

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: P195971

Luminaire Tested: **NVN-AF-05-LED-U-5WQ-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195971
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-05-LED-U-5WQ-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 4000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 25856.1 lumens
Efficiency: N/A
Efficacy: 123.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G3

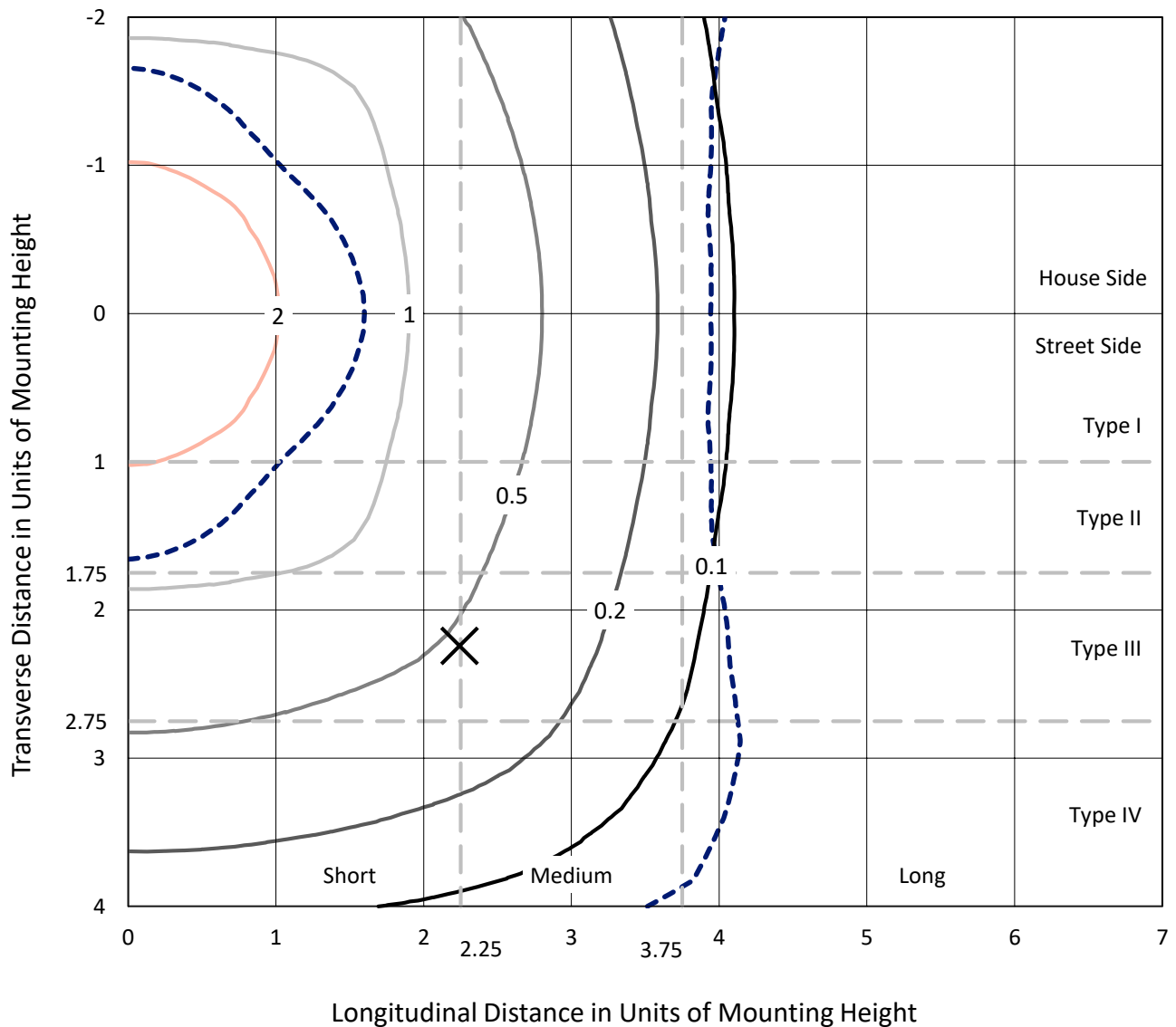
Input Watts (W): 210
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

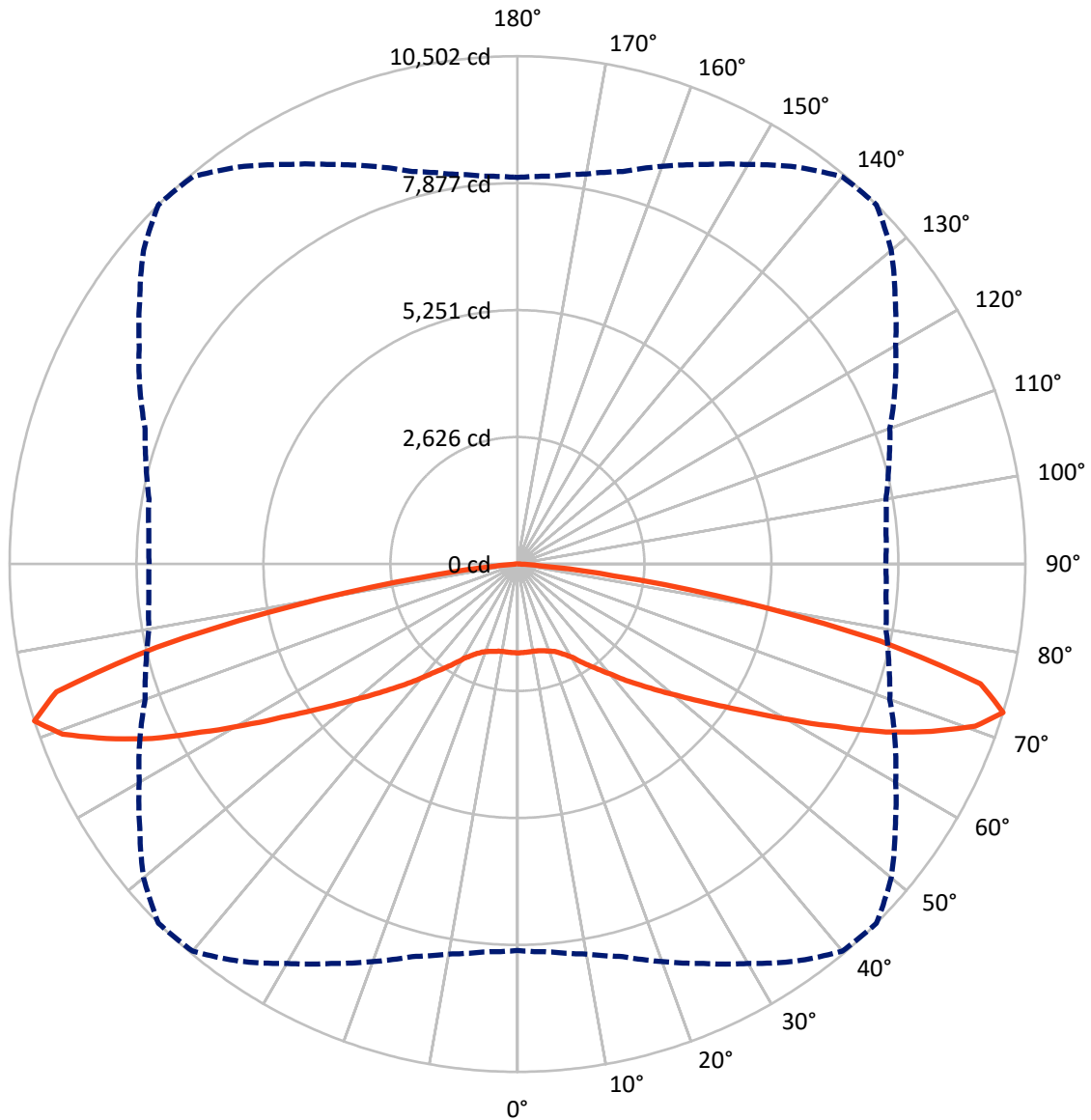
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.9 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 12928.1 | 0.0 | 12928.1 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 12928.1 | 0.0 | 12928.1 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 25856.1 | 0.0 | 25856.1 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 175.5 | 0.7 |
| 10°-20° | 531.0 | 2.1 |
| 20°-30° | 958.6 | 3.7 |
| 30°-40° | 1635.1 | 6.3 |
| 40°-50° | 2783.8 | 10.8 |
| 50°-60° | 4480.1 | 17.3 |
| 60°-70° | 7450.4 | 28.8 |
| 70°-80° | 7207.4 | 27.9 |
| 80°-90° | 634.3 | 2.5 |
| 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° | 25856.1 | 100.0 |
| 0°-180° | 25856.1 | 100.0 |



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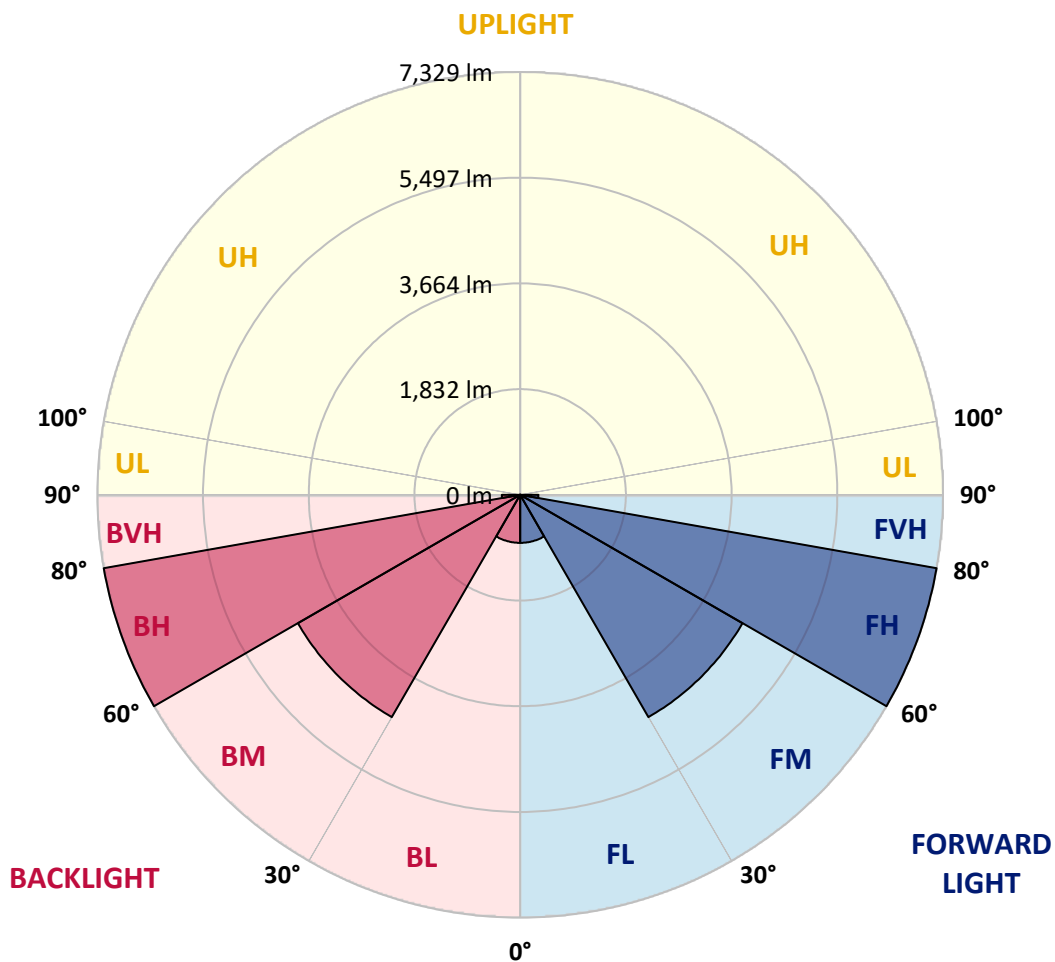
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 832.5 | 3.2 | | | |
| FM | (30°-60°) | 4449.4 | 17.2 | | | |
| FH | (60°-80°) | 7328.9 | 28.3 | | | G3/7500 |
| FVH | (80°-90°) | 317.2 | 1.2 | | | G3/500 |
| BL | (0°-30°) | 832.5 | 3.2 | B2/1000 | | |
| BM | (30°-60°) | 4449.4 | 17.2 | B3/5000 | | |
| BH | (60°-80°) | 7328.9 | 28.3 | B5 | | G3/7500 |
| BVH | (80°-90°) | 317.2 | 1.2 | | | G3/500 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B5-U0-G3

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|
| 0° | 1838.1 | 1838.1 | 1838.1 | 1838.1 | 1838.1 | 1838.1 | 1838.1 | 1838.1 | 1838.1 | 1838.1 | 1838.1 |
| 2.5° | 1852.5 | 1852.5 | 1854.1 | 1852.5 | 1849.3 | 1847.8 | 1842.9 | 1839.8 | 1836.6 | 1835.0 | 1831.8 |
| 5° | 1854.1 | 1854.1 | 1855.6 | 1854.1 | 1850.9 | 1847.8 | 1844.6 | 1839.8 | 1836.6 | 1833.4 | 1831.8 |
| 7.5° | 1860.4 | 1862.1 | 1863.6 | 1862.1 | 1855.6 | 1852.5 | 1847.8 | 1842.9 | 1836.6 | 1833.4 | 1830.3 |
| 10° | 1873.2 | 1873.2 | 1873.2 | 1871.6 | 1866.8 | 1860.4 | 1854.1 | 1849.3 | 1841.3 | 1833.4 | 1828.6 |
| 12.5° | 1882.7 | 1884.4 | 1884.4 | 1881.1 | 1874.8 | 1866.8 | 1860.4 | 1855.6 | 1849.3 | 1842.9 | 1838.1 |
| 15° | 1897.1 | 1897.1 | 1895.4 | 1889.1 | 1879.6 | 1873.2 | 1870.0 | 1868.4 | 1866.8 | 1863.6 | 1858.9 |
| 17.5° | 1925.7 | 1924.1 | 1919.4 | 1909.7 | 1898.7 | 1893.9 | 1890.7 | 1890.7 | 1890.7 | 1889.1 | 1885.9 |
| 20° | 1967.1 | 1967.1 | 1960.7 | 1944.8 | 1935.2 | 1930.5 | 1925.7 | 1925.7 | 1925.7 | 1920.9 | 1916.2 |
| 22.5° | 2033.9 | 2035.6 | 2026.0 | 2006.8 | 1994.1 | 1984.6 | 1978.2 | 1973.5 | 1968.7 | 1965.5 | 1957.5 |
| 25° | 2124.7 | 2123.0 | 2111.9 | 2088.0 | 2078.5 | 2068.9 | 2056.2 | 2048.3 | 2041.9 | 2037.1 | 2027.6 |
| 27.5° | 2220.1 | 2218.6 | 2205.8 | 2185.1 | 2178.8 | 2164.5 | 2154.8 | 2143.7 | 2135.8 | 2127.8 | 2118.3 |
| 30° | 2342.7 | 2334.7 | 2325.2 | 2309.2 | 2306.0 | 2294.9 | 2282.2 | 2266.2 | 2253.6 | 2240.8 | 2229.7 |
| 32.5° | 2452.5 | 2452.5 | 2438.2 | 2430.2 | 2436.6 | 2431.8 | 2433.4 | 2423.9 | 2415.9 | 2411.1 | 2399.9 |
| 35° | 2605.3 | 2605.3 | 2598.9 | 2589.4 | 2590.9 | 2579.8 | 2578.2 | 2579.8 | 2586.2 | 2586.2 | 2573.4 |
| 37.5° | 2809.0 | 2812.2 | 2791.5 | 2788.3 | 2780.4 | 2764.4 | 2756.4 | 2759.6 | 2773.9 | 2781.9 | 2764.4 |
| 40° | 3062.0 | 3068.4 | 3062.0 | 3041.3 | 3031.8 | 3004.7 | 2988.9 | 2988.9 | 3000.0 | 3007.9 | 3001.5 |
| 42.5° | 3311.9 | 3323.1 | 3311.9 | 3295.9 | 3288.1 | 3267.3 | 3259.4 | 3265.8 | 3280.1 | 3289.6 | 3280.1 |
| 45° | 3590.5 | 3598.3 | 3584.0 | 3565.0 | 3555.4 | 3544.2 | 3539.5 | 3544.2 | 3560.2 | 3569.7 | 3566.5 |
| 47.5° | 3864.2 | 3875.2 | 3857.8 | 3849.8 | 3849.8 | 3838.7 | 3851.4 | 3864.2 | 3878.5 | 3900.7 | 3891.2 |
| 50° | 4131.5 | 4145.8 | 4134.7 | 4136.3 | 4149.0 | 4169.8 | 4193.6 | 4219.1 | 4244.5 | 4268.4 | 4271.5 |
| 52.5° | 4370.3 | 4392.6 | 4394.1 | 4422.7 | 4462.5 | 4494.3 | 4561.2 | 4616.9 | 4677.4 | 4698.1 | 4688.5 |
| 55° | 4621.7 | 4652.0 | 4691.8 | 4736.3 | 4800.0 | 4865.2 | 4978.2 | 5078.4 | 5158.0 | 5207.3 | 5199.5 |
| 57.5° | 4981.4 | 5011.6 | 5053.0 | 5126.2 | 5221.7 | 5310.9 | 5465.2 | 5621.1 | 5742.1 | 5816.9 | 5780.3 |
| 60° | 5447.7 | 5479.5 | 5533.7 | 5611.6 | 5735.8 | 5856.7 | 6068.3 | 6292.8 | 6480.6 | 6566.5 | 6499.6 |
| 62.5° | 6065.2 | 6095.5 | 6130.4 | 6233.9 | 6372.4 | 6528.3 | 6794.1 | 7082.2 | 7320.8 | 7403.6 | 7309.7 |
| 65° | 6945.3 | 6981.8 | 6993.0 | 7077.4 | 7212.6 | 7357.5 | 7643.9 | 7968.6 | 8240.8 | 8376.0 | 8188.2 |
| 67.5° | 7936.8 | 7951.1 | 7995.7 | 8094.3 | 8232.8 | 8363.3 | 8589.3 | 8896.4 | 9157.5 | 9232.2 | 9031.7 |
| 70° | 8517.7 | 8546.3 | 8624.3 | 8761.2 | 8926.7 | 9132.0 | 9378.7 | 9709.7 | 10005.7 | 10040.8 | 9786.1 |
| 72.5° | 7992.5 | 8051.3 | 8189.8 | 8403.1 | 8750.0 | 9114.5 | 9539.4 | 10028.0 | 10452.9 | 10502.2 | 10093.3 |
| 75° | 6410.5 | 6477.4 | 6642.9 | 6876.9 | 7287.4 | 7828.5 | 8442.8 | 9176.6 | 9813.2 | 9894.3 | 9353.2 |
| 77.5° | 3417.0 | 3499.7 | 3740.0 | 4055.1 | 4640.8 | 5357.0 | 6097.0 | 6934.2 | 7475.2 | 7658.2 | 7268.4 |
| 80° | 861.0 | 905.5 | 1021.7 | 1206.4 | 1602.7 | 2180.3 | 2818.5 | 3719.3 | 4390.9 | 4675.8 | 4390.9 |
| 82.5° | 334.2 | 367.6 | 399.5 | 421.8 | 459.9 | 539.5 | 744.8 | 1214.3 | 1636.0 | 2014.8 | 1744.2 |
| 85° | 128.9 | 136.9 | 197.3 | 224.4 | 224.4 | 246.6 | 283.3 | 334.2 | 413.8 | 451.9 | 378.8 |
| 87.5° | 50.9 | 55.8 | 68.4 | 105.1 | 108.2 | 95.4 | 101.9 | 114.6 | 87.6 | 73.2 | 82.8 |
| 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° | 1838.1 | 1838.1 | 1838.1 | 1838.1 | 1838.1 | 1838.1 | 1838.1 | 1838.1 |
| 2.5° | 1830.3 | 1828.6 | 1825.5 | 1827.0 | 1825.5 | 1825.5 | 1825.5 | 1825.5 |
| 5° | 1828.6 | 1828.6 | 1825.5 | 1825.5 | 1825.5 | 1827.0 | 1825.5 | 1825.5 |
| 7.5° | 1827.0 | 1825.5 | 1822.3 | 1820.6 | 1820.6 | 1819.1 | 1819.1 | 1819.1 |
| 10° | 1823.8 | 1820.6 | 1817.5 | 1815.9 | 1815.9 | 1812.7 | 1812.7 | 1812.7 |
| 12.5° | 1831.8 | 1827.0 | 1823.8 | 1822.3 | 1822.3 | 1822.3 | 1823.8 | 1823.8 |
| 15° | 1854.1 | 1844.6 | 1839.8 | 1838.1 | 1839.8 | 1842.9 | 1844.6 | 1846.1 |
| 17.5° | 1877.9 | 1868.4 | 1860.4 | 1857.3 | 1858.9 | 1863.6 | 1868.4 | 1871.6 |
| 20° | 1908.2 | 1900.2 | 1890.7 | 1887.5 | 1887.5 | 1893.9 | 1897.1 | 1901.9 |
| 22.5° | 1951.2 | 1944.8 | 1936.9 | 1932.0 | 1928.9 | 1936.9 | 1941.7 | 1944.8 |
| 25° | 2019.6 | 2013.3 | 2006.8 | 2002.1 | 2000.5 | 2008.5 | 2011.6 | 2013.3 |
| 27.5° | 2110.3 | 2104.0 | 2100.7 | 2099.2 | 2094.4 | 2097.6 | 2102.4 | 2100.7 |
| 30° | 2228.1 | 2232.9 | 2228.1 | 2228.1 | 2220.1 | 2223.3 | 2220.1 | 2216.9 |
| 32.5° | 2385.6 | 2380.9 | 2366.6 | 2357.0 | 2345.8 | 2345.8 | 2341.1 | 2336.3 |
| 35° | 2543.2 | 2527.3 | 2519.3 | 2524.1 | 2519.3 | 2522.5 | 2514.5 | 2506.6 |
| 37.5° | 2729.4 | 2719.8 | 2718.3 | 2732.6 | 2729.4 | 2732.6 | 2732.6 | 2721.5 |
| 40° | 2976.1 | 2969.7 | 2980.9 | 3004.7 | 3014.3 | 3012.7 | 3015.9 | 3001.5 |
| 42.5° | 3259.4 | 3248.3 | 3253.0 | 3273.7 | 3284.8 | 3288.1 | 3286.4 | 3273.7 |
| 45° | 3542.7 | 3545.9 | 3545.9 | 3568.2 | 3579.3 | 3585.6 | 3574.5 | 3569.7 |
| 47.5° | 3862.6 | 3867.4 | 3856.2 | 3870.5 | 3873.7 | 3884.9 | 3875.2 | 3867.4 |
| 50° | 4231.7 | 4214.3 | 4188.8 | 4193.6 | 4193.6 | 4190.4 | 4179.3 | 4169.8 |
| 52.5° | 4644.0 | 4604.2 | 4556.4 | 4540.6 | 4523.0 | 4505.5 | 4483.3 | 4465.7 |
| 55° | 5113.4 | 5045.0 | 4959.1 | 4919.3 | 4885.9 | 4846.1 | 4795.2 | 4777.7 |
| 57.5° | 5657.7 | 5540.0 | 5425.4 | 5353.8 | 5267.9 | 5215.3 | 5150.0 | 5146.9 |
| 60° | 6303.9 | 6144.8 | 5942.6 | 5836.0 | 5750.1 | 5688.0 | 5638.7 | 5619.6 |
| 62.5° | 7050.3 | 6776.5 | 6558.5 | 6444.0 | 6343.7 | 6305.5 | 6243.5 | 6251.4 |
| 65° | 7815.9 | 7537.3 | 7325.7 | 7233.4 | 7139.5 | 7114.0 | 7056.7 | 7077.4 |
| 67.5° | 8645.0 | 8415.8 | 8183.5 | 8097.5 | 8011.5 | 7986.1 | 7927.3 | 7944.7 |
| 70° | 9388.2 | 9097.0 | 8832.8 | 8664.1 | 8517.7 | 8399.9 | 8325.1 | 8294.9 |
| 72.5° | 9536.3 | 9031.7 | 8616.3 | 8194.6 | 7951.1 | 7737.8 | 7650.3 | 7616.9 |
| 75° | 8568.6 | 7785.6 | 7193.6 | 6698.6 | 6424.8 | 6114.5 | 6081.1 | 6034.9 |
| 77.5° | 6665.1 | 5773.9 | 5057.8 | 4421.2 | 4053.5 | 3674.7 | 3544.2 | 3445.6 |
| 80° | 3975.6 | 3055.7 | 2368.1 | 1659.9 | 1354.4 | 1090.2 | 1024.9 | 956.5 |
| 82.5° | 1422.8 | 912.0 | 614.3 | 479.0 | 428.1 | 394.7 | 369.2 | 335.8 |
| 85° | 343.7 | 289.7 | 273.7 | 248.3 | 245.1 | 208.5 | 148.0 | 132.1 |
| 87.5° | 109.8 | 100.2 | 101.9 | 97.1 | 101.9 | 76.4 | 62.1 | 55.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)