

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: P196928

Luminaire Tested: **NVN-AF-02-LED-U-5WQ-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196928
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-02-LED-U-5WQ-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 3000K, 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: 8354 lumens
Efficiency: N/A
Efficacy: 98.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G2

Input Watts (W): 85
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

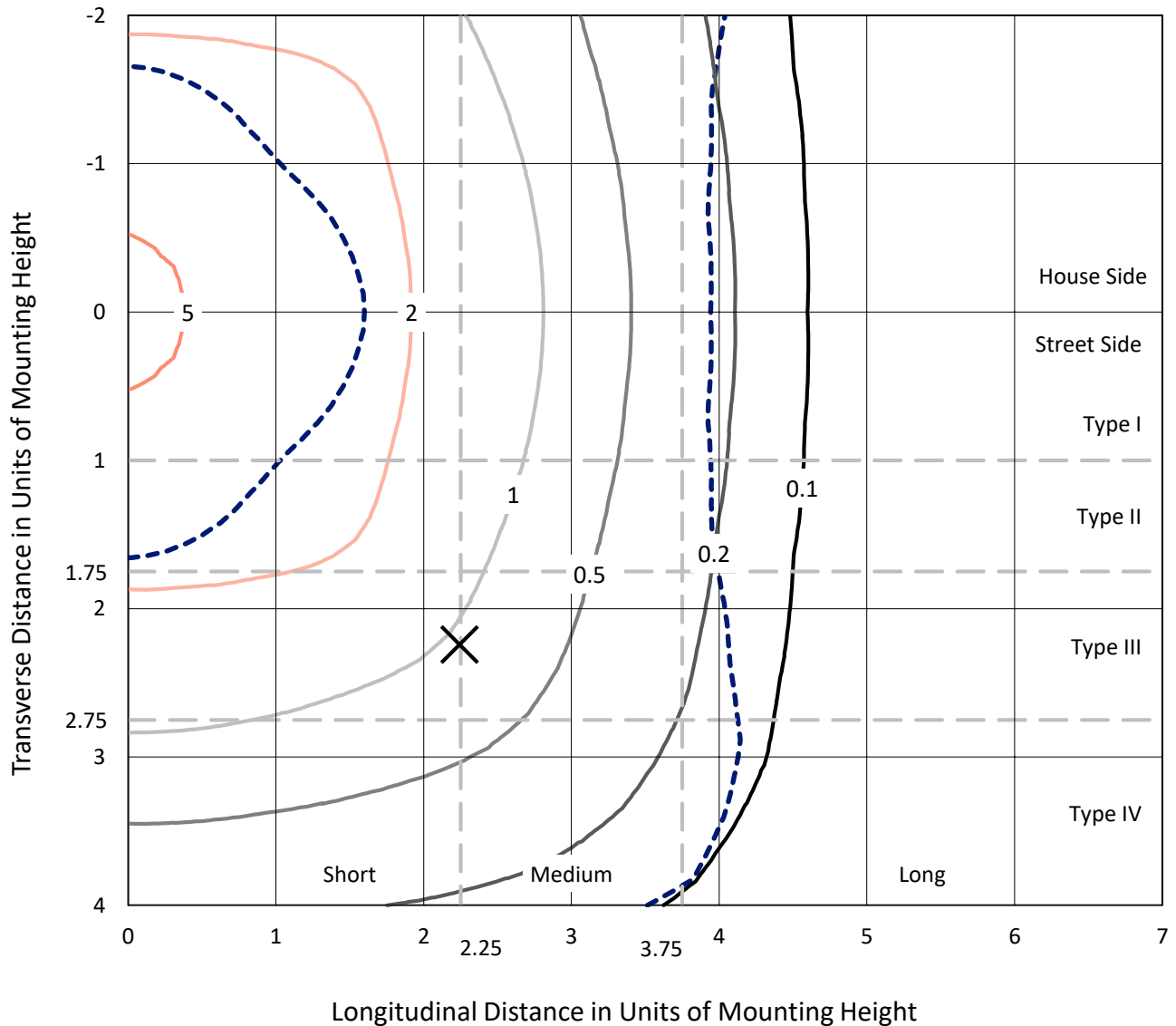


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

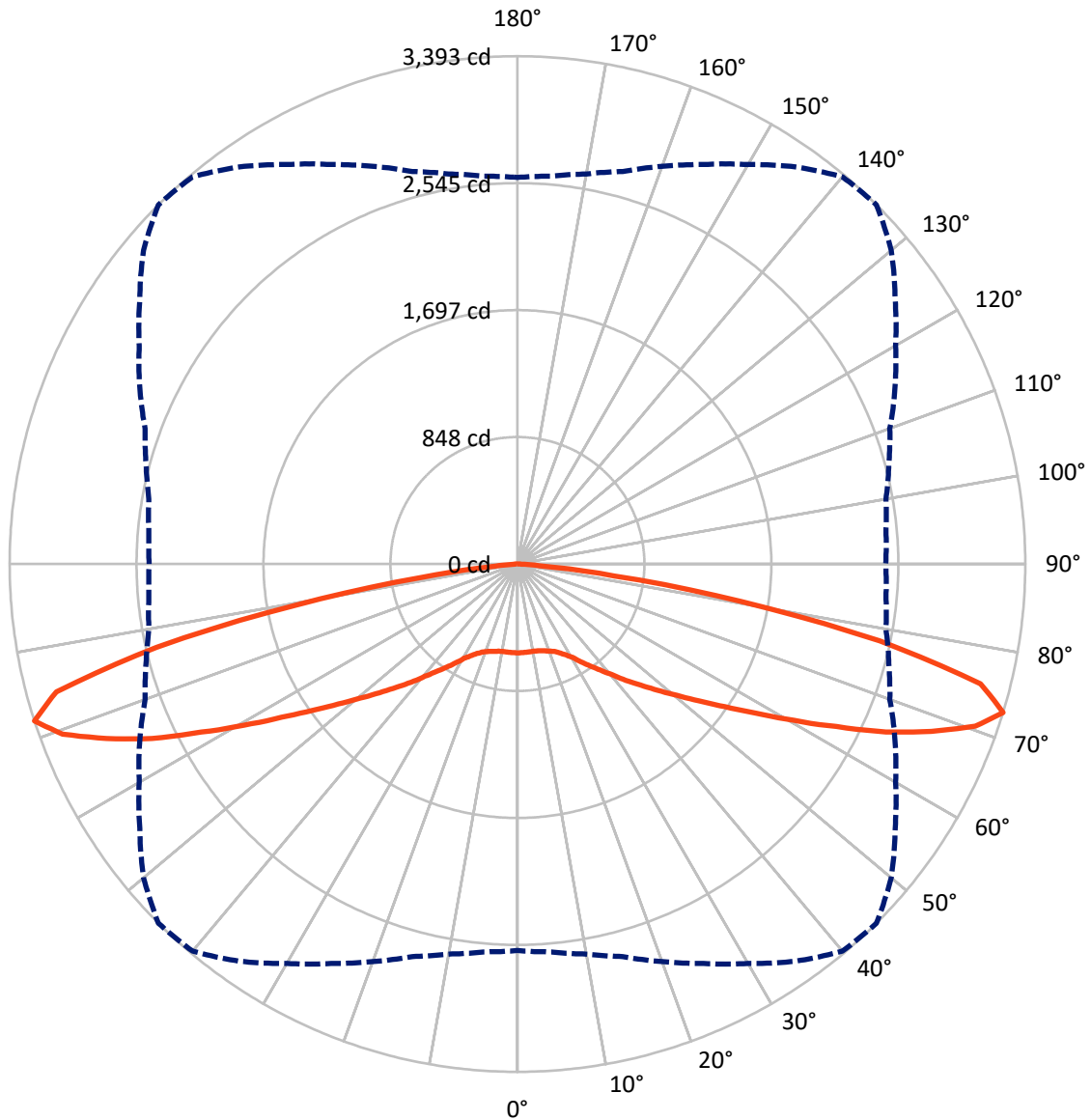


Based on 10 foot mounting height. Maximum calculated value = 5.9 fc
 Type V - Short - Semi-Cutoff

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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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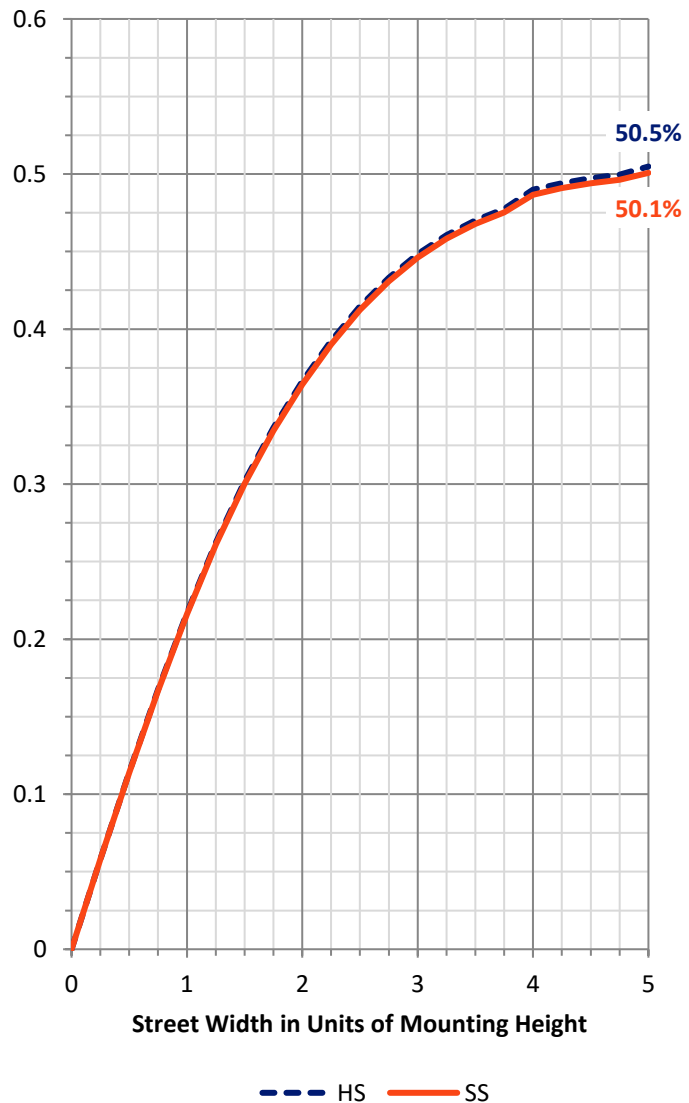
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 4177.0 | 0.0 | 4177.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 4177.0 | 0.0 | 4177.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 8354.0 | 0.0 | 8354.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 56.7 | 0.7 |
| 10°-20° | 171.6 | 2.1 |
| 20°-30° | 309.7 | 3.7 |
| 30°-40° | 528.3 | 6.3 |
| 40°-50° | 899.4 | 10.8 |
| 50°-60° | 1447.5 | 17.3 |
| 60°-70° | 2407.2 | 28.8 |
| 70°-80° | 2328.7 | 27.9 |
| 80°-90° | 205.0 | 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° | 8354.0 | 100.0 |
| 0°-180° | 8354.0 | 100.0 |

Coefficient of Utilization



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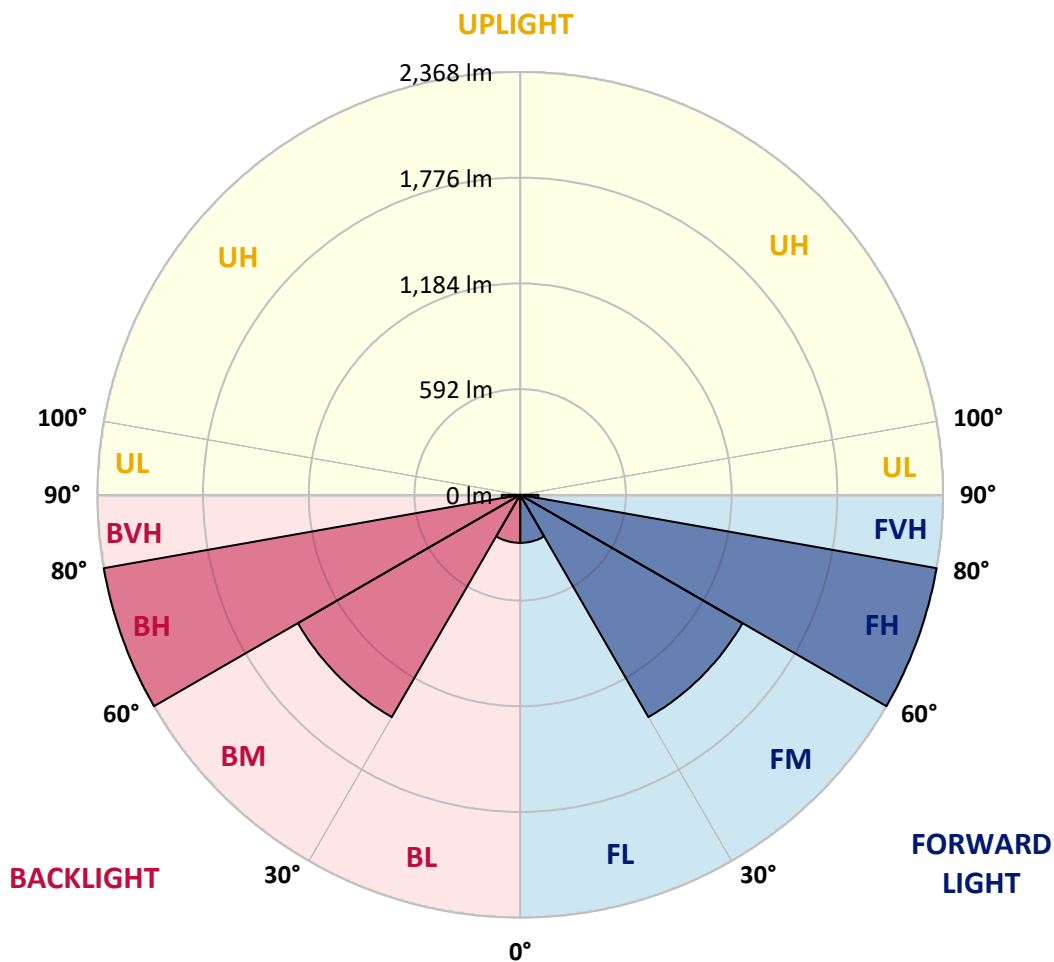
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 269.0 | 3.2 | | | |
| FM (30°-60°) | 1437.6 | 17.2 | | | |
| FH (60°-80°) | 2367.9 | 28.3 | | | G2/5000 |
| FVH (80°-90°) | 102.5 | 1.2 | | | G2/225 |
| BL (0°-30°) | 269.0 | 3.2 | B1/500 | | |
| BM (30°-60°) | 1437.6 | 17.2 | B2/2500 | | |
| BH (60°-80°) | 2367.9 | 28.3 | B3/2500 | | G2/5000 |
| BVH (80°-90°) | 102.5 | 1.2 | | | G2/225 |
| 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° | 593.9 | 593.9 | 593.9 | 593.9 | 593.9 | 593.9 | 593.9 | 593.9 | 593.9 | 593.9 | 593.9 |
| 2.5° | 598.5 | 598.5 | 599.0 | 598.5 | 597.5 | 597.0 | 595.4 | 594.4 | 593.4 | 592.9 | 591.8 |
| 5° | 599.0 | 599.0 | 599.6 | 599.0 | 598.0 | 597.0 | 596.0 | 594.4 | 593.4 | 592.4 | 591.8 |
| 7.5° | 601.1 | 601.6 | 602.1 | 601.6 | 599.6 | 598.5 | 597.0 | 595.4 | 593.4 | 592.4 | 591.3 |
| 10° | 605.2 | 605.2 | 605.2 | 604.7 | 603.2 | 601.1 | 599.0 | 597.5 | 594.9 | 592.4 | 590.8 |
| 12.5° | 608.3 | 608.8 | 608.8 | 607.8 | 605.7 | 603.2 | 601.1 | 599.6 | 597.5 | 595.4 | 593.9 |
| 15° | 612.9 | 612.9 | 612.4 | 610.4 | 607.3 | 605.2 | 604.2 | 603.7 | 603.2 | 602.1 | 600.6 |
| 17.5° | 622.2 | 621.7 | 620.1 | 617.0 | 613.4 | 611.9 | 610.9 | 610.9 | 610.9 | 610.4 | 609.3 |
| 20° | 635.6 | 635.6 | 633.5 | 628.4 | 625.3 | 623.7 | 622.2 | 622.2 | 622.2 | 620.6 | 619.1 |
| 22.5° | 657.2 | 657.7 | 654.6 | 648.4 | 644.3 | 641.2 | 639.2 | 637.6 | 636.1 | 635.0 | 632.5 |
| 25° | 686.5 | 685.9 | 682.3 | 674.6 | 671.6 | 668.5 | 664.4 | 661.8 | 659.7 | 658.2 | 655.1 |
| 27.5° | 717.3 | 716.8 | 712.7 | 706.0 | 703.9 | 699.3 | 696.2 | 692.6 | 690.1 | 687.5 | 684.4 |
| 30° | 756.9 | 754.3 | 751.3 | 746.1 | 745.1 | 741.5 | 737.4 | 732.2 | 728.1 | 724.0 | 720.4 |
| 32.5° | 792.4 | 792.4 | 787.8 | 785.2 | 787.2 | 785.7 | 786.2 | 783.1 | 780.6 | 779.0 | 775.4 |
| 35° | 841.8 | 841.8 | 839.7 | 836.6 | 837.1 | 833.5 | 833.0 | 833.5 | 835.6 | 835.6 | 831.5 |
| 37.5° | 907.6 | 908.6 | 901.9 | 900.9 | 898.3 | 893.2 | 890.6 | 891.6 | 896.3 | 898.8 | 893.2 |
| 40° | 989.3 | 991.4 | 989.3 | 982.6 | 979.6 | 970.8 | 965.7 | 965.7 | 969.3 | 971.8 | 969.8 |
| 42.5° | 1070.1 | 1073.7 | 1070.1 | 1064.9 | 1062.3 | 1055.7 | 1053.1 | 1055.1 | 1059.8 | 1062.9 | 1059.8 |
| 45° | 1160.0 | 1162.6 | 1158.0 | 1151.8 | 1148.7 | 1145.1 | 1143.6 | 1145.1 | 1150.3 | 1153.4 | 1152.3 |
| 47.5° | 1248.5 | 1252.1 | 1246.4 | 1243.9 | 1243.9 | 1240.3 | 1244.4 | 1248.5 | 1253.1 | 1260.3 | 1257.2 |
| 50° | 1334.9 | 1339.5 | 1335.9 | 1336.4 | 1340.5 | 1347.2 | 1354.9 | 1363.2 | 1371.4 | 1379.1 | 1380.1 |
| 52.5° | 1412.0 | 1419.2 | 1419.7 | 1429.0 | 1441.8 | 1452.1 | 1473.7 | 1491.7 | 1511.2 | 1517.9 | 1514.8 |
| 55° | 1493.3 | 1503.0 | 1515.9 | 1530.3 | 1550.8 | 1571.9 | 1608.4 | 1640.8 | 1666.5 | 1682.5 | 1679.9 |
| 57.5° | 1609.5 | 1619.2 | 1632.6 | 1656.3 | 1687.1 | 1715.9 | 1765.8 | 1816.2 | 1855.3 | 1879.4 | 1867.6 |
| 60° | 1760.1 | 1770.4 | 1787.9 | 1813.1 | 1853.2 | 1892.3 | 1960.7 | 2033.2 | 2093.8 | 2121.6 | 2100.0 |
| 62.5° | 1959.6 | 1969.4 | 1980.7 | 2014.1 | 2058.9 | 2109.3 | 2195.1 | 2288.2 | 2365.3 | 2392.1 | 2361.7 |
| 65° | 2244.0 | 2255.8 | 2259.4 | 2286.7 | 2330.4 | 2377.2 | 2469.7 | 2574.6 | 2662.6 | 2706.3 | 2645.6 |
| 67.5° | 2564.3 | 2569.0 | 2583.4 | 2615.2 | 2660.0 | 2702.1 | 2775.2 | 2874.4 | 2958.7 | 2982.9 | 2918.1 |
| 70° | 2752.0 | 2761.3 | 2786.5 | 2830.7 | 2884.2 | 2950.5 | 3030.2 | 3137.2 | 3232.8 | 3244.1 | 3161.8 |
| 72.5° | 2582.3 | 2601.4 | 2646.1 | 2715.0 | 2827.1 | 2944.9 | 3082.1 | 3240.0 | 3377.3 | 3393.2 | 3261.1 |
| 75° | 2071.2 | 2092.8 | 2146.3 | 2221.9 | 2354.5 | 2529.4 | 2727.9 | 2964.9 | 3170.6 | 3196.8 | 3022.0 |
| 77.5° | 1104.0 | 1130.7 | 1208.4 | 1310.2 | 1499.4 | 1730.8 | 1969.9 | 2240.4 | 2415.2 | 2474.4 | 2348.4 |
| 80° | 278.2 | 292.6 | 330.1 | 389.8 | 517.8 | 704.5 | 910.7 | 1201.7 | 1418.7 | 1510.7 | 1418.7 |
| 82.5° | 108.0 | 118.8 | 129.1 | 136.3 | 148.6 | 174.3 | 240.6 | 392.3 | 528.6 | 651.0 | 563.6 |
| 85° | 41.7 | 44.2 | 63.8 | 72.5 | 72.5 | 79.7 | 91.5 | 108.0 | 133.7 | 146.0 | 122.4 |
| 87.5° | 16.5 | 18.0 | 22.1 | 33.9 | 35.0 | 30.9 | 32.9 | 37.0 | 28.3 | 23.7 | 26.7 |
| 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° | 593.9 | 593.9 | 593.9 | 593.9 | 593.9 | 593.9 | 593.9 | 593.9 |
| 2.5° | 591.3 | 590.8 | 589.8 | 590.3 | 589.8 | 589.8 | 589.8 | 589.8 |
| 5° | 590.8 | 590.8 | 589.8 | 589.8 | 589.8 | 590.3 | 589.8 | 589.8 |
| 7.5° | 590.3 | 589.8 | 588.8 | 588.3 | 588.3 | 587.7 | 587.7 | 587.7 |
| 10° | 589.3 | 588.3 | 587.2 | 586.7 | 586.7 | 585.7 | 585.7 | 585.7 |
| 12.5° | 591.8 | 590.3 | 589.3 | 588.8 | 588.8 | 588.8 | 589.3 | 589.3 |
| 15° | 599.0 | 596.0 | 594.4 | 593.9 | 594.4 | 595.4 | 596.0 | 596.5 |
| 17.5° | 606.8 | 603.7 | 601.1 | 600.1 | 600.6 | 602.1 | 603.7 | 604.7 |
| 20° | 616.5 | 614.0 | 610.9 | 609.8 | 609.8 | 611.9 | 612.9 | 614.5 |
| 22.5° | 630.4 | 628.4 | 625.8 | 624.2 | 623.2 | 625.8 | 627.3 | 628.4 |
| 25° | 652.5 | 650.5 | 648.4 | 646.9 | 646.4 | 648.9 | 650.0 | 650.5 |
| 27.5° | 681.8 | 679.8 | 678.8 | 678.2 | 676.7 | 677.7 | 679.3 | 678.8 |
| 30° | 719.9 | 721.4 | 719.9 | 719.9 | 717.3 | 718.3 | 717.3 | 716.3 |
| 32.5° | 770.8 | 769.3 | 764.6 | 761.5 | 757.9 | 757.9 | 756.4 | 754.9 |
| 35° | 821.7 | 816.6 | 814.0 | 815.5 | 814.0 | 815.0 | 812.4 | 809.9 |
| 37.5° | 881.9 | 878.8 | 878.3 | 882.9 | 881.9 | 882.9 | 882.9 | 879.3 |
| 40° | 961.6 | 959.5 | 963.1 | 970.8 | 973.9 | 973.4 | 974.4 | 969.8 |
| 42.5° | 1053.1 | 1049.5 | 1051.0 | 1057.7 | 1061.3 | 1062.3 | 1061.8 | 1057.7 |
| 45° | 1144.6 | 1145.6 | 1145.6 | 1152.8 | 1156.4 | 1158.5 | 1154.9 | 1153.4 |
| 47.5° | 1248.0 | 1249.5 | 1245.9 | 1250.5 | 1251.6 | 1255.2 | 1252.1 | 1249.5 |
| 50° | 1367.3 | 1361.6 | 1353.4 | 1354.9 | 1354.9 | 1353.9 | 1350.3 | 1347.2 |
| 52.5° | 1500.4 | 1487.6 | 1472.2 | 1467.0 | 1461.4 | 1455.7 | 1448.5 | 1442.9 |
| 55° | 1652.1 | 1630.0 | 1602.3 | 1589.4 | 1578.6 | 1565.8 | 1549.3 | 1543.6 |
| 57.5° | 1828.0 | 1789.9 | 1752.9 | 1729.8 | 1702.0 | 1685.0 | 1664.0 | 1662.9 |
| 60° | 2036.8 | 1985.3 | 1920.0 | 1885.6 | 1857.8 | 1837.8 | 1821.8 | 1815.7 |
| 62.5° | 2277.9 | 2189.5 | 2119.0 | 2082.0 | 2049.6 | 2037.3 | 2017.2 | 2019.8 |
| 65° | 2525.3 | 2435.3 | 2366.9 | 2337.1 | 2306.7 | 2298.5 | 2280.0 | 2286.7 |
| 67.5° | 2793.2 | 2719.1 | 2644.0 | 2616.3 | 2588.5 | 2580.3 | 2561.3 | 2566.9 |
| 70° | 3033.3 | 2939.2 | 2853.8 | 2799.3 | 2752.0 | 2714.0 | 2689.8 | 2680.0 |
| 72.5° | 3081.1 | 2918.1 | 2783.9 | 2647.6 | 2569.0 | 2500.1 | 2471.8 | 2461.0 |
| 75° | 2768.5 | 2515.5 | 2324.2 | 2164.3 | 2075.8 | 1975.6 | 1964.8 | 1949.9 |
| 77.5° | 2153.5 | 1865.5 | 1634.1 | 1428.5 | 1309.7 | 1187.3 | 1145.1 | 1113.3 |
| 80° | 1284.5 | 987.3 | 765.1 | 536.3 | 437.6 | 352.2 | 331.1 | 309.0 |
| 82.5° | 459.7 | 294.6 | 198.5 | 154.8 | 138.3 | 127.5 | 119.3 | 108.5 |
| 85° | 111.1 | 93.6 | 88.4 | 80.2 | 79.2 | 67.4 | 47.8 | 42.7 |
| 87.5° | 35.5 | 32.4 | 32.9 | 31.4 | 32.9 | 24.7 | 20.1 | 18.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)