

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: P299720

Luminaire Tested: **GLNA-AF-05-LED-E1-5MQ-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299720
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24142)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-05-LED-E1-5MQ-7030-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(5) 70 CRI, 3000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19846.8 lumens
Efficiency: N/A
Efficacy: 122.5 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B4 - U0 - G2

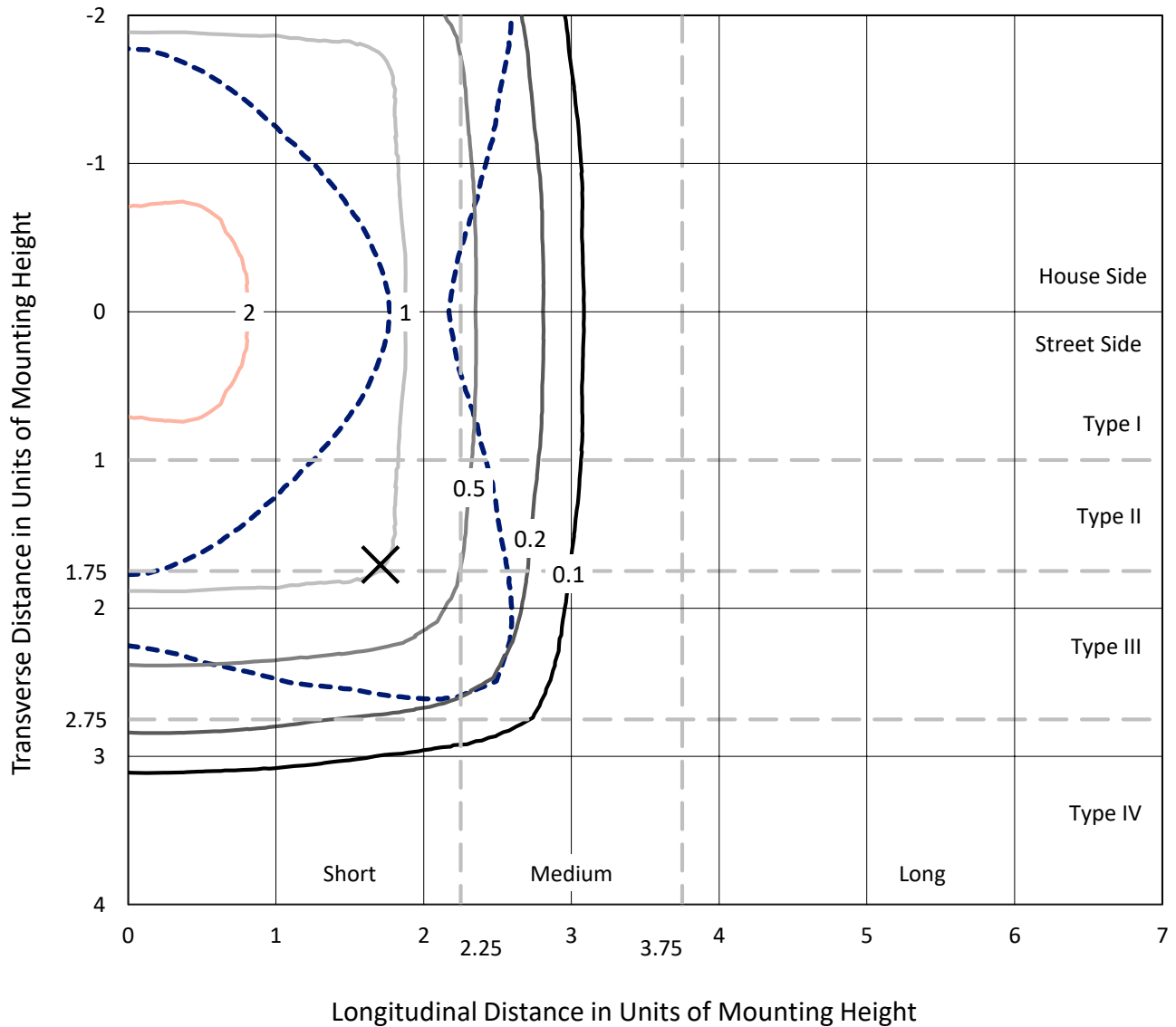
Input Watts (W): 162
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

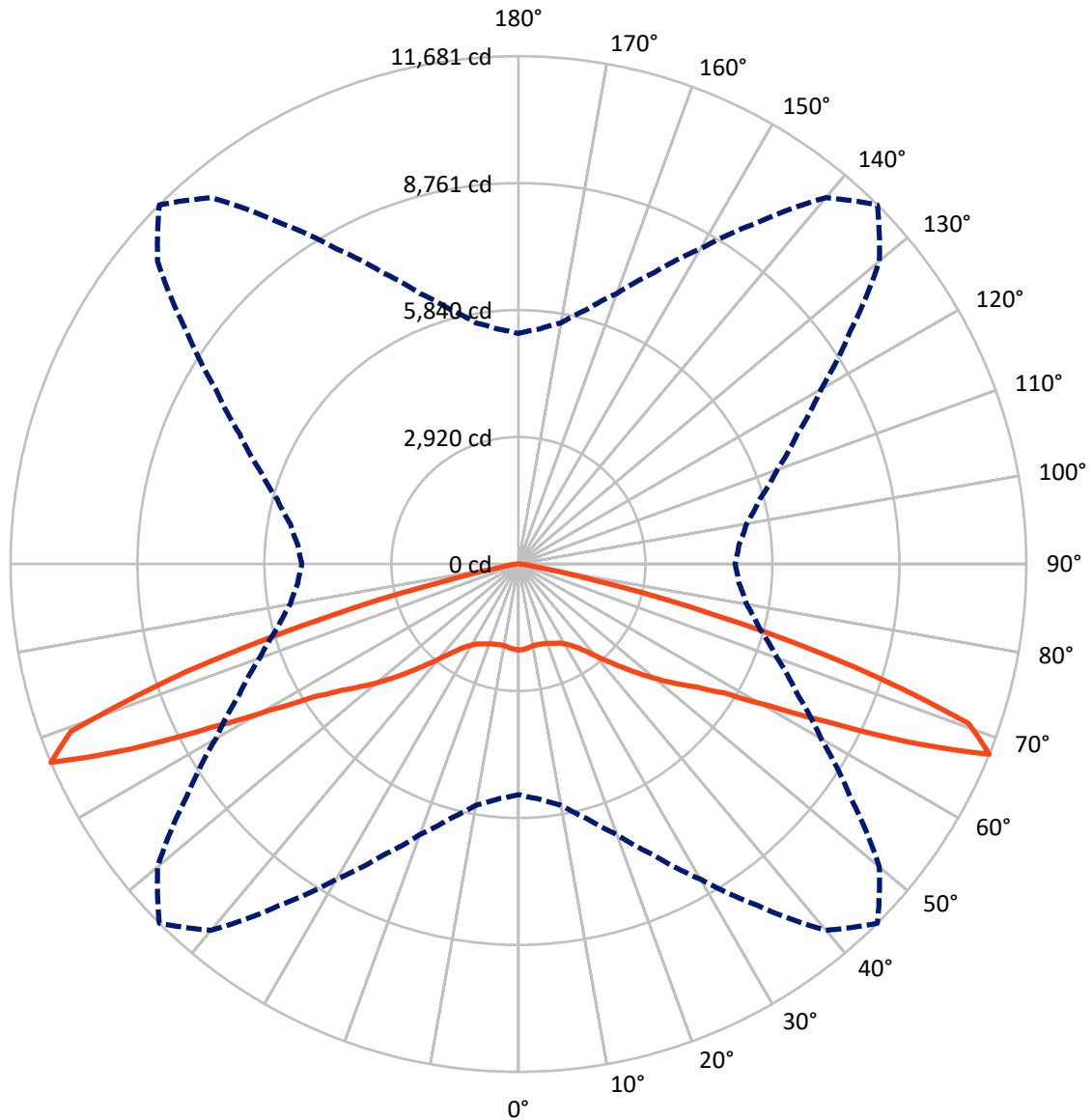


Based on 25 foot mounting height. Maximum calculated value = 3.2 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 9923.4 | 0.0 | 9923.4 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 9923.4 | 0.0 | 9923.4 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 19846.8 | 0.0 | 19846.8 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 185.1 | 0.9 |
| 10°-20° | 537.2 | 2.7 |
| 20°-30° | 913.2 | 4.6 |
| 30°-40° | 1492.8 | 7.5 |
| 40°-50° | 2664.8 | 13.4 |
| 50°-60° | 4493.0 | 22.6 |
| 60°-70° | 6972.5 | 35.1 |
| 70°-80° | 2449.8 | 12.3 |
| 80°-90° | 138.5 | 0.7 |
| 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° | 19846.8 | 100.0 |
| 0°-180° | 19846.8 | 100.0 |



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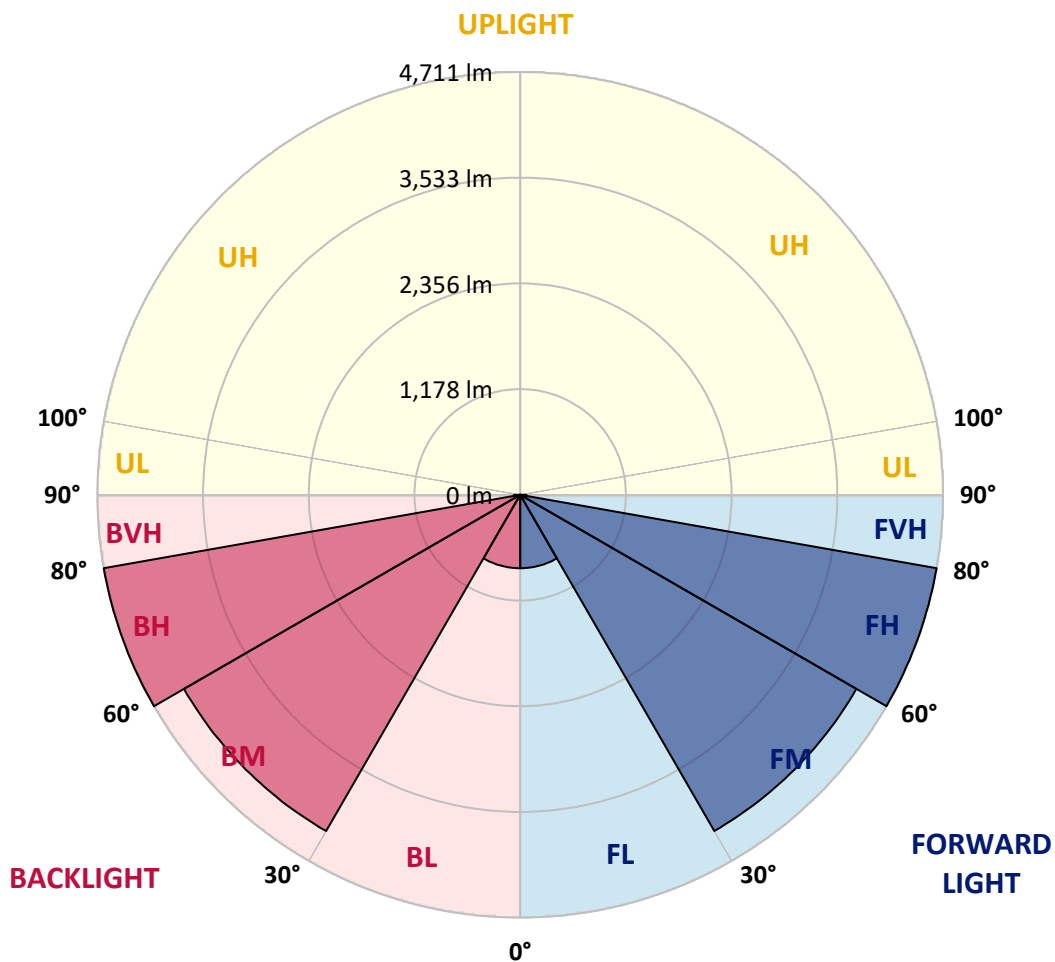
CATALOG NUMBER: GLNA-AF-05-LED-E1-5MQ-7030-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 817.7 | 4.1 | | | |
| FM | (30°-60°) | 4325.3 | 21.8 | | | |
| FH | (60°-80°) | 4711.1 | 23.7 | | | G2/5000 |
| FVH | (80°-90°) | 69.2 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 817.7 | 4.1 | B2/1000 | | |
| BM | (30°-60°) | 4325.3 | 21.8 | B3/5000 | | |
| BH | (60°-80°) | 4711.1 | 23.7 | B4/5000 | | G2/5000 |
| BVH | (80°-90°) | 69.2 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B4-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| 0° | 1977.8 | 1977.8 | 1977.8 | 1977.8 | 1977.8 | 1977.8 | 1977.8 | 1977.8 | 1977.8 | 1977.8 | 1977.8 |
| 2.5° | 1970.5 | 1972.3 | 1972.3 | 1972.3 | 1971.4 | 1971.4 | 1969.6 | 1971.4 | 1970.5 | 1967.8 | 1968.7 |
| 5° | 1954.1 | 1955.9 | 1955.9 | 1955.0 | 1957.7 | 1956.8 | 1954.1 | 1955.9 | 1955.0 | 1953.2 | 1954.1 |
| 7.5° | 1930.4 | 1933.1 | 1933.1 | 1932.2 | 1934.9 | 1934.0 | 1932.2 | 1933.1 | 1933.1 | 1930.4 | 1930.4 |
| 10° | 1903.9 | 1905.7 | 1905.7 | 1904.8 | 1909.4 | 1909.4 | 1908.5 | 1911.2 | 1912.1 | 1909.4 | 1907.5 |
| 12.5° | 1879.2 | 1882.0 | 1882.0 | 1885.6 | 1890.2 | 1892.0 | 1896.6 | 1900.2 | 1903.9 | 1903.0 | 1899.3 |
| 15° | 1864.6 | 1866.5 | 1870.1 | 1874.7 | 1882.0 | 1888.4 | 1895.7 | 1903.9 | 1911.2 | 1913.0 | 1907.5 |
| 17.5° | 1855.5 | 1858.3 | 1863.7 | 1870.1 | 1880.2 | 1891.1 | 1902.1 | 1913.0 | 1923.1 | 1926.7 | 1920.3 |
| 20° | 1852.8 | 1854.6 | 1860.1 | 1871.0 | 1884.7 | 1901.2 | 1916.7 | 1929.4 | 1943.1 | 1947.7 | 1943.1 |
| 22.5° | 1858.3 | 1861.9 | 1868.3 | 1881.1 | 1899.3 | 1920.3 | 1938.6 | 1955.9 | 1973.3 | 1981.5 | 1975.1 |
| 25° | 1882.9 | 1886.5 | 1894.8 | 1911.2 | 1931.3 | 1953.2 | 1974.2 | 1994.2 | 2009.8 | 2018.0 | 2013.4 |
| 27.5° | 1928.5 | 1933.1 | 1943.1 | 1959.6 | 1981.5 | 2005.2 | 2028.0 | 2044.4 | 2057.2 | 2060.0 | 2054.5 |
| 30° | 1997.0 | 2007.0 | 2018.9 | 2037.1 | 2062.7 | 2082.8 | 2105.6 | 2120.2 | 2135.7 | 2135.7 | 2131.2 |
| 32.5° | 2103.8 | 2113.8 | 2126.6 | 2143.9 | 2164.0 | 2185.9 | 2206.0 | 2218.8 | 2235.2 | 2236.1 | 2225.2 |
| 35° | 2263.5 | 2268.1 | 2279.0 | 2290.0 | 2308.2 | 2327.4 | 2344.7 | 2352.9 | 2366.6 | 2367.5 | 2357.5 |
| 37.5° | 2474.3 | 2475.2 | 2482.5 | 2486.2 | 2502.6 | 2523.6 | 2540.0 | 2545.5 | 2558.3 | 2556.5 | 2546.4 |
| 40° | 2719.8 | 2724.4 | 2727.1 | 2732.6 | 2750.0 | 2770.0 | 2787.4 | 2790.1 | 2803.8 | 2801.1 | 2788.3 |
| 42.5° | 3003.7 | 3005.5 | 3021.0 | 3029.2 | 3045.7 | 3055.7 | 3077.6 | 3080.4 | 3096.8 | 3089.5 | 3074.9 |
| 45° | 3322.2 | 3338.7 | 3353.3 | 3369.7 | 3387.0 | 3398.9 | 3416.2 | 3412.6 | 3423.5 | 3412.6 | 3404.4 |
| 47.5° | 3657.2 | 3669.0 | 3701.9 | 3727.5 | 3755.8 | 3765.8 | 3790.4 | 3779.5 | 3790.4 | 3774.9 | 3772.2 |
| 50° | 4025.9 | 4046.9 | 4075.2 | 4104.4 | 4134.5 | 4151.0 | 4182.9 | 4169.2 | 4183.8 | 4169.2 | 4161.0 |
| 52.5° | 4389.2 | 4394.6 | 4456.7 | 4499.6 | 4541.6 | 4560.8 | 4579.9 | 4573.5 | 4574.4 | 4573.5 | 4565.3 |
| 55° | 4734.2 | 4746.9 | 4809.0 | 4867.4 | 4940.4 | 4994.3 | 5027.1 | 5023.5 | 5015.3 | 5007.1 | 4993.4 |
| 57.5° | 5123.0 | 5135.8 | 5206.9 | 5279.0 | 5362.1 | 5438.8 | 5505.4 | 5573.8 | 5600.3 | 5607.6 | 5577.5 |
| 60° | 5648.7 | 5647.8 | 5742.7 | 5830.3 | 5949.0 | 6063.1 | 6209.1 | 6357.9 | 6528.5 | 6607.9 | 6503.0 |
| 62.5° | 6183.5 | 6205.4 | 6342.3 | 6497.5 | 6742.1 | 6980.3 | 7249.6 | 7514.2 | 7784.4 | 8004.4 | 7770.7 |
| 65° | 6119.6 | 6203.6 | 6407.1 | 6758.5 | 7210.3 | 7747.0 | 8327.5 | 8941.7 | 9496.6 | 9878.1 | 9450.1 |
| 67.5° | 5303.7 | 5423.3 | 5630.4 | 6057.6 | 6622.5 | 7396.5 | 8371.3 | 9586.1 | 10998.0 | 11680.7 | 10834.6 |
| 70° | 3844.3 | 3979.4 | 4196.6 | 4613.7 | 5173.2 | 5908.8 | 6967.5 | 8426.0 | 10295.2 | 10983.4 | 10051.5 |
| 72.5° | 1913.0 | 1986.0 | 2120.2 | 2385.8 | 2809.3 | 3406.2 | 4366.3 | 5768.3 | 7422.1 | 8053.7 | 7202.1 |
| 75° | 649.8 | 683.6 | 706.4 | 793.1 | 927.3 | 1161.9 | 1639.2 | 2521.8 | 3847.0 | 4611.9 | 3792.3 |
| 77.5° | 375.1 | 376.0 | 391.5 | 407.1 | 429.9 | 455.4 | 519.3 | 681.8 | 1179.2 | 1674.8 | 1220.3 |
| 80° | 242.8 | 241.9 | 254.6 | 266.5 | 282.0 | 294.8 | 298.5 | 315.8 | 364.2 | 431.7 | 386.1 |
| 82.5° | 126.0 | 141.5 | 169.8 | 185.3 | 214.5 | 220.0 | 212.7 | 206.3 | 218.1 | 226.3 | 231.8 |
| 85° | 69.4 | 60.2 | 90.4 | 116.8 | 129.6 | 131.4 | 131.4 | 124.1 | 128.7 | 126.0 | 136.9 |
| 87.5° | 31.9 | 29.2 | 35.6 | 57.5 | 61.2 | 52.0 | 54.8 | 48.4 | 34.7 | 33.8 | 38.3 |
| 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° | 1977.8 | 1977.8 | 1977.8 | 1977.8 | 1977.8 | 1977.8 | 1977.8 | 1977.8 |
| 2.5° | 1968.7 | 1969.6 | 1969.6 | 1972.3 | 1973.3 | 1975.1 | 1976.9 | 1977.8 |
| 5° | 1953.2 | 1955.9 | 1954.1 | 1956.8 | 1956.8 | 1958.7 | 1958.7 | 1959.6 |
| 7.5° | 1930.4 | 1933.1 | 1933.1 | 1933.1 | 1932.2 | 1934.9 | 1934.9 | 1934.9 |
| 10° | 1906.6 | 1908.5 | 1907.5 | 1905.7 | 1903.9 | 1906.6 | 1905.7 | 1904.8 |
| 12.5° | 1899.3 | 1894.8 | 1891.1 | 1889.3 | 1885.6 | 1886.5 | 1883.8 | 1883.8 |
| 15° | 1903.9 | 1895.7 | 1889.3 | 1886.5 | 1882.9 | 1881.1 | 1879.2 | 1880.2 |
| 17.5° | 1915.8 | 1905.7 | 1897.5 | 1892.9 | 1888.4 | 1885.6 | 1882.0 | 1882.9 |
| 20° | 1936.7 | 1924.9 | 1913.0 | 1903.9 | 1895.7 | 1891.1 | 1888.4 | 1887.5 |
| 22.5° | 1967.8 | 1950.4 | 1933.1 | 1919.4 | 1908.5 | 1902.1 | 1899.3 | 1897.5 |
| 25° | 2003.4 | 1984.2 | 1964.1 | 1948.6 | 1937.7 | 1929.4 | 1924.0 | 1924.0 |
| 27.5° | 2048.1 | 2032.6 | 2014.3 | 1996.1 | 1986.0 | 1977.8 | 1974.2 | 1972.3 |
| 30° | 2122.9 | 2108.3 | 2093.7 | 2076.4 | 2063.6 | 2055.4 | 2049.0 | 2043.5 |
| 32.5° | 2218.8 | 2206.9 | 2195.0 | 2182.3 | 2170.4 | 2159.4 | 2149.4 | 2144.8 |
| 35° | 2353.8 | 2344.7 | 2336.5 | 2321.9 | 2317.3 | 2311.0 | 2305.5 | 2300.9 |
| 37.5° | 2540.0 | 2536.4 | 2536.4 | 2520.9 | 2517.2 | 2514.5 | 2509.0 | 2509.9 |
| 40° | 2784.6 | 2788.3 | 2783.7 | 2778.3 | 2775.5 | 2768.2 | 2768.2 | 2774.6 |
| 42.5° | 3074.0 | 3076.7 | 3086.7 | 3077.6 | 3087.7 | 3078.5 | 3073.1 | 3077.6 |
| 45° | 3409.8 | 3419.9 | 3440.0 | 3430.8 | 3437.2 | 3421.7 | 3402.5 | 3403.5 |
| 47.5° | 3786.8 | 3795.9 | 3804.1 | 3797.7 | 3798.7 | 3773.1 | 3747.5 | 3741.2 |
| 50° | 4178.3 | 4182.0 | 4186.5 | 4177.4 | 4179.2 | 4151.0 | 4121.7 | 4122.7 |
| 52.5° | 4565.3 | 4582.7 | 4600.9 | 4576.3 | 4570.8 | 4538.8 | 4497.8 | 4481.3 |
| 55° | 5008.0 | 5032.6 | 5011.6 | 4968.7 | 4925.8 | 4882.9 | 4829.1 | 4820.0 |
| 57.5° | 5553.8 | 5511.8 | 5446.1 | 5364.8 | 5305.5 | 5245.3 | 5190.5 | 5167.7 |
| 60° | 6313.1 | 6155.2 | 6036.6 | 5916.1 | 5840.4 | 5766.4 | 5694.3 | 5683.4 |
| 62.5° | 7386.5 | 7113.6 | 6877.2 | 6628.0 | 6424.5 | 6265.7 | 6138.8 | 6103.2 |
| 65° | 8731.8 | 8086.5 | 7527.0 | 7005.0 | 6551.3 | 6209.1 | 5993.7 | 5898.8 |
| 67.5° | 9310.4 | 8036.3 | 7077.1 | 6336.0 | 5742.7 | 5328.3 | 5095.6 | 4979.7 |
| 70° | 8181.4 | 6664.5 | 5621.3 | 4879.3 | 4339.0 | 3897.2 | 3686.4 | 3562.3 |
| 72.5° | 5628.6 | 4239.5 | 3352.3 | 2736.3 | 2304.6 | 1934.9 | 1788.9 | 1777.9 |
| 75° | 2527.3 | 1673.9 | 1153.7 | 889.0 | 748.4 | 650.8 | 620.6 | 597.8 |
| 77.5° | 707.3 | 523.0 | 466.4 | 436.3 | 407.1 | 373.3 | 360.5 | 363.3 |
| 80° | 344.1 | 324.9 | 312.1 | 293.0 | 266.5 | 238.2 | 225.4 | 230.9 |
| 82.5° | 228.2 | 225.4 | 233.7 | 220.0 | 181.6 | 154.2 | 129.6 | 118.7 |
| 85° | 138.7 | 140.6 | 143.3 | 144.2 | 122.3 | 85.8 | 58.4 | 65.7 |
| 87.5° | 54.8 | 63.0 | 68.5 | 71.2 | 66.6 | 41.1 | 32.9 | 33.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)