

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: P197284

Luminaire Tested: **NVN-AF-04-LED-U-T3R-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197284
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-04-LED-U-T3R-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13342 lumens
Efficiency: N/A
Efficacy: 103.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium - Full Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 129
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

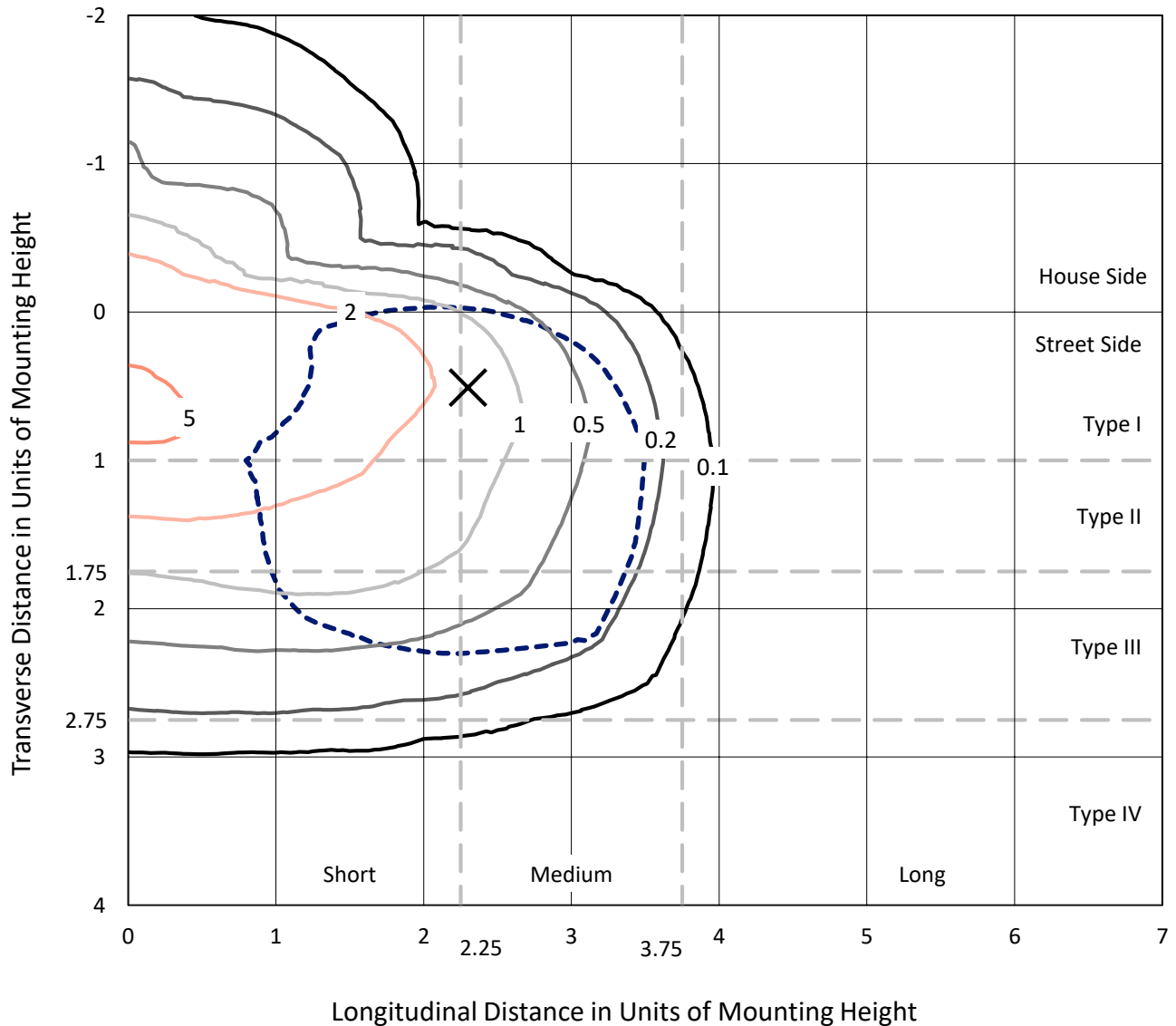


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Iso-Footcandle Lines of Horizontal Illumination

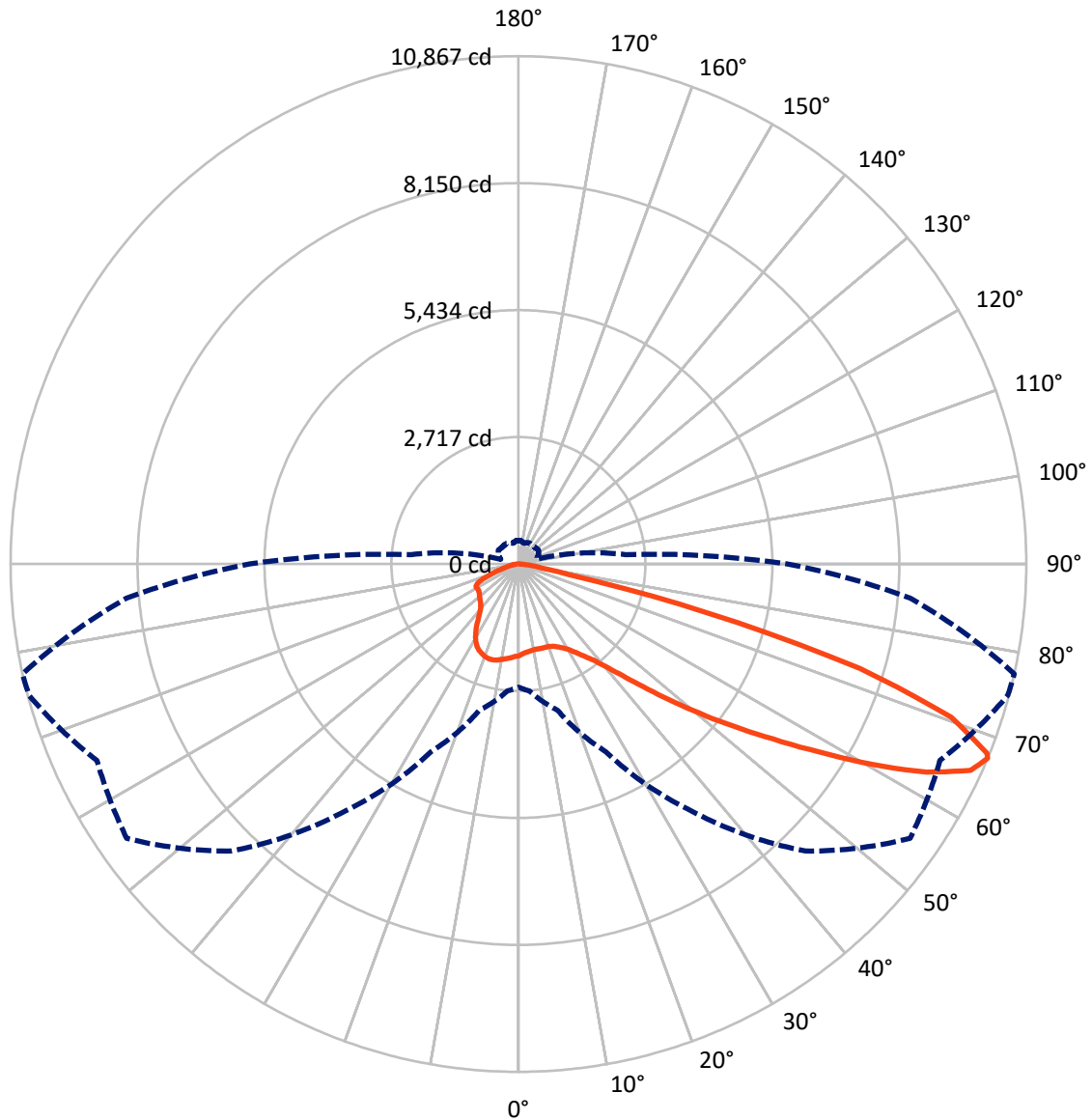
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.9 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 | 2292.8 | 0.0 | 2292.8 |
| | % Fixture | 17.2 | 0.0 | 17.2 |
| Street Side | Lumens | 11049.2 | 0.0 | 11049.2 |
| | % Fixture | 82.8 | 0.0 | 82.8 |
| Total | Lumens | 13342.0 | 0.0 | 13342.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 174.9 | 1.3 |
| 10°-20° | 484.3 | 3.6 |
| 20°-30° | 822.9 | 6.2 |
| 30°-40° | 1316.5 | 9.9 |
| 40°-50° | 2026.7 | 15.2 |
| 50°-60° | 2811.9 | 21.1 |
| 60°-70° | 3750.8 | 28.1 |
| 70°-80° | 1785.0 | 13.4 |
| 80°-90° | 169.0 | 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° | 13342.0 | 100.0 |
| 0°-180° | 13342.0 | 100.0 |

Coefficient of Utilization



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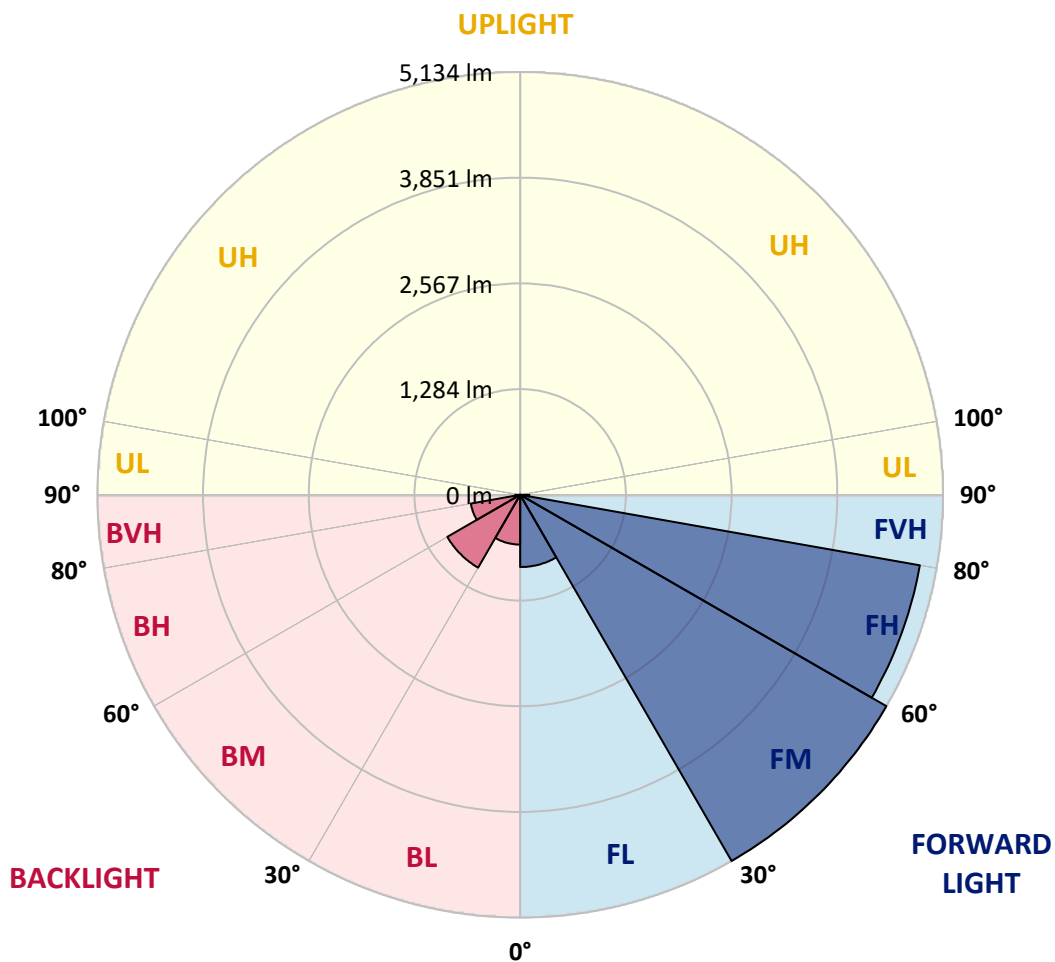
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 877.4 | 6.6 | | | |
| FM | (30°-60°) | 5134.1 | 38.5 | | | |
| FH | (60°-80°) | 4927.9 | 36.9 | | | G2/5000 |
| FVH | (80°-90°) | 109.8 | 0.8 | | | G2/225 |
| BL | (0°-30°) | 604.8 | 4.5 | B2/1000 | | |
| BM | (30°-60°) | 1020.9 | 7.7 | B2/2500 | | |
| BH | (60°-80°) | 607.9 | 4.6 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 59.2 | 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-G2

Type III Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 77.5° | 85° |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|--------|
| 0° | 1963.6 | 1963.6 | 1963.6 | 1963.6 | 1963.6 | 1963.6 | 1963.6 | 1963.6 | 1963.6 | 1963.6 | 1963.6 |
| 2.5° | 1760.7 | 1769.0 | 1769.8 | 1793.7 | 1804.4 | 1831.6 | 1861.3 | 1887.7 | 1910.8 | 1919.1 | 1933.9 |
| 5° | 1584.2 | 1584.2 | 1586.7 | 1602.4 | 1632.9 | 1676.6 | 1738.5 | 1806.1 | 1877.0 | 1894.3 | 1938.0 |
| 7.5° | 1491.9 | 1493.5 | 1495.2 | 1510.8 | 1534.8 | 1573.5 | 1635.4 | 1727.7 | 1845.7 | 1874.5 | 1951.2 |
| 10° | 1500.1 | 1497.6 | 1489.4 | 1486.1 | 1496.0 | 1520.7 | 1574.3 | 1669.2 | 1819.3 | 1863.8 | 1975.1 |
| 12.5° | 1629.6 | 1624.6 | 1597.4 | 1557.8 | 1521.6 | 1512.5 | 1549.6 | 1639.5 | 1806.9 | 1863.8 | 2015.5 |
| 15° | 1851.4 | 1854.7 | 1801.1 | 1718.7 | 1623.8 | 1559.5 | 1554.5 | 1628.8 | 1802.8 | 1868.8 | 2062.6 |
| 17.5° | 2140.1 | 2141.7 | 2067.5 | 1947.9 | 1790.4 | 1657.6 | 1588.4 | 1628.8 | 1802.8 | 1873.7 | 2107.9 |
| 20° | 2446.9 | 2435.3 | 2351.2 | 2201.1 | 1996.6 | 1793.7 | 1650.2 | 1638.7 | 1807.7 | 1881.1 | 2150.8 |
| 22.5° | 2709.9 | 2699.2 | 2611.0 | 2453.5 | 2219.2 | 1954.5 | 1733.5 | 1671.7 | 1834.9 | 1911.6 | 2211.0 |
| 25° | 2940.0 | 2946.6 | 2860.9 | 2683.5 | 2441.1 | 2136.0 | 1858.0 | 1747.5 | 1891.8 | 1966.9 | 2285.2 |
| 27.5° | 3219.6 | 3207.2 | 3108.3 | 2939.2 | 2669.5 | 2324.0 | 2013.9 | 1843.2 | 1959.5 | 2033.7 | 2375.9 |
| 30° | 3542.9 | 3537.1 | 3403.5 | 3229.5 | 2921.1 | 2534.3 | 2168.1 | 1946.3 | 2047.7 | 2125.2 | 2489.7 |
| 32.5° | 3935.4 | 3934.6 | 3791.1 | 3577.5 | 3203.9 | 2771.8 | 2350.4 | 2087.3 | 2176.4 | 2254.7 | 2640.7 |
| 35° | 4379.9 | 4379.1 | 4230.7 | 3948.6 | 3529.7 | 3034.9 | 2564.8 | 2258.8 | 2335.5 | 2418.0 | 2820.4 |
| 37.5° | 4688.4 | 4683.4 | 4605.9 | 4332.1 | 3890.1 | 3340.8 | 2832.8 | 2489.7 | 2516.1 | 2608.5 | 3037.3 |
| 40° | 4747.8 | 4777.4 | 4844.2 | 4682.6 | 4283.5 | 3680.6 | 3101.7 | 2738.0 | 2762.7 | 2881.5 | 3310.3 |
| 42.5° | 4683.4 | 4722.2 | 4944.0 | 4989.4 | 4676.8 | 4092.1 | 3438.1 | 3081.9 | 3113.2 | 3260.8 | 3631.1 |
| 45° | 4627.3 | 4661.2 | 4939.1 | 5159.3 | 5065.3 | 4540.8 | 3857.9 | 3501.6 | 3561.0 | 3744.1 | 3997.3 |
| 47.5° | 4531.7 | 4563.0 | 4841.8 | 5189.8 | 5287.1 | 4972.9 | 4363.4 | 4006.4 | 4108.6 | 4330.5 | 4414.6 |
| 50° | 4526.7 | 4540.8 | 4709.0 | 5087.5 | 5363.8 | 5301.1 | 4923.4 | 4596.8 | 4753.5 | 5009.2 | 4876.4 |
| 52.5° | 4401.4 | 4499.5 | 4652.1 | 4924.2 | 5365.4 | 5492.4 | 5475.1 | 5244.2 | 5485.9 | 5768.7 | 5382.8 |
| 55° | 3634.4 | 3747.4 | 4462.4 | 4844.2 | 5355.6 | 5656.6 | 5979.0 | 5932.8 | 6310.5 | 6608.3 | 5950.2 |
| 57.5° | 3393.6 | 3441.4 | 3914.8 | 4868.2 | 5438.0 | 5927.9 | 6482.9 | 6672.6 | 7254.0 | 7578.9 | 6630.5 |
| 60° | 3327.6 | 3377.9 | 3805.1 | 4879.7 | 5661.5 | 6421.9 | 7166.6 | 7508.0 | 8363.2 | 8707.9 | 7403.3 |
| 62.5° | 3254.2 | 3319.4 | 3813.4 | 4890.4 | 6054.1 | 7152.6 | 8073.7 | 8414.3 | 9502.1 | 9809.7 | 8127.3 |
| 65° | 3039.8 | 3126.4 | 3660.8 | 4822.8 | 6483.7 | 8069.6 | 9272.8 | 9359.4 | 10443.1 | 10638.5 | 8564.4 |
| 67° | 2633.2 | 2728.1 | 3241.9 | 4431.9 | 6444.1 | 8687.3 | 10232.0 | 9950.7 | 10843.1 | 10867.0 | 8422.6 |
| 67.5° | 2504.6 | 2602.7 | 3100.0 | 4269.4 | 6331.2 | 8768.1 | 10401.8 | 10032.4 | 10839.8 | 10813.4 | 8290.6 |
| 70° | 1686.5 | 1797.0 | 2195.3 | 3134.7 | 5078.5 | 8160.3 | 10360.6 | 9780.8 | 10128.9 | 9826.2 | 7122.9 |
| 72.5° | 837.1 | 840.4 | 1095.2 | 1717.0 | 3076.9 | 5852.8 | 8642.8 | 8367.3 | 8210.6 | 7639.1 | 5226.9 |
| 75° | 403.3 | 410.7 | 517.1 | 758.7 | 1297.2 | 3021.7 | 5894.1 | 5645.8 | 4807.1 | 4162.2 | 2615.9 |
| 77.5° | 307.6 | 315.0 | 401.6 | 494.0 | 541.0 | 985.5 | 2919.4 | 2359.4 | 1392.9 | 1112.5 | 737.3 |
| 80° | 237.5 | 251.5 | 338.9 | 379.4 | 357.9 | 395.0 | 917.9 | 722.4 | 541.8 | 497.3 | 365.3 |
| 82.5° | 185.6 | 193.8 | 287.8 | 287.8 | 247.4 | 264.7 | 427.2 | 417.3 | 336.5 | 303.5 | 196.3 |
| 85° | 131.1 | 147.6 | 231.7 | 214.4 | 162.5 | 164.1 | 255.7 | 244.9 | 173.2 | 139.4 | 76.7 |
| 87.5° | 58.6 | 75.0 | 164.9 | 140.2 | 86.6 | 66.8 | 104.7 | 89.9 | 68.4 | 52.8 | 35.5 |
| 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° | 1963.6 | 1963.6 | 1963.6 | 1963.6 | 1963.6 | 1963.6 | 1963.6 | 1963.6 | 1963.6 | 1963.6 | 1963.6 |
| 2.5° | 1950.4 | 1963.6 | 1984.2 | 1996.6 | 2013.1 | 2019.7 | 2026.3 | 2037.8 | 2046.9 | 2044.4 | 2040.3 |
| 5° | 1968.5 | 1990.8 | 2016.4 | 2024.6 | 2024.6 | 2016.4 | 2011.4 | 2012.2 | 2009.8 | 2008.1 | 2003.2 |
| 7.5° | 1994.9 | 2025.4 | 2043.6 | 2035.3 | 2009.8 | 1977.6 | 1947.1 | 1929.0 | 1911.6 | 1900.9 | 1904.2 |
| 10° | 2032.0 | 2065.9 | 2066.7 | 2030.4 | 1969.4 | 1899.3 | 1839.1 | 1800.3 | 1763.2 | 1746.7 | 1751.6 |
| 12.5° | 2085.6 | 2119.5 | 2090.6 | 2012.2 | 1905.0 | 1795.4 | 1684.8 | 1604.9 | 1533.1 | 1515.8 | 1510.8 |
| 15° | 2143.4 | 2169.8 | 2105.4 | 1973.5 | 1812.7 | 1632.1 | 1446.5 | 1326.9 | 1246.9 | 1232.9 | 1228.0 |
| 17.5° | 2193.7 | 2208.5 | 2098.0 | 1904.2 | 1666.7 | 1382.2 | 1166.1 | 1085.3 | 1068.8 | 1077.0 | 1077.0 |
| 20° | 2238.2 | 2233.3 | 2065.9 | 1797.0 | 1436.6 | 1105.1 | 979.7 | 978.9 | 1001.2 | 1021.8 | 1023.4 |
| 22.5° | 2294.3 | 2255.5 | 2014.7 | 1637.8 | 1162.0 | 922.0 | 900.6 | 922.0 | 946.7 | 969.8 | 972.3 |
| 25° | 2361.1 | 2280.3 | 1946.3 | 1411.0 | 934.4 | 837.1 | 846.1 | 864.3 | 879.9 | 898.1 | 898.9 |
| 27.5° | 2427.9 | 2299.2 | 1849.8 | 1144.7 | 810.7 | 782.6 | 792.5 | 800.0 | 804.1 | 815.6 | 815.6 |
| 30° | 2505.4 | 2314.1 | 1710.4 | 917.1 | 753.8 | 734.8 | 729.0 | 725.7 | 729.0 | 744.7 | 745.5 |
| 32.5° | 2602.7 | 2340.5 | 1519.9 | 786.8 | 727.4 | 701.0 | 671.3 | 654.8 | 666.4 | 694.4 | 699.3 |
| 35° | 2713.2 | 2371.8 | 1291.5 | 734.8 | 718.3 | 684.5 | 630.1 | 604.5 | 608.6 | 634.2 | 638.3 |
| 37.5° | 2851.8 | 2412.2 | 1066.3 | 722.4 | 727.4 | 682.8 | 611.1 | 574.8 | 556.7 | 557.5 | 556.7 |
| 40° | 3029.1 | 2452.6 | 888.2 | 725.7 | 747.2 | 687.0 | 602.0 | 545.1 | 507.2 | 508.8 | 512.1 |
| 42.5° | 3214.6 | 2479.0 | 775.2 | 735.6 | 771.1 | 692.7 | 598.7 | 516.3 | 483.3 | 511.3 | 536.9 |
| 45° | 3431.5 | 2471.6 | 716.7 | 744.7 | 789.2 | 695.2 | 586.4 | 513.0 | 485.7 | 569.9 | 617.7 |
| 47.5° | 3680.6 | 2439.4 | 683.7 | 748.8 | 794.2 | 694.4 | 577.3 | 523.7 | 506.4 | 652.3 | 706.8 |
| 50° | 3951.1 | 2389.1 | 657.3 | 742.2 | 791.7 | 691.1 | 587.2 | 536.9 | 514.6 | 670.5 | 712.5 |
| 52.5° | 4247.2 | 2343.0 | 630.1 | 727.4 | 779.3 | 681.2 | 599.6 | 531.1 | 491.5 | 617.7 | 649.9 |
| 55° | 4597.7 | 2332.2 | 599.6 | 701.8 | 758.7 | 670.5 | 593.0 | 513.0 | 466.0 | 547.6 | 567.4 |
| 57.5° | 4998.5 | 2399.0 | 560.0 | 670.5 | 730.7 | 649.0 | 577.3 | 503.1 | 456.9 | 498.1 | 508.8 |
| 60° | 5507.3 | 2546.6 | 517.9 | 637.5 | 696.0 | 616.9 | 563.3 | 505.5 | 459.4 | 490.7 | 493.2 |
| 62.5° | 5904.8 | 2679.4 | 480.0 | 597.1 | 649.9 | 578.1 | 548.4 | 508.0 | 466.8 | 500.6 | 496.5 |
| 65° | 6049.1 | 2614.3 | 433.0 | 536.9 | 584.7 | 535.2 | 527.8 | 509.7 | 466.8 | 506.4 | 497.3 |
| 67° | 5753.1 | 2303.4 | 388.4 | 476.7 | 522.9 | 497.3 | 508.0 | 503.1 | 458.5 | 505.5 | 489.9 |
| 67.5° | 5612.0 | 2193.7 | 376.9 | 466.8 | 506.4 | 485.7 | 503.1 | 499.8 | 456.1 | 503.9 | 485.7 |
| 70° | 4628.2 | 1573.5 | 318.3 | 391.7 | 423.9 | 428.0 | 472.5 | 478.3 | 436.3 | 473.4 | 440.4 |
| 72.5° | 3293.0 | 984.7 | 274.6 | 303.5 | 342.2 | 366.2 | 431.3 | 449.5 | 409.9 | 411.5 | 384.3 |
| 75° | 1629.6 | 528.6 | 244.9 | 234.2 | 266.4 | 305.1 | 376.1 | 409.9 | 371.1 | 343.1 | 334.0 |
| 77.5° | 550.1 | 299.4 | 207.0 | 188.9 | 207.0 | 244.9 | 311.7 | 357.9 | 327.4 | 290.3 | 284.5 |
| 80° | 284.5 | 217.7 | 161.6 | 151.7 | 163.3 | 189.7 | 244.1 | 297.7 | 279.6 | 281.2 | 231.7 |
| 82.5° | 177.3 | 132.8 | 116.3 | 115.5 | 123.7 | 145.1 | 179.8 | 241.6 | 240.0 | 205.3 | 149.3 |
| 85° | 82.5 | 76.7 | 74.2 | 76.7 | 79.2 | 82.5 | 117.1 | 172.4 | 182.3 | 110.5 | 98.1 |
| 87.5° | 34.6 | 33.8 | 29.7 | 32.2 | 35.5 | 34.6 | 47.0 | 73.4 | 102.3 | 69.3 | 63.5 |
| 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)