

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: STREETWORKS

Report Number: P299657

Luminaire Tested: **GAA-AF-04-LED-U-5MQ-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299657
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: STREETWORKS
Catalog Number: GAA-AF-04-LED-U-5MQ-7050-800
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 5000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20308.5 lumens
Efficiency: N/A
Efficacy: 118.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B4 - U0 - G2

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: 28.75 FT

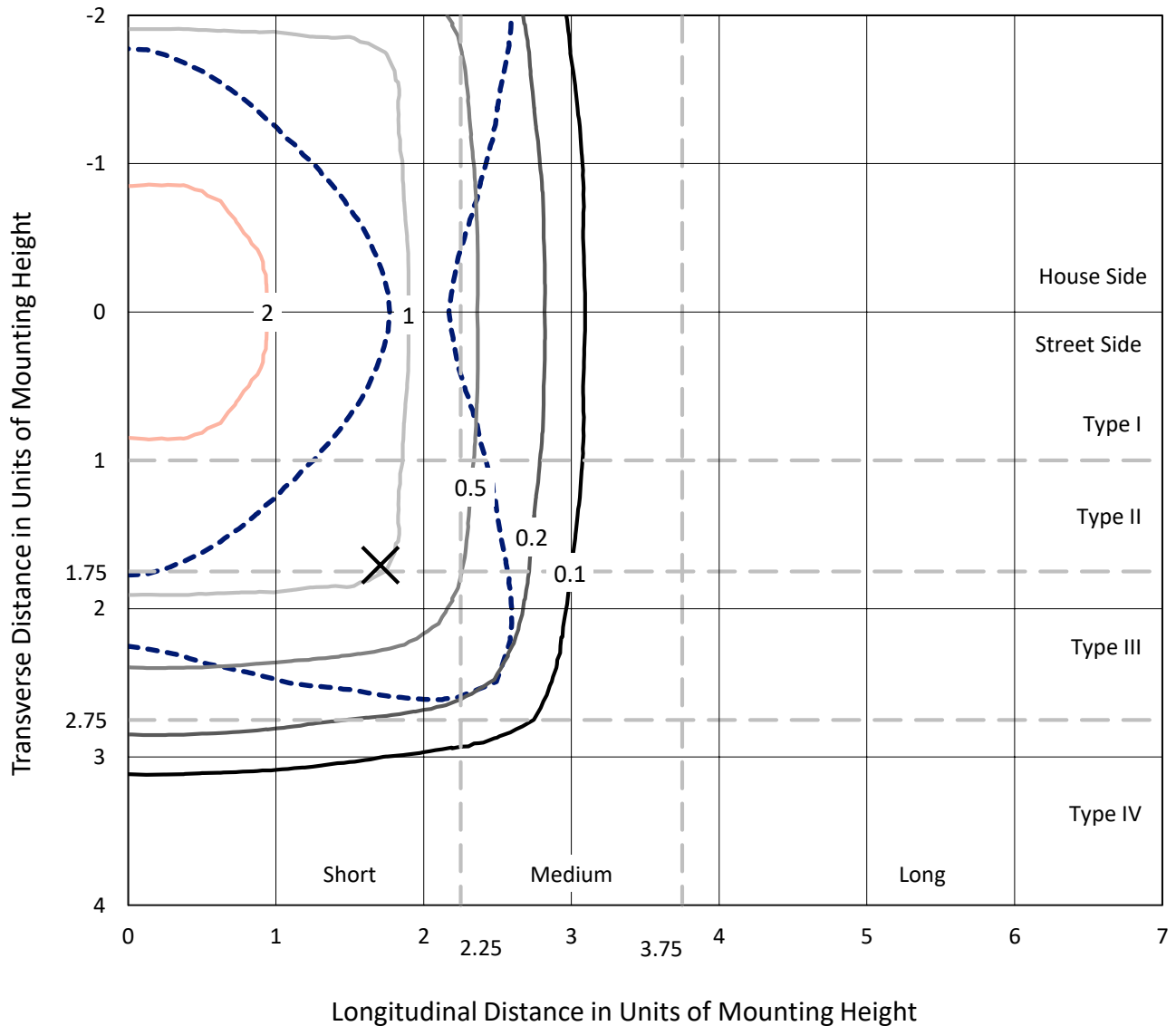


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

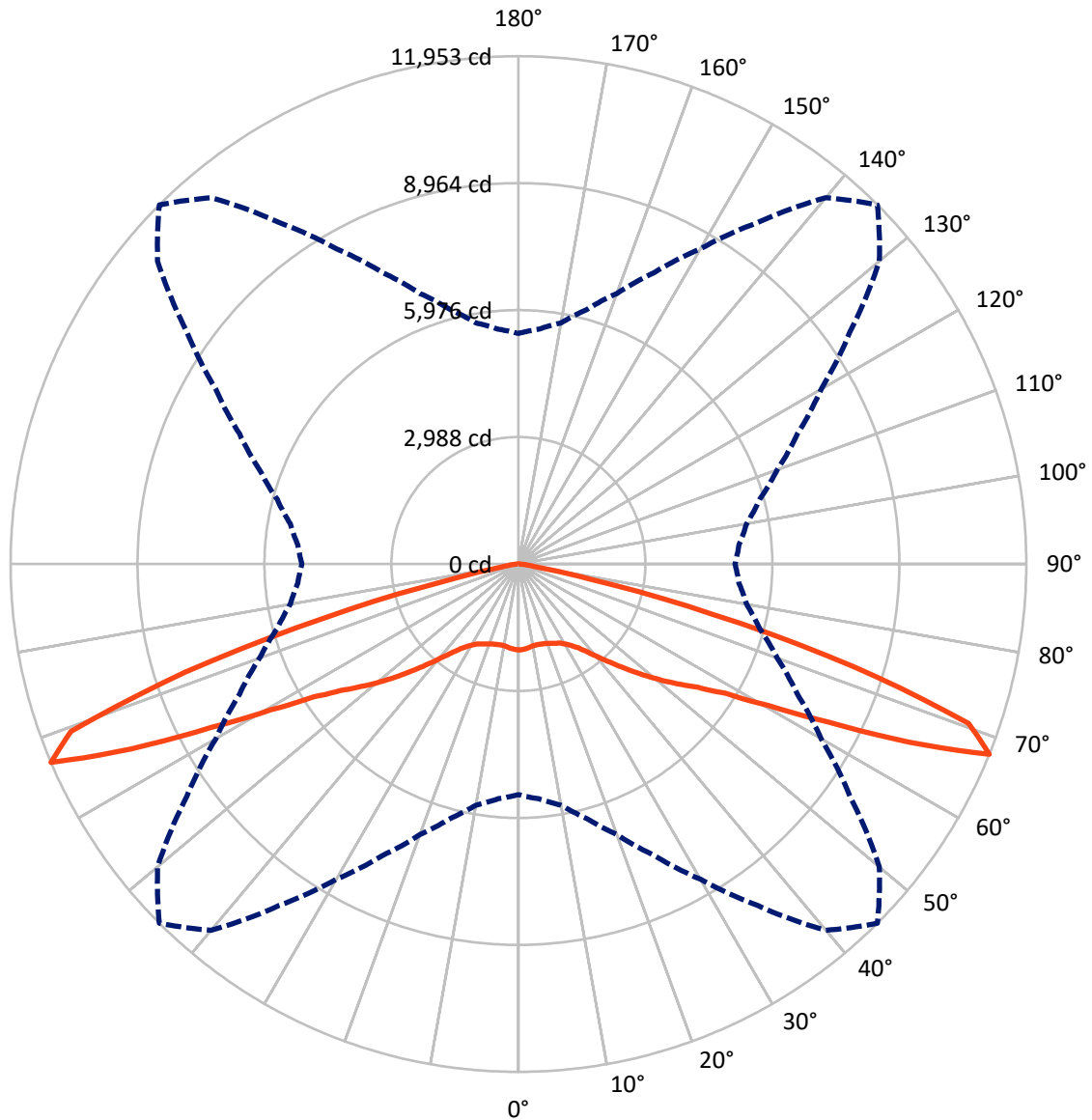


Based on 25 foot mounting height. Maximum calculated value = 3.2 fc
 Type V - Short - Full Cutoff

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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 | 10154.3 | 0.0 | 10154.3 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 10154.3 | 0.0 | 10154.3 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 20308.5 | 0.0 | 20308.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 189.4 | 0.9 |
| 10°-20° | 549.7 | 2.7 |
| 20°-30° | 934.4 | 4.6 |
| 30°-40° | 1527.5 | 7.5 |
| 40°-50° | 2726.8 | 13.4 |
| 50°-60° | 4597.5 | 22.6 |
| 60°-70° | 7134.7 | 35.1 |
| 70°-80° | 2506.8 | 12.3 |
| 80°-90° | 141.7 | 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° | 20308.5 | 100.0 |
| 0°-180° | 20308.5 | 100.0 |



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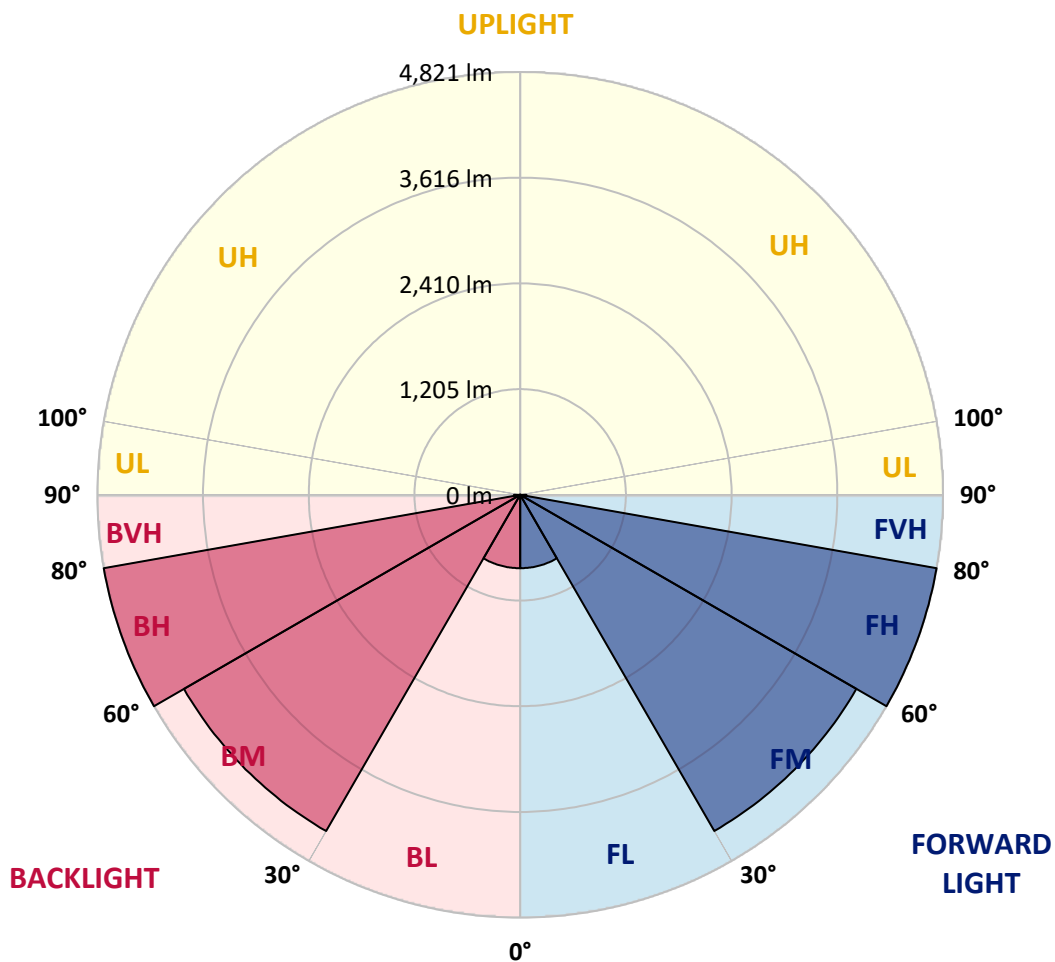
CATALOG NUMBER: GAA-AF-04-LED-U-5MQ-7050-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 836.8 | 4.1 | | | |
| FM | (30°-60°) | 4425.9 | 21.8 | | | |
| FH | (60°-80°) | 4820.7 | 23.7 | | | G2/5000 |
| FVH | (80°-90°) | 70.8 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 836.8 | 4.1 | B2/1000 | | |
| BM | (30°-60°) | 4425.9 | 21.8 | B3/5000 | | |
| BH | (60°-80°) | 4820.7 | 23.7 | B4/5000 | | G2/5000 |
| BVH | (80°-90°) | 70.8 | 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° | 2023.8 | 2023.8 | 2023.8 | 2023.8 | 2023.8 | 2023.8 | 2023.8 | 2023.8 | 2023.8 | 2023.8 | 2023.8 |
| 2.5° | 2016.4 | 2018.2 | 2018.2 | 2018.2 | 2017.3 | 2017.3 | 2015.4 | 2017.3 | 2016.4 | 2013.6 | 2014.5 |
| 5° | 1999.5 | 2001.4 | 2001.4 | 2000.5 | 2003.3 | 2002.3 | 1999.5 | 2001.4 | 2000.5 | 1998.6 | 1999.5 |
| 7.5° | 1975.3 | 1978.1 | 1978.1 | 1977.1 | 1979.9 | 1979.0 | 1977.1 | 1978.1 | 1978.1 | 1975.3 | 1975.3 |
| 10° | 1948.2 | 1950.0 | 1950.0 | 1949.1 | 1953.8 | 1953.8 | 1952.9 | 1955.7 | 1956.6 | 1953.8 | 1951.9 |
| 12.5° | 1923.0 | 1925.8 | 1925.8 | 1929.5 | 1934.2 | 1936.0 | 1940.7 | 1944.4 | 1948.2 | 1947.2 | 1943.5 |
| 15° | 1908.0 | 1909.9 | 1913.6 | 1918.3 | 1925.8 | 1932.3 | 1939.8 | 1948.2 | 1955.7 | 1957.5 | 1951.9 |
| 17.5° | 1898.7 | 1901.5 | 1907.1 | 1913.6 | 1923.9 | 1935.1 | 1946.3 | 1957.5 | 1967.8 | 1971.5 | 1965.0 |
| 20° | 1895.9 | 1897.7 | 1903.4 | 1914.6 | 1928.6 | 1945.4 | 1961.3 | 1974.3 | 1988.3 | 1993.0 | 1988.3 |
| 22.5° | 1901.5 | 1905.2 | 1911.8 | 1924.8 | 1943.5 | 1965.0 | 1983.7 | 2001.4 | 2019.2 | 2027.6 | 2021.0 |
| 25° | 1926.7 | 1930.4 | 1938.8 | 1955.7 | 1976.2 | 1998.6 | 2020.1 | 2040.6 | 2056.5 | 2064.9 | 2060.3 |
| 27.5° | 1973.4 | 1978.1 | 1988.3 | 2005.2 | 2027.6 | 2051.8 | 2075.2 | 2092.0 | 2105.1 | 2107.9 | 2102.3 |
| 30° | 2043.4 | 2053.7 | 2065.9 | 2084.5 | 2110.7 | 2131.2 | 2154.6 | 2169.5 | 2185.4 | 2185.4 | 2180.7 |
| 32.5° | 2152.7 | 2163.0 | 2176.1 | 2193.8 | 2214.4 | 2236.8 | 2257.3 | 2270.4 | 2287.2 | 2288.1 | 2276.9 |
| 35° | 2316.2 | 2320.8 | 2332.0 | 2343.2 | 2361.9 | 2381.5 | 2399.3 | 2407.7 | 2421.7 | 2422.6 | 2412.3 |
| 37.5° | 2531.9 | 2532.8 | 2540.3 | 2544.0 | 2560.8 | 2582.3 | 2599.1 | 2604.7 | 2617.8 | 2615.9 | 2605.7 |
| 40° | 2783.1 | 2787.8 | 2790.6 | 2796.2 | 2813.9 | 2834.5 | 2852.2 | 2855.0 | 2869.0 | 2866.2 | 2853.2 |
| 42.5° | 3073.6 | 3075.4 | 3091.3 | 3099.7 | 3116.5 | 3126.8 | 3149.2 | 3152.0 | 3168.8 | 3161.4 | 3146.4 |
| 45° | 3399.5 | 3416.3 | 3431.3 | 3448.1 | 3465.8 | 3478.0 | 3495.7 | 3492.0 | 3503.2 | 3492.0 | 3483.6 |
| 47.5° | 3742.3 | 3754.4 | 3788.0 | 3814.2 | 3843.1 | 3853.4 | 3878.6 | 3867.4 | 3878.6 | 3862.7 | 3859.9 |
| 50° | 4119.6 | 4141.1 | 4170.0 | 4199.9 | 4230.7 | 4247.5 | 4280.2 | 4266.2 | 4281.1 | 4266.2 | 4257.8 |
| 52.5° | 4491.3 | 4496.9 | 4560.4 | 4604.3 | 4647.2 | 4666.9 | 4686.5 | 4679.9 | 4680.9 | 4679.9 | 4671.5 |
| 55° | 4844.3 | 4857.4 | 4920.9 | 4980.7 | 5055.4 | 5110.5 | 5144.1 | 5140.4 | 5132.0 | 5123.5 | 5109.5 |
| 57.5° | 5242.2 | 5255.2 | 5328.1 | 5401.9 | 5486.8 | 5565.3 | 5633.5 | 5703.5 | 5730.6 | 5738.1 | 5707.3 |
| 60° | 5780.1 | 5779.2 | 5876.3 | 5966.0 | 6087.4 | 6204.1 | 6353.5 | 6505.8 | 6680.4 | 6761.7 | 6654.3 |
| 62.5° | 6327.4 | 6349.8 | 6489.9 | 6648.7 | 6899.0 | 7142.7 | 7418.2 | 7689.1 | 7965.5 | 8190.6 | 7951.5 |
| 65° | 6262.0 | 6347.9 | 6556.2 | 6915.8 | 7378.1 | 7927.2 | 8521.2 | 9149.7 | 9717.6 | 10107.9 | 9669.9 |
| 67.5° | 5427.1 | 5549.4 | 5761.4 | 6198.5 | 6776.6 | 7568.6 | 8566.0 | 9809.1 | 11253.9 | 11952.5 | 11086.7 |
| 70° | 3933.7 | 4071.9 | 4294.2 | 4721.0 | 5293.5 | 6046.3 | 7129.6 | 8622.1 | 10534.7 | 11238.9 | 10285.4 |
| 72.5° | 1957.5 | 2032.2 | 2169.5 | 2441.3 | 2874.6 | 3485.4 | 4467.9 | 5902.4 | 7594.7 | 8241.0 | 7369.7 |
| 75° | 665.0 | 699.5 | 722.9 | 811.6 | 948.9 | 1188.9 | 1677.3 | 2580.5 | 3936.5 | 4719.2 | 3880.5 |
| 77.5° | 383.8 | 384.8 | 400.7 | 416.5 | 439.9 | 466.0 | 531.4 | 697.6 | 1206.6 | 1713.8 | 1248.7 |
| 80° | 248.4 | 247.5 | 260.6 | 272.7 | 288.6 | 301.7 | 305.4 | 323.1 | 372.6 | 441.7 | 395.1 |
| 82.5° | 128.9 | 144.8 | 173.7 | 189.6 | 219.5 | 225.1 | 217.6 | 211.1 | 223.2 | 231.6 | 237.2 |
| 85° | 71.0 | 61.6 | 92.5 | 119.5 | 132.6 | 134.5 | 134.5 | 127.0 | 131.7 | 128.9 | 140.1 |
| 87.5° | 32.7 | 29.9 | 36.4 | 58.8 | 62.6 | 53.2 | 56.0 | 49.5 | 35.5 | 34.6 | 39.2 |
| 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° | 2023.8 | 2023.8 | 2023.8 | 2023.8 | 2023.8 | 2023.8 | 2023.8 | 2023.8 |
| 2.5° | 2014.5 | 2015.4 | 2015.4 | 2018.2 | 2019.2 | 2021.0 | 2022.9 | 2023.8 |
| 5° | 1998.6 | 2001.4 | 1999.5 | 2002.3 | 2002.3 | 2004.2 | 2004.2 | 2005.2 |
| 7.5° | 1975.3 | 1978.1 | 1978.1 | 1978.1 | 1977.1 | 1979.9 | 1979.9 | 1979.9 |
| 10° | 1951.0 | 1952.9 | 1951.9 | 1950.0 | 1948.2 | 1951.0 | 1950.0 | 1949.1 |
| 12.5° | 1943.5 | 1938.8 | 1935.1 | 1933.2 | 1929.5 | 1930.4 | 1927.6 | 1927.6 |
| 15° | 1948.2 | 1939.8 | 1933.2 | 1930.4 | 1926.7 | 1924.8 | 1923.0 | 1923.9 |
| 17.5° | 1960.3 | 1950.0 | 1941.6 | 1937.0 | 1932.3 | 1929.5 | 1925.8 | 1926.7 |
| 20° | 1981.8 | 1969.7 | 1957.5 | 1948.2 | 1939.8 | 1935.1 | 1932.3 | 1931.4 |
| 22.5° | 2013.6 | 1995.8 | 1978.1 | 1964.1 | 1952.9 | 1946.3 | 1943.5 | 1941.6 |
| 25° | 2050.0 | 2030.4 | 2009.8 | 1993.9 | 1982.7 | 1974.3 | 1968.7 | 1968.7 |
| 27.5° | 2095.7 | 2079.9 | 2061.2 | 2042.5 | 2032.2 | 2023.8 | 2020.1 | 2018.2 |
| 30° | 2172.3 | 2157.4 | 2142.4 | 2124.7 | 2111.6 | 2103.2 | 2096.7 | 2091.1 |
| 32.5° | 2270.4 | 2258.2 | 2246.1 | 2233.0 | 2220.9 | 2209.7 | 2199.4 | 2194.7 |
| 35° | 2408.6 | 2399.3 | 2390.9 | 2375.9 | 2371.3 | 2364.7 | 2359.1 | 2354.4 |
| 37.5° | 2599.1 | 2595.4 | 2595.4 | 2579.5 | 2575.8 | 2573.0 | 2567.4 | 2568.3 |
| 40° | 2849.4 | 2853.2 | 2848.5 | 2842.9 | 2840.1 | 2832.6 | 2832.6 | 2839.2 |
| 42.5° | 3145.5 | 3148.3 | 3158.6 | 3149.2 | 3159.5 | 3150.2 | 3144.5 | 3149.2 |
| 45° | 3489.2 | 3499.4 | 3520.0 | 3510.6 | 3517.2 | 3501.3 | 3481.7 | 3482.6 |
| 47.5° | 3874.9 | 3884.2 | 3892.6 | 3886.1 | 3887.0 | 3860.9 | 3834.7 | 3828.2 |
| 50° | 4275.5 | 4279.3 | 4283.9 | 4274.6 | 4276.5 | 4247.5 | 4217.6 | 4218.6 |
| 52.5° | 4671.5 | 4689.3 | 4707.9 | 4682.7 | 4677.1 | 4644.4 | 4602.4 | 4585.6 |
| 55° | 5124.5 | 5149.7 | 5128.2 | 5084.3 | 5040.4 | 4996.5 | 4941.4 | 4932.1 |
| 57.5° | 5683.0 | 5640.0 | 5572.8 | 5489.7 | 5428.9 | 5367.3 | 5311.3 | 5287.9 |
| 60° | 6460.0 | 6298.4 | 6177.0 | 6053.7 | 5976.2 | 5900.6 | 5826.8 | 5815.6 |
| 62.5° | 7558.3 | 7279.1 | 7037.2 | 6782.2 | 6573.9 | 6411.4 | 6281.6 | 6245.2 |
| 65° | 8934.9 | 8274.6 | 7702.1 | 7167.9 | 6703.8 | 6353.5 | 6133.1 | 6036.0 |
| 67.5° | 9527.0 | 8223.3 | 7241.7 | 6483.4 | 5876.3 | 5452.3 | 5214.1 | 5095.5 |
| 70° | 8371.8 | 6819.6 | 5752.1 | 4992.8 | 4439.9 | 3987.9 | 3772.2 | 3645.1 |
| 72.5° | 5759.6 | 4338.1 | 3430.3 | 2799.9 | 2358.2 | 1979.9 | 1830.5 | 1819.3 |
| 75° | 2586.1 | 1712.8 | 1180.5 | 909.6 | 765.8 | 665.9 | 635.1 | 611.7 |
| 77.5° | 723.8 | 535.1 | 477.2 | 446.4 | 416.5 | 382.0 | 368.9 | 371.7 |
| 80° | 352.1 | 332.5 | 319.4 | 299.8 | 272.7 | 243.8 | 230.7 | 236.3 |
| 82.5° | 233.5 | 230.7 | 239.1 | 225.1 | 185.9 | 157.8 | 132.6 | 121.4 |
| 85° | 142.0 | 143.8 | 146.6 | 147.6 | 125.1 | 87.8 | 59.8 | 67.2 |
| 87.5° | 56.0 | 64.4 | 70.0 | 72.8 | 68.2 | 42.0 | 33.6 | 34.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)