

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: P195380

Luminaire Tested: **NVN-AF-02-LED-U-T3R-7060-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195380
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-02-LED-U-T3R-7060-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 5700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13590 lumens
Efficiency: N/A
Efficacy: 105.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium - Full Cutoff
BUG Rating: B2 - U0 - G3

Input Watts (W): 129
Input Voltage (V): NR
Input Current (A_{in}): 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

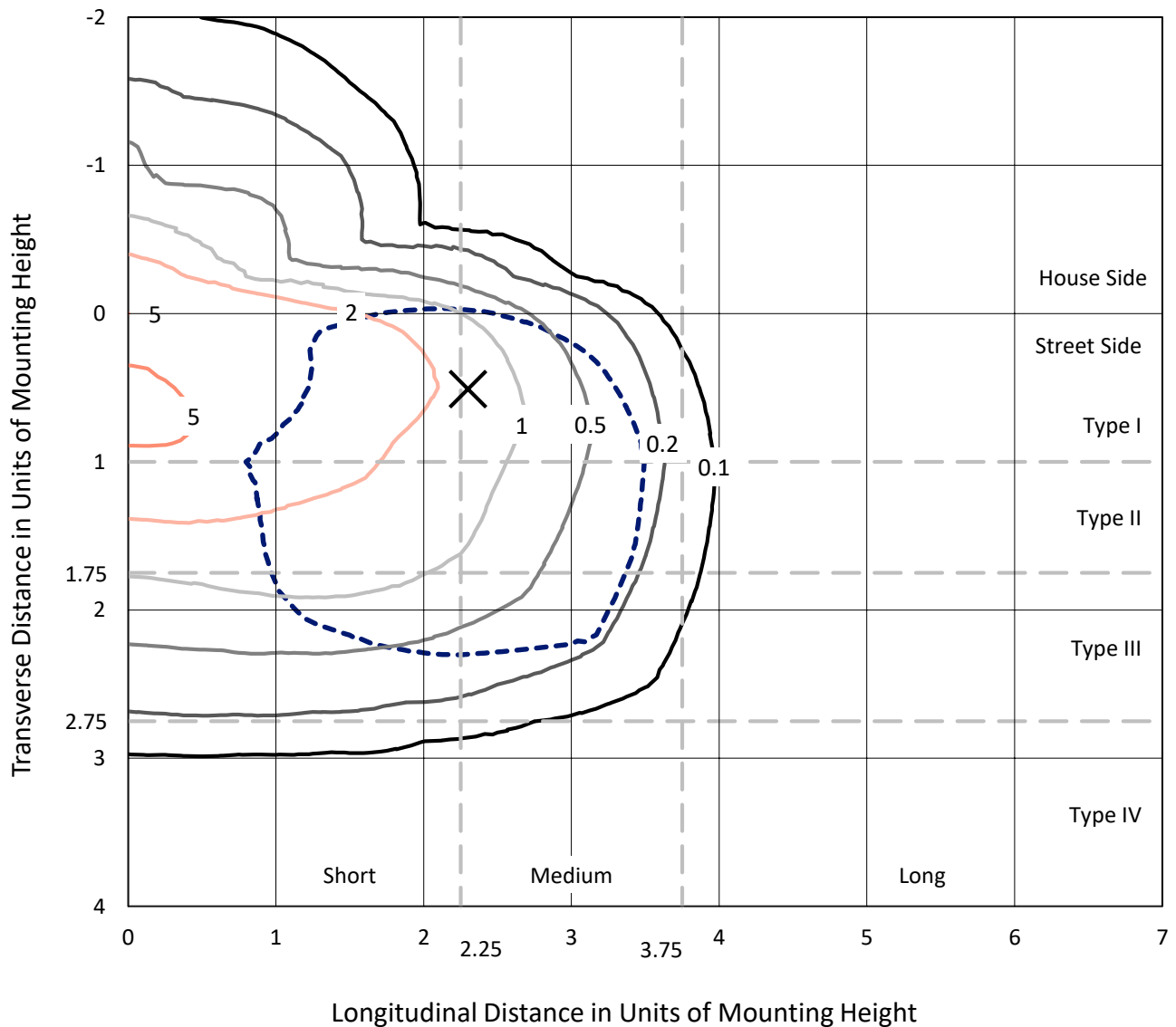


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

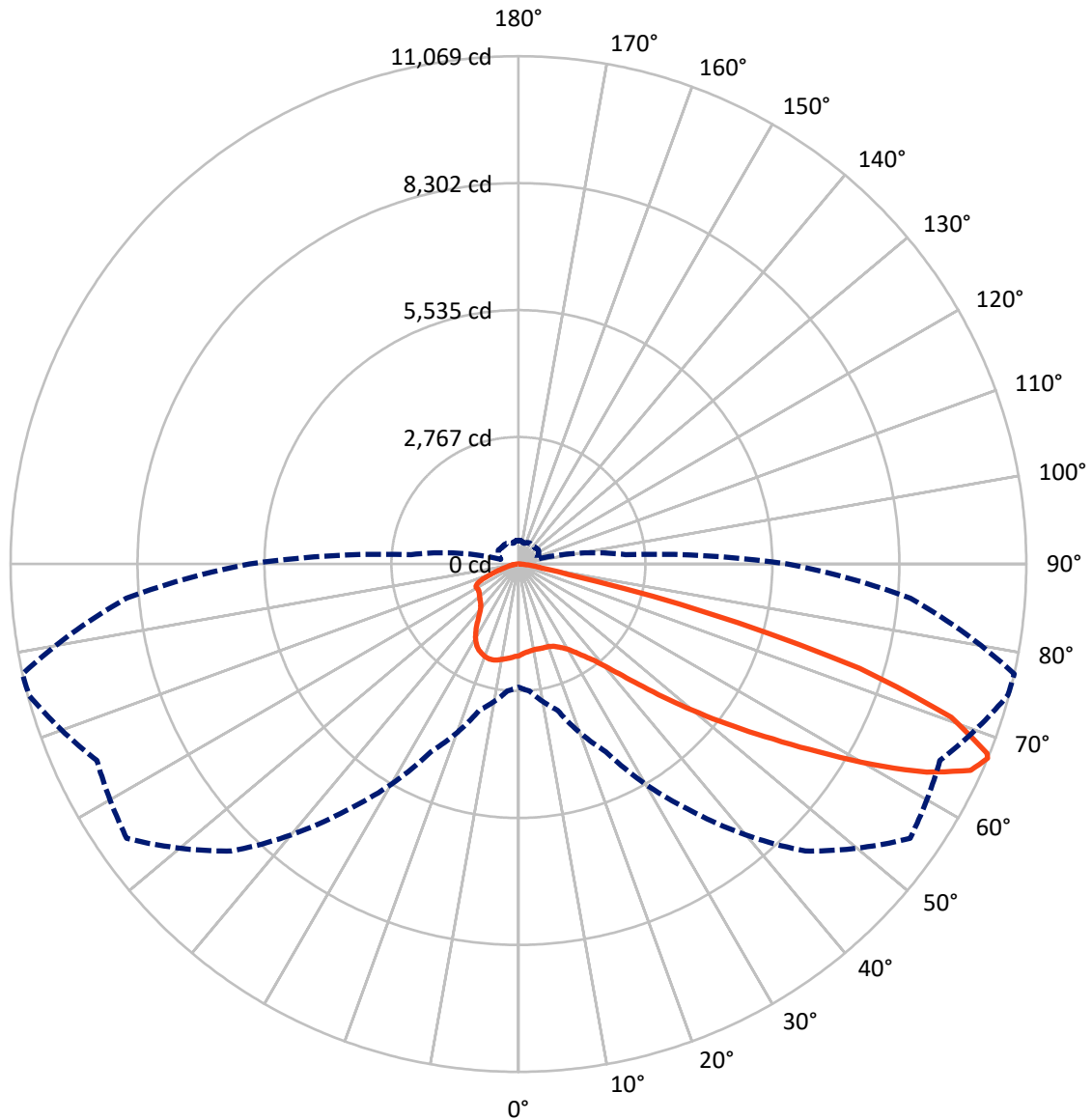


Based on 20 foot mounting height. Maximum calculated value = 6 fc
 Type III - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical



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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2335.4 | 0.0 | 2335.4 |
| | % Fixture | 17.2 | 0.0 | 17.2 |
| Street Side | Lumens | 11254.6 | 0.0 | 11254.6 |
| | % Fixture | 82.8 | 0.0 | 82.8 |
| Total | Lumens | 13590.0 | 0.0 | 13590.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 178.1 | 1.3 |
| 10°-20° | 493.3 | 3.6 |
| 20°-30° | 838.2 | 6.2 |
| 30°-40° | 1340.9 | 9.9 |
| 40°-50° | 2064.4 | 15.2 |
| 50°-60° | 2864.1 | 21.1 |
| 60°-70° | 3820.5 | 28.1 |
| 70°-80° | 1818.2 | 13.4 |
| 80°-90° | 172.2 | 1.3 |
| 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° | 13590.0 | 100.0 |
| 0°-180° | 13590.0 | 100.0 |



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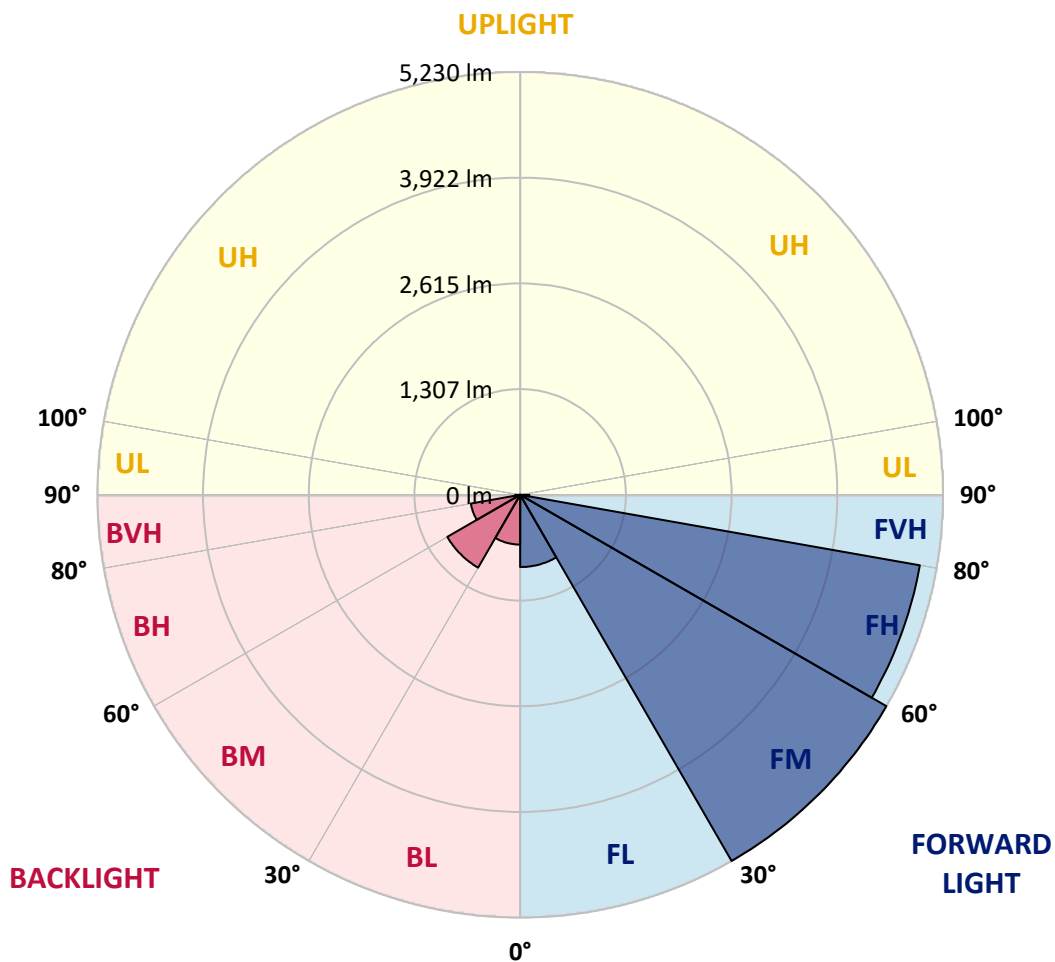
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 893.7 | 6.6 | | | |
| FM (30°-60°) | 5229.6 | 38.5 | | | |
| FH (60°-80°) | 5019.5 | 36.9 | | | G3/7500 |
| FVH (80°-90°) | 111.8 | 0.8 | | | G2/225 |
| BL (0°-30°) | 616.0 | 4.5 | B2/1000 | | |
| BM (30°-60°) | 1039.9 | 7.7 | B2/2500 | | |
| BH (60°-80°) | 619.2 | 4.6 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 60.3 | 0.4 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 77.5° | 85° |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|--------|
| 0° | 2000.1 | 2000.1 | 2000.1 | 2000.1 | 2000.1 | 2000.1 | 2000.1 | 2000.1 | 2000.1 | 2000.1 | 2000.1 |
| 2.5° | 1793.4 | 1801.8 | 1802.7 | 1827.0 | 1838.0 | 1865.7 | 1895.9 | 1922.8 | 1946.3 | 1954.7 | 1969.9 |
| 5° | 1613.7 | 1613.7 | 1616.2 | 1632.2 | 1663.2 | 1707.8 | 1770.8 | 1839.6 | 1911.9 | 1929.5 | 1974.1 |
| 7.5° | 1519.6 | 1521.3 | 1523.0 | 1538.9 | 1563.3 | 1602.8 | 1665.8 | 1759.8 | 1880.0 | 1909.4 | 1987.5 |
| 10° | 1528.0 | 1525.5 | 1517.1 | 1513.7 | 1523.8 | 1549.0 | 1603.6 | 1700.2 | 1853.1 | 1898.4 | 2011.9 |
| 12.5° | 1659.9 | 1654.8 | 1627.1 | 1586.8 | 1549.8 | 1540.6 | 1578.4 | 1670.0 | 1840.5 | 1898.4 | 2053.0 |
| 15° | 1885.8 | 1889.2 | 1834.6 | 1750.6 | 1654.0 | 1588.5 | 1583.4 | 1659.0 | 1836.3 | 1903.5 | 2100.9 |
| 17.5° | 2179.9 | 2181.5 | 2105.9 | 1984.1 | 1823.7 | 1688.4 | 1617.9 | 1659.0 | 1836.3 | 1908.5 | 2147.1 |
| 20° | 2492.3 | 2480.6 | 2394.9 | 2242.0 | 2033.7 | 1827.0 | 1680.9 | 1669.1 | 1841.3 | 1916.1 | 2190.8 |
| 22.5° | 2760.3 | 2749.4 | 2659.5 | 2499.1 | 2260.5 | 1990.9 | 1765.7 | 1702.7 | 1869.0 | 1947.2 | 2252.1 |
| 25° | 2994.7 | 3001.4 | 2914.0 | 2733.4 | 2486.5 | 2175.7 | 1892.6 | 1780.0 | 1927.0 | 2003.5 | 2327.7 |
| 27.5° | 3279.4 | 3266.8 | 3166.0 | 2993.8 | 2719.1 | 2367.2 | 2051.3 | 1877.4 | 1995.9 | 2071.5 | 2420.1 |
| 30° | 3608.7 | 3602.9 | 3466.8 | 3289.5 | 2975.4 | 2581.4 | 2208.4 | 1982.5 | 2085.8 | 2164.7 | 2536.0 |
| 32.5° | 4008.6 | 4007.7 | 3861.6 | 3644.0 | 3263.5 | 2823.3 | 2394.1 | 2126.1 | 2216.8 | 2296.6 | 2689.7 |
| 35° | 4461.4 | 4460.5 | 4309.3 | 4022.0 | 3595.3 | 3091.3 | 2612.5 | 2300.8 | 2378.9 | 2462.9 | 2872.9 |
| 37.5° | 4775.5 | 4770.5 | 4691.5 | 4412.6 | 3962.4 | 3402.9 | 2885.5 | 2536.0 | 2562.9 | 2657.0 | 3093.8 |
| 40° | 4836.0 | 4866.2 | 4934.3 | 4769.6 | 4363.1 | 3749.0 | 3159.3 | 2788.9 | 2814.1 | 2935.0 | 3371.8 |
| 42.5° | 4770.5 | 4810.0 | 5035.9 | 5082.1 | 4763.8 | 4168.2 | 3502.0 | 3139.2 | 3171.1 | 3321.4 | 3698.6 |
| 45° | 4713.4 | 4747.8 | 5030.9 | 5255.2 | 5159.4 | 4625.2 | 3929.6 | 3566.7 | 3627.2 | 3813.7 | 4071.6 |
| 47.5° | 4615.9 | 4647.8 | 4931.8 | 5286.3 | 5385.4 | 5065.3 | 4444.6 | 4080.8 | 4185.0 | 4411.0 | 4496.6 |
| 50° | 4610.9 | 4625.2 | 4796.5 | 5182.1 | 5463.5 | 5399.7 | 5014.9 | 4682.3 | 4841.9 | 5102.3 | 4967.0 |
| 52.5° | 4483.2 | 4583.2 | 4738.6 | 5015.8 | 5465.2 | 5594.5 | 5576.9 | 5341.7 | 5587.8 | 5875.9 | 5482.8 |
| 55° | 3702.0 | 3817.1 | 4545.4 | 4934.3 | 5455.1 | 5761.7 | 6090.2 | 6043.1 | 6427.8 | 6731.1 | 6060.8 |
| 57.5° | 3456.7 | 3505.4 | 3987.6 | 4958.6 | 5539.1 | 6038.1 | 6603.4 | 6796.6 | 7388.8 | 7719.8 | 6753.8 |
| 60° | 3389.5 | 3440.7 | 3875.9 | 4970.4 | 5766.7 | 6541.2 | 7299.8 | 7647.6 | 8518.7 | 8869.8 | 7540.9 |
| 62.5° | 3314.7 | 3381.1 | 3884.3 | 4981.3 | 6166.6 | 7285.5 | 8223.8 | 8570.7 | 9678.7 | 9992.1 | 8278.4 |
| 65° | 3096.3 | 3184.5 | 3728.9 | 4912.4 | 6604.2 | 8219.6 | 9445.2 | 9533.4 | 10637.2 | 10836.3 | 8723.6 |
| 67° | 2682.2 | 2778.8 | 3302.1 | 4514.3 | 6563.9 | 8848.8 | 10422.1 | 10135.7 | 11044.6 | 11069.0 | 8579.1 |
| 67.5° | 2551.1 | 2651.1 | 3157.6 | 4348.8 | 6448.8 | 8931.1 | 10595.2 | 10218.9 | 11041.2 | 11014.4 | 8444.7 |
| 70° | 1717.8 | 1830.4 | 2236.1 | 3192.9 | 5172.9 | 8312.0 | 10553.2 | 9962.7 | 10317.1 | 10008.9 | 7255.3 |
| 72.5° | 852.6 | 856.0 | 1115.5 | 1748.9 | 3134.1 | 5961.6 | 8803.4 | 8522.9 | 8363.3 | 7781.1 | 5324.1 |
| 75° | 410.8 | 418.3 | 526.7 | 772.8 | 1321.4 | 3077.8 | 6003.6 | 5750.8 | 4896.5 | 4239.6 | 2664.5 |
| 77.5° | 313.3 | 320.9 | 409.1 | 503.2 | 551.1 | 1003.8 | 2973.7 | 2403.3 | 1418.8 | 1133.2 | 751.0 |
| 80° | 241.9 | 256.2 | 345.2 | 386.4 | 364.6 | 402.4 | 934.9 | 735.9 | 551.9 | 506.5 | 372.1 |
| 82.5° | 189.0 | 197.4 | 293.2 | 293.2 | 252.0 | 269.6 | 435.1 | 425.1 | 342.7 | 309.1 | 199.9 |
| 85° | 133.6 | 150.4 | 236.0 | 218.4 | 165.5 | 167.2 | 260.4 | 249.5 | 176.4 | 142.0 | 78.1 |
| 87.5° | 59.6 | 76.4 | 168.0 | 142.8 | 88.2 | 68.0 | 106.7 | 91.6 | 69.7 | 53.8 | 36.1 |
| 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):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2000.1 | 2000.1 | 2000.1 | 2000.1 | 2000.1 | 2000.1 | 2000.1 | 2000.1 | 2000.1 | 2000.1 | 2000.1 |
| 2.5° | 1986.7 | 2000.1 | 2021.1 | 2033.7 | 2050.5 | 2057.2 | 2063.9 | 2075.7 | 2084.9 | 2082.4 | 2078.2 |
| 5° | 2005.1 | 2027.8 | 2053.9 | 2062.3 | 2062.3 | 2053.9 | 2048.8 | 2049.7 | 2047.1 | 2045.5 | 2040.4 |
| 7.5° | 2032.0 | 2063.1 | 2081.6 | 2073.2 | 2047.1 | 2014.4 | 1983.3 | 1964.8 | 1947.2 | 1936.2 | 1939.6 |
| 10° | 2069.8 | 2104.3 | 2105.1 | 2068.1 | 2006.0 | 1934.6 | 1873.2 | 1833.8 | 1796.0 | 1779.2 | 1784.2 |
| 12.5° | 2124.4 | 2158.9 | 2129.5 | 2049.7 | 1940.4 | 1828.7 | 1716.2 | 1634.7 | 1561.6 | 1544.0 | 1538.9 |
| 15° | 2183.2 | 2210.1 | 2144.6 | 2010.2 | 1846.4 | 1662.4 | 1473.4 | 1351.6 | 1270.1 | 1255.8 | 1250.8 |
| 17.5° | 2234.5 | 2249.6 | 2137.0 | 1939.6 | 1697.7 | 1407.9 | 1187.8 | 1105.5 | 1088.7 | 1097.1 | 1097.1 |
| 20° | 2279.8 | 2274.8 | 2104.3 | 1830.4 | 1463.3 | 1125.6 | 997.9 | 997.1 | 1019.8 | 1040.8 | 1042.5 |
| 22.5° | 2336.9 | 2297.5 | 2052.2 | 1668.3 | 1183.6 | 939.1 | 917.3 | 939.1 | 964.3 | 987.9 | 990.4 |
| 25° | 2405.0 | 2322.7 | 1982.5 | 1437.3 | 951.7 | 852.6 | 861.9 | 880.3 | 896.3 | 914.8 | 915.6 |
| 27.5° | 2473.0 | 2342.0 | 1884.2 | 1165.9 | 825.7 | 797.2 | 807.3 | 814.8 | 819.0 | 830.8 | 830.8 |
| 30° | 2552.0 | 2357.1 | 1742.2 | 934.1 | 767.8 | 748.5 | 742.6 | 739.2 | 742.6 | 758.5 | 759.4 |
| 32.5° | 2651.1 | 2384.0 | 1548.2 | 801.4 | 740.9 | 714.0 | 683.8 | 667.0 | 678.7 | 707.3 | 712.3 |
| 35° | 2763.7 | 2415.9 | 1315.5 | 748.5 | 731.7 | 697.2 | 641.8 | 615.7 | 619.9 | 646.0 | 650.2 |
| 37.5° | 2904.8 | 2457.1 | 1086.1 | 735.9 | 740.9 | 695.5 | 622.5 | 585.5 | 567.0 | 567.9 | 567.0 |
| 40° | 3085.4 | 2498.2 | 904.7 | 739.2 | 761.1 | 699.7 | 613.2 | 555.3 | 516.6 | 518.3 | 521.7 |
| 42.5° | 3274.4 | 2525.1 | 789.6 | 749.3 | 785.4 | 705.6 | 609.9 | 525.9 | 492.3 | 520.8 | 546.9 |
| 45° | 3495.3 | 2517.5 | 730.0 | 758.5 | 803.9 | 708.1 | 597.3 | 522.5 | 494.8 | 580.5 | 629.2 |
| 47.5° | 3749.0 | 2484.8 | 696.4 | 762.7 | 808.9 | 707.3 | 588.0 | 533.4 | 515.8 | 664.5 | 719.9 |
| 50° | 4024.5 | 2433.5 | 669.5 | 756.0 | 806.4 | 703.9 | 598.1 | 546.9 | 524.2 | 682.9 | 725.8 |
| 52.5° | 4326.1 | 2386.5 | 641.8 | 740.9 | 793.8 | 693.9 | 610.7 | 541.0 | 500.7 | 629.2 | 661.9 |
| 55° | 4683.1 | 2375.6 | 610.7 | 714.9 | 772.8 | 682.9 | 604.0 | 522.5 | 474.6 | 557.8 | 577.9 |
| 57.5° | 5091.4 | 2443.6 | 570.4 | 682.9 | 744.3 | 661.1 | 588.0 | 512.4 | 465.4 | 507.4 | 518.3 |
| 60° | 5609.7 | 2594.0 | 527.5 | 649.3 | 709.0 | 628.3 | 573.7 | 514.9 | 467.9 | 499.8 | 502.3 |
| 62.5° | 6014.6 | 2729.2 | 488.9 | 608.2 | 661.9 | 588.9 | 558.6 | 517.5 | 475.5 | 509.9 | 505.7 |
| 65° | 6161.6 | 2662.9 | 441.0 | 546.9 | 595.6 | 545.2 | 537.6 | 519.1 | 475.5 | 515.8 | 506.5 |
| 67° | 5860.0 | 2346.2 | 395.7 | 485.5 | 532.6 | 506.5 | 517.5 | 512.4 | 467.1 | 514.9 | 499.0 |
| 67.5° | 5716.3 | 2234.5 | 383.9 | 475.5 | 515.8 | 494.8 | 512.4 | 509.1 | 464.5 | 513.3 | 494.8 |
| 70° | 4714.2 | 1602.8 | 324.2 | 399.0 | 431.8 | 436.0 | 481.3 | 487.2 | 444.4 | 482.2 | 448.6 |
| 72.5° | 3354.2 | 1003.0 | 279.7 | 309.1 | 348.6 | 373.0 | 439.3 | 457.8 | 417.5 | 419.2 | 391.4 |
| 75° | 1659.9 | 538.5 | 249.5 | 238.6 | 271.3 | 310.8 | 383.0 | 417.5 | 378.0 | 349.4 | 340.2 |
| 77.5° | 560.3 | 304.9 | 210.8 | 192.4 | 210.8 | 249.5 | 317.5 | 364.6 | 333.5 | 295.7 | 289.8 |
| 80° | 289.8 | 221.8 | 164.6 | 154.6 | 166.3 | 193.2 | 248.6 | 303.2 | 284.8 | 286.4 | 236.0 |
| 82.5° | 180.6 | 135.2 | 118.4 | 117.6 | 126.0 | 147.8 | 183.1 | 246.1 | 244.4 | 209.2 | 152.0 |
| 85° | 84.0 | 78.1 | 75.6 | 78.1 | 80.6 | 84.0 | 119.3 | 175.6 | 185.6 | 112.6 | 100.0 |
| 87.5° | 35.3 | 34.4 | 30.2 | 32.8 | 36.1 | 35.3 | 47.9 | 74.8 | 104.2 | 70.6 | 64.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)