

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: P270885

Luminaire Tested: **NVN-AF-03-LED-U-5NQ-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270885
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-03-LED-U-5NQ-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V
NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16177.7 lumens
Efficiency: N/A
Efficacy: 97.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B3 - U0 - G2

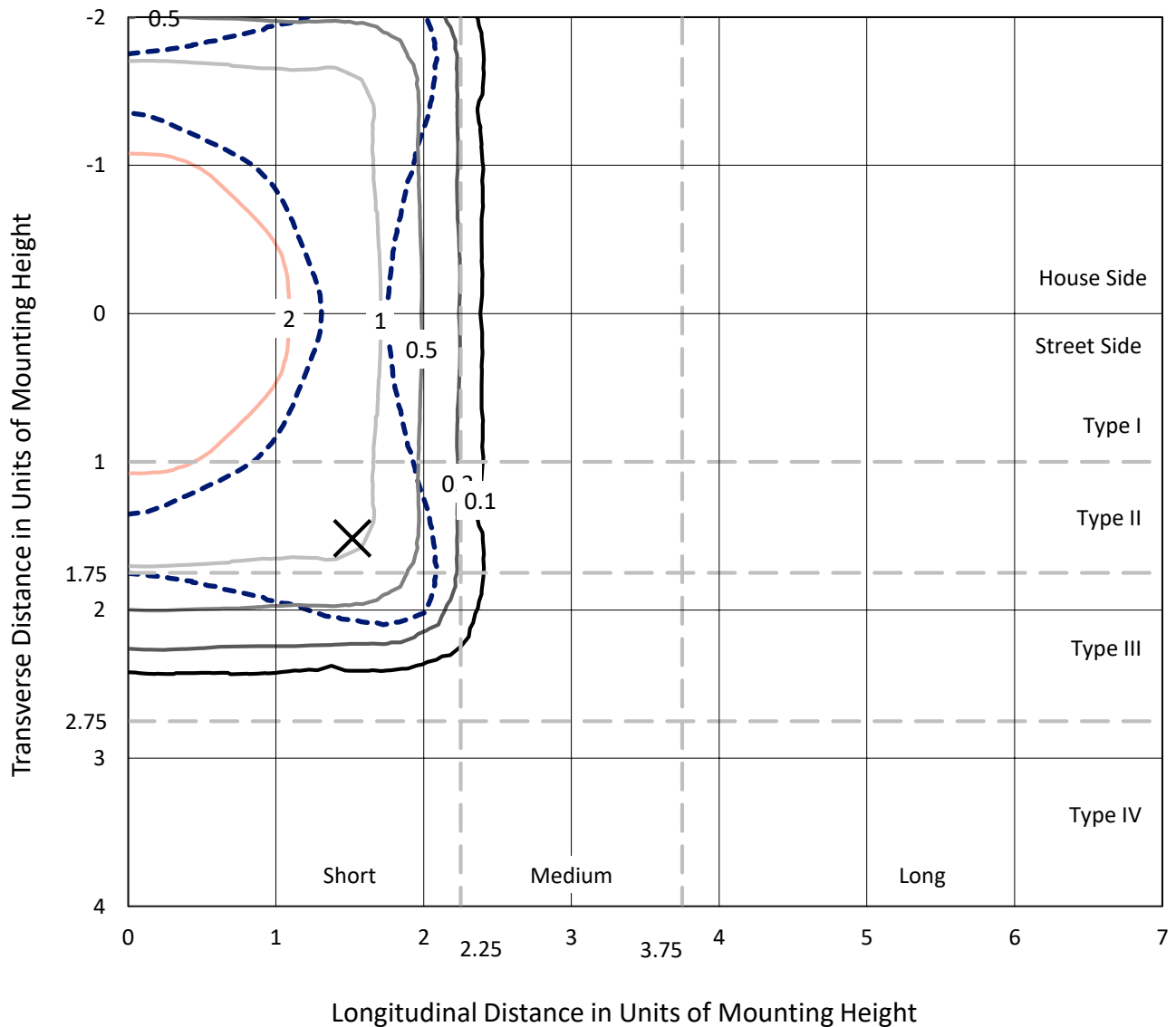
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

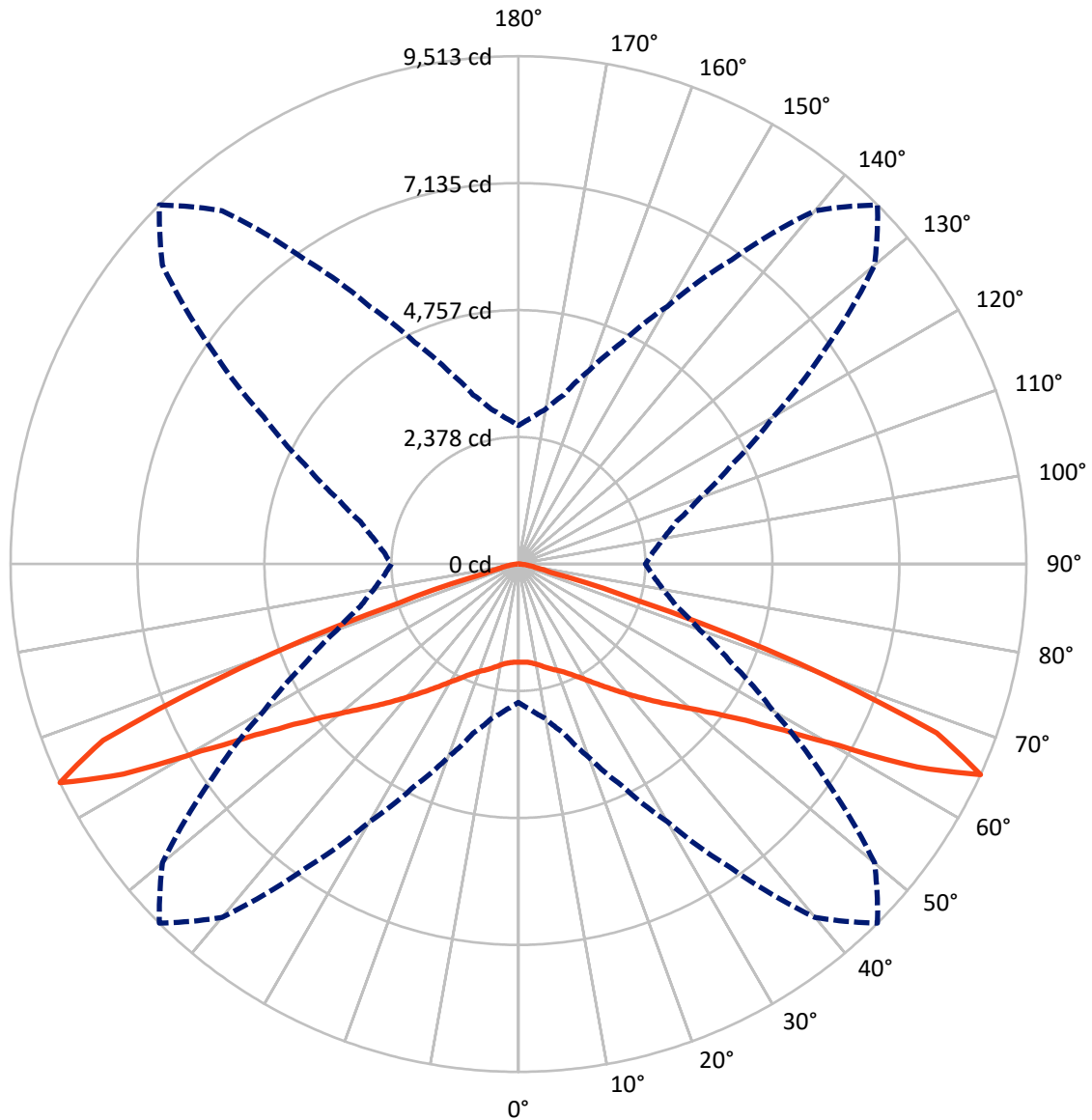
✕ Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 8088.9 | 0.0 | 8088.9 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 8088.9 | 0.0 | 8088.9 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 16177.7 | 0.0 | 16177.7 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 179.2 | 1.1 |
| 10°-20° | 574.3 | 3.6 |
| 20°-30° | 1071.4 | 6.6 |
| 30°-40° | 1806.6 | 11.2 |
| 40°-50° | 2934.4 | 18.1 |
| 50°-60° | 4597.7 | 28.4 |
| 60°-70° | 4340.0 | 26.8 |
| 70°-80° | 584.9 | 3.6 |
| 80°-90° | 89.1 | 0.6 |
| 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° | 16177.7 | 100.0 |
| 0°-180° | 16177.7 | 100.0 |

Coefficient of Utilization



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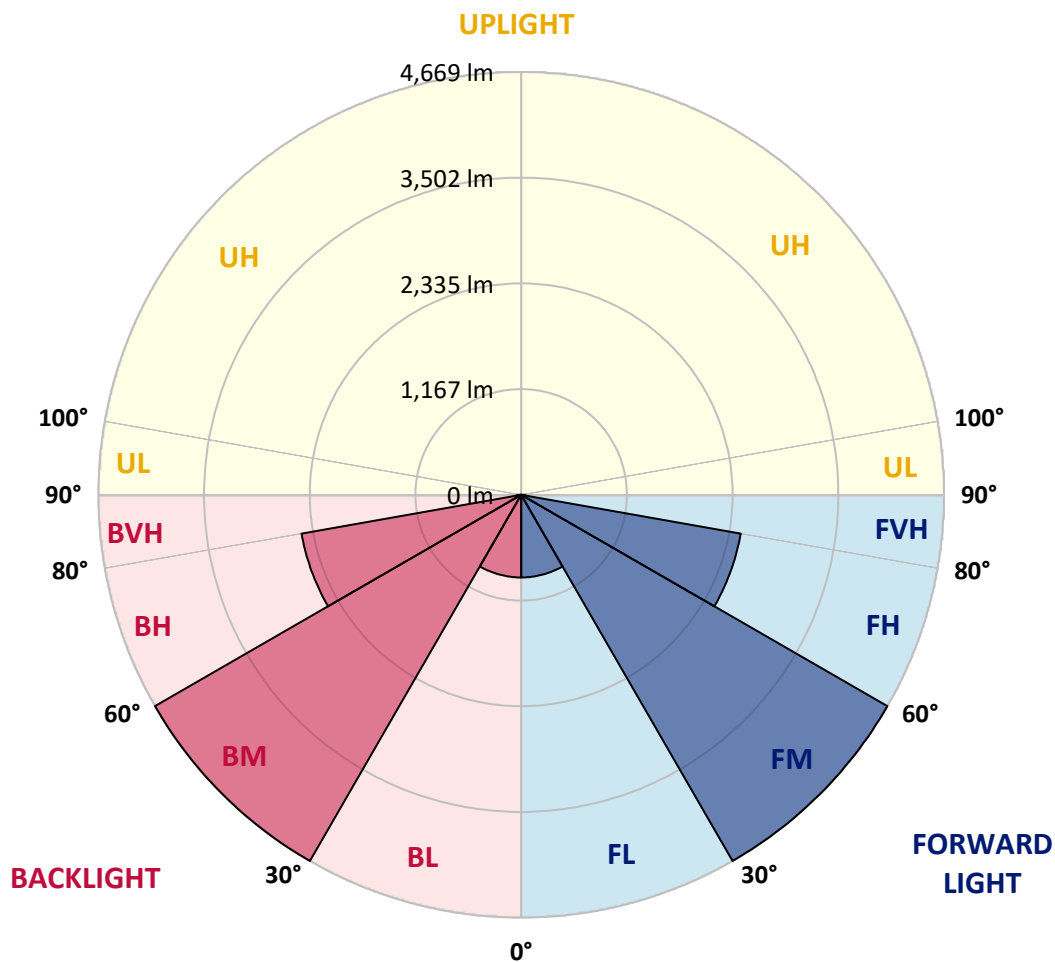
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 912.5 | 5.6 | | | |
| FM (30°-60°) | 4669.4 | 28.9 | | | |
| FH (60°-80°) | 2462.5 | 15.2 | | | G2/5000 |
| FVH (80°-90°) | 44.6 | 0.3 | | | G1/100 |
| BL (0°-30°) | 912.5 | 5.6 | B2/1000 | | |
| BM (30°-60°) | 4669.4 | 28.9 | B3/5000 | | |
| BH (60°-80°) | 2462.5 | 15.2 | B3/2500 | | G2/5000 |
| BVH (80°-90°) | 44.6 | 0.3 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1840.2 | 1840.2 | 1840.2 | 1840.2 | 1840.2 | 1840.2 | 1840.2 | 1840.2 | 1840.2 | 1840.2 | 1840.2 |
| 2.5° | 1855.3 | 1855.3 | 1858.4 | 1857.3 | 1853.4 | 1850.2 | 1847.3 | 1843.2 | 1841.2 | 1839.2 | 1838.2 |
| 5° | 1865.4 | 1865.4 | 1868.5 | 1867.3 | 1864.4 | 1860.4 | 1858.4 | 1855.3 | 1852.2 | 1850.2 | 1851.2 |
| 7.5° | 1890.7 | 1891.7 | 1892.5 | 1891.7 | 1888.5 | 1885.5 | 1881.5 | 1880.5 | 1876.5 | 1873.4 | 1875.5 |
| 10° | 1928.9 | 1928.9 | 1929.9 | 1930.8 | 1928.9 | 1921.8 | 1921.8 | 1919.8 | 1915.7 | 1911.8 | 1912.9 |
| 12.5° | 1971.2 | 1971.2 | 1972.1 | 1972.1 | 1972.1 | 1968.1 | 1969.3 | 1968.1 | 1963.2 | 1961.1 | 1963.2 |
| 15° | 2012.6 | 2013.6 | 2013.6 | 2015.5 | 2015.5 | 2016.5 | 2020.6 | 2020.6 | 2018.6 | 2017.6 | 2017.6 |
| 17.5° | 2060.9 | 2062.9 | 2063.9 | 2066.9 | 2068.0 | 2070.0 | 2073.9 | 2075.1 | 2076.1 | 2073.0 | 2073.9 |
| 20° | 2125.4 | 2126.4 | 2129.4 | 2130.4 | 2134.5 | 2134.5 | 2136.4 | 2135.5 | 2133.5 | 2129.4 | 2129.4 |
| 22.5° | 2198.0 | 2199.9 | 2206.0 | 2206.0 | 2211.1 | 2208.0 | 2209.0 | 2206.0 | 2200.9 | 2199.1 | 2197.0 |
| 25° | 2292.7 | 2295.7 | 2300.7 | 2298.8 | 2300.7 | 2295.7 | 2295.7 | 2295.7 | 2292.7 | 2289.7 | 2288.6 |
| 27.5° | 2412.6 | 2407.5 | 2412.6 | 2408.5 | 2407.5 | 2403.5 | 2404.6 | 2402.5 | 2399.6 | 2398.6 | 2394.5 |
| 30° | 2537.6 | 2531.6 | 2534.6 | 2535.6 | 2533.6 | 2532.5 | 2528.5 | 2525.4 | 2520.5 | 2521.5 | 2518.5 |
| 32.5° | 2680.7 | 2674.7 | 2677.7 | 2678.7 | 2676.7 | 2678.7 | 2677.7 | 2670.7 | 2664.6 | 2668.5 | 2668.5 |
| 35° | 2851.0 | 2847.0 | 2855.1 | 2858.0 | 2851.9 | 2849.0 | 2844.9 | 2836.8 | 2827.9 | 2833.9 | 2835.0 |
| 37.5° | 3055.6 | 3050.6 | 3056.7 | 3064.7 | 3053.6 | 3047.5 | 3031.4 | 3019.4 | 3013.3 | 3016.2 | 3020.3 |
| 40° | 3268.3 | 3269.2 | 3286.4 | 3288.3 | 3276.3 | 3269.2 | 3253.1 | 3234.9 | 3217.8 | 3217.8 | 3222.8 |
| 42.5° | 3491.9 | 3494.9 | 3515.1 | 3522.2 | 3518.1 | 3505.0 | 3482.9 | 3460.7 | 3438.5 | 3442.6 | 3448.7 |
| 45° | 3744.9 | 3740.9 | 3762.0 | 3779.2 | 3776.1 | 3772.2 | 3751.0 | 3710.5 | 3690.4 | 3689.5 | 3699.6 |
| 47.5° | 4010.9 | 4018.9 | 4041.1 | 4070.4 | 4069.4 | 4059.4 | 4032.1 | 3994.9 | 3957.6 | 3960.5 | 3972.7 |
| 50° | 4321.3 | 4332.4 | 4369.7 | 4398.9 | 4403.0 | 4400.0 | 4367.6 | 4324.4 | 4272.0 | 4275.0 | 4291.2 |
| 52.5° | 4599.5 | 4615.6 | 4659.0 | 4719.4 | 4756.7 | 4773.9 | 4752.7 | 4712.4 | 4659.0 | 4661.9 | 4679.1 |
| 55° | 4851.4 | 4876.5 | 4941.1 | 5023.9 | 5098.3 | 5167.9 | 5199.1 | 5198.1 | 5158.7 | 5167.9 | 5190.0 |
| 57.5° | 5009.7 | 5044.9 | 5142.6 | 5275.7 | 5423.8 | 5563.9 | 5684.8 | 5798.7 | 5823.9 | 5871.3 | 5871.3 |
| 60° | 4796.9 | 4879.7 | 5009.7 | 5237.4 | 5528.7 | 5843.0 | 6183.8 | 6515.2 | 6728.9 | 6897.2 | 6806.5 |
| 62.5° | 4005.9 | 4127.8 | 4310.2 | 4610.6 | 5064.0 | 5625.5 | 6309.6 | 7080.6 | 7884.9 | 8376.6 | 8015.8 |
| 65° | 2592.0 | 2745.2 | 2943.7 | 3281.2 | 3852.7 | 4575.2 | 5571.9 | 6957.7 | 8640.6 | 9513.4 | 8707.2 |
| 67.5° | 1026.9 | 1130.7 | 1251.7 | 1491.5 | 1987.3 | 2696.8 | 3815.5 | 5524.7 | 7629.8 | 8453.2 | 7549.3 |
| 70° | 490.7 | 507.9 | 531.1 | 582.6 | 706.4 | 953.3 | 1532.9 | 2722.0 | 4679.1 | 5546.9 | 4567.3 |
| 72.5° | 354.7 | 357.7 | 368.8 | 386.0 | 422.3 | 472.7 | 574.5 | 832.4 | 1613.4 | 2346.2 | 1615.4 |
| 75° | 269.1 | 273.2 | 279.2 | 288.3 | 307.4 | 331.6 | 369.8 | 443.5 | 552.3 | 636.9 | 551.3 |
| 77.5° | 204.5 | 208.5 | 213.6 | 222.7 | 232.8 | 249.9 | 264.0 | 293.2 | 339.6 | 357.7 | 355.8 |
| 80° | 149.2 | 156.2 | 164.3 | 172.4 | 179.4 | 187.4 | 188.5 | 202.6 | 228.8 | 245.9 | 240.8 |
| 82.5° | 94.7 | 100.8 | 121.9 | 131.1 | 132.1 | 134.0 | 132.9 | 134.0 | 148.1 | 160.3 | 156.2 |
| 85° | 60.5 | 64.5 | 75.5 | 85.7 | 83.6 | 87.7 | 87.7 | 85.7 | 79.6 | 68.5 | 81.7 |
| 87.5° | 30.3 | 31.3 | 36.3 | 45.4 | 43.4 | 38.3 | 37.3 | 37.3 | 27.2 | 23.1 | 25.2 |
| 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° | 1840.2 | 1840.2 | 1840.2 | 1840.2 | 1840.2 | 1840.2 | 1840.2 | 1840.2 |
| 2.5° | 1835.1 | 1837.2 | 1834.2 | 1834.2 | 1833.1 | 1835.1 | 1832.2 | 1832.2 |
| 5° | 1849.3 | 1852.2 | 1851.2 | 1851.2 | 1853.4 | 1855.3 | 1854.3 | 1853.4 |
| 7.5° | 1874.5 | 1876.5 | 1878.4 | 1879.6 | 1881.5 | 1880.5 | 1882.5 | 1881.5 |
| 10° | 1912.9 | 1910.8 | 1913.7 | 1910.8 | 1911.8 | 1909.7 | 1910.8 | 1910.8 |
| 12.5° | 1961.1 | 1958.1 | 1956.1 | 1954.1 | 1954.1 | 1950.0 | 1950.0 | 1951.1 |
| 15° | 2016.5 | 2011.6 | 2007.5 | 2005.5 | 2003.5 | 2003.5 | 2000.4 | 2002.4 |
| 17.5° | 2071.0 | 2065.9 | 2058.8 | 2058.8 | 2056.0 | 2053.9 | 2051.8 | 2056.8 |
| 20° | 2128.4 | 2123.5 | 2119.3 | 2118.4 | 2112.4 | 2110.3 | 2111.2 | 2117.3 |
| 22.5° | 2195.0 | 2192.0 | 2192.0 | 2189.9 | 2185.8 | 2182.8 | 2182.8 | 2189.9 |
| 25° | 2284.6 | 2278.6 | 2279.5 | 2280.5 | 2278.6 | 2278.6 | 2276.6 | 2281.7 |
| 27.5° | 2394.5 | 2389.4 | 2392.5 | 2394.5 | 2392.5 | 2395.5 | 2392.5 | 2396.5 |
| 30° | 2523.5 | 2520.5 | 2523.5 | 2526.6 | 2521.5 | 2521.5 | 2519.4 | 2522.5 |
| 32.5° | 2677.7 | 2673.6 | 2675.6 | 2675.6 | 2668.5 | 2662.5 | 2654.5 | 2660.5 |
| 35° | 2847.0 | 2842.0 | 2846.0 | 2849.0 | 2840.9 | 2835.0 | 2822.7 | 2827.9 |
| 37.5° | 3033.3 | 3035.5 | 3040.5 | 3053.6 | 3051.5 | 3041.5 | 3032.4 | 3036.5 |
| 40° | 3242.1 | 3252.1 | 3274.2 | 3283.3 | 3281.2 | 3271.3 | 3259.1 | 3261.1 |
| 42.5° | 3477.9 | 3491.0 | 3514.1 | 3529.3 | 3522.2 | 3508.2 | 3493.0 | 3499.0 |
| 45° | 3734.9 | 3754.9 | 3785.2 | 3800.3 | 3791.2 | 3776.1 | 3754.9 | 3766.1 |
| 47.5° | 4006.9 | 4047.3 | 4087.6 | 4107.7 | 4104.6 | 4083.5 | 4056.2 | 4059.4 |
| 50° | 4332.4 | 4385.9 | 4437.3 | 4457.4 | 4442.3 | 4410.0 | 4371.7 | 4370.8 |
| 52.5° | 4737.5 | 4795.1 | 4837.4 | 4832.3 | 4795.1 | 4744.6 | 4701.3 | 4699.3 |
| 55° | 5243.4 | 5262.6 | 5256.5 | 5213.3 | 5147.7 | 5069.1 | 5013.7 | 5004.5 |
| 57.5° | 5855.2 | 5790.7 | 5696.0 | 5564.9 | 5417.8 | 5268.6 | 5167.9 | 5130.6 |
| 60° | 6602.9 | 6311.8 | 5973.1 | 5616.4 | 5290.8 | 5046.9 | 4892.8 | 4799.0 |
| 62.5° | 7220.8 | 6377.2 | 5620.3 | 5000.5 | 4493.7 | 4192.4 | 3981.7 | 3851.8 |
| 65° | 7009.0 | 5509.6 | 4413.1 | 3613.9 | 3060.6 | 2749.3 | 2526.6 | 2378.4 |
| 67.5° | 5414.9 | 3681.4 | 2561.7 | 1775.7 | 1346.4 | 1139.8 | 995.7 | 902.0 |
| 70° | 2730.0 | 1411.9 | 855.5 | 603.7 | 515.9 | 479.8 | 455.5 | 441.3 |
| 72.5° | 801.2 | 535.1 | 444.4 | 393.0 | 361.7 | 339.6 | 325.5 | 318.4 |
| 75° | 443.5 | 361.7 | 319.4 | 290.2 | 270.1 | 254.9 | 245.9 | 239.8 |
| 77.5° | 305.3 | 263.1 | 241.9 | 222.7 | 206.6 | 195.6 | 188.5 | 182.4 |
| 80° | 213.6 | 192.4 | 183.4 | 173.4 | 161.2 | 152.2 | 142.1 | 138.1 |
| 82.5° | 142.1 | 132.9 | 131.1 | 123.0 | 115.9 | 105.8 | 87.7 | 81.7 |
| 85° | 83.6 | 82.6 | 82.6 | 79.6 | 74.6 | 65.4 | 52.5 | 52.5 |
| 87.5° | 29.3 | 30.3 | 31.3 | 33.2 | 32.2 | 27.2 | 22.2 | 21.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)