | 5113.8 | 4936.1 | 4755.1 | 4579.8 | 4449.2 | 4394.8 | 4443.5 | 4464.6 |
| 55° | 5461.9 | 5287.4 | 5114.6 | 4943.4 | 4788.4 | 4724.3 | 4776.2 | 4803.0 |
| 57.5° | 5829.5 | 5668.0 | 5503.3 | 5330.4 | 5181.1 | 5081.3 | 5136.5 | 5172.2 |
| 60° | 6260.3 | 6122.4 | 5951.2 | 5760.5 | 5609.6 | 5508.1 | 5539.8 | 5571.4 |
| 62.5° | 6601.2 | 6654.7 | 6509.5 | 6288.7 | 6094.8 | 5965.0 | 5995.8 | 6029.1 |
| 65° | 6436.4 | 6985.8 | 7114.8 | 6891.7 | 6623.1 | 6421.0 | 6408.0 | 6425.1 |
| 67.5° | 5379.9 | 6447.0 | 7225.2 | 7437.8 | 7213.0 | 6932.2 | 6880.3 | 6905.5 |
| 70° | 3598.8 | 4927.9 | 6300.9 | 7323.3 | 7595.2 | 7486.5 | 7435.3 | 7450.7 |
| 72.5° | 1728.4 | 2870.1 | 4274.7 | 5633.9 | 6461.6 | 6841.3 | 6963.1 | 7022.3 |
| 75° | 632.1 | 1139.3 | 2060.3 | 3104.6 | 3748.1 | 4338.8 | 4724.3 | 4881.7 |
| 77.5° | 381.4 | 460.1 | 658.1 | 990.8 | 1122.2 | 1256.1 | 1204.2 | 1230.2 |
| 80° | 282.4 | 318.9 | 361.1 | 405.7 | 420.3 | 420.3 | 404.1 | 391.1 |
| 82.5° | 198.0 | 221.5 | 241.8 | 266.2 | 272.6 | 260.5 | 214.2 | 170.4 |
| 85° | 127.4 | 137.9 | 146.9 | 162.3 | 158.2 | 150.9 | 101.4 | 90.1 |
| 87.5° | 58.4 | 66.5 | 69.8 | 77.1 | 73.8 | 70.6 | 50.3 | 42.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)