

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: P195919

Luminaire Tested: **NVN-AF-01-LED-U-5MQ-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195919
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-01-LED-U-5MQ-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5377.7 lumens
Efficiency: N/A
Efficacy: 122.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B3 - U0 - G1

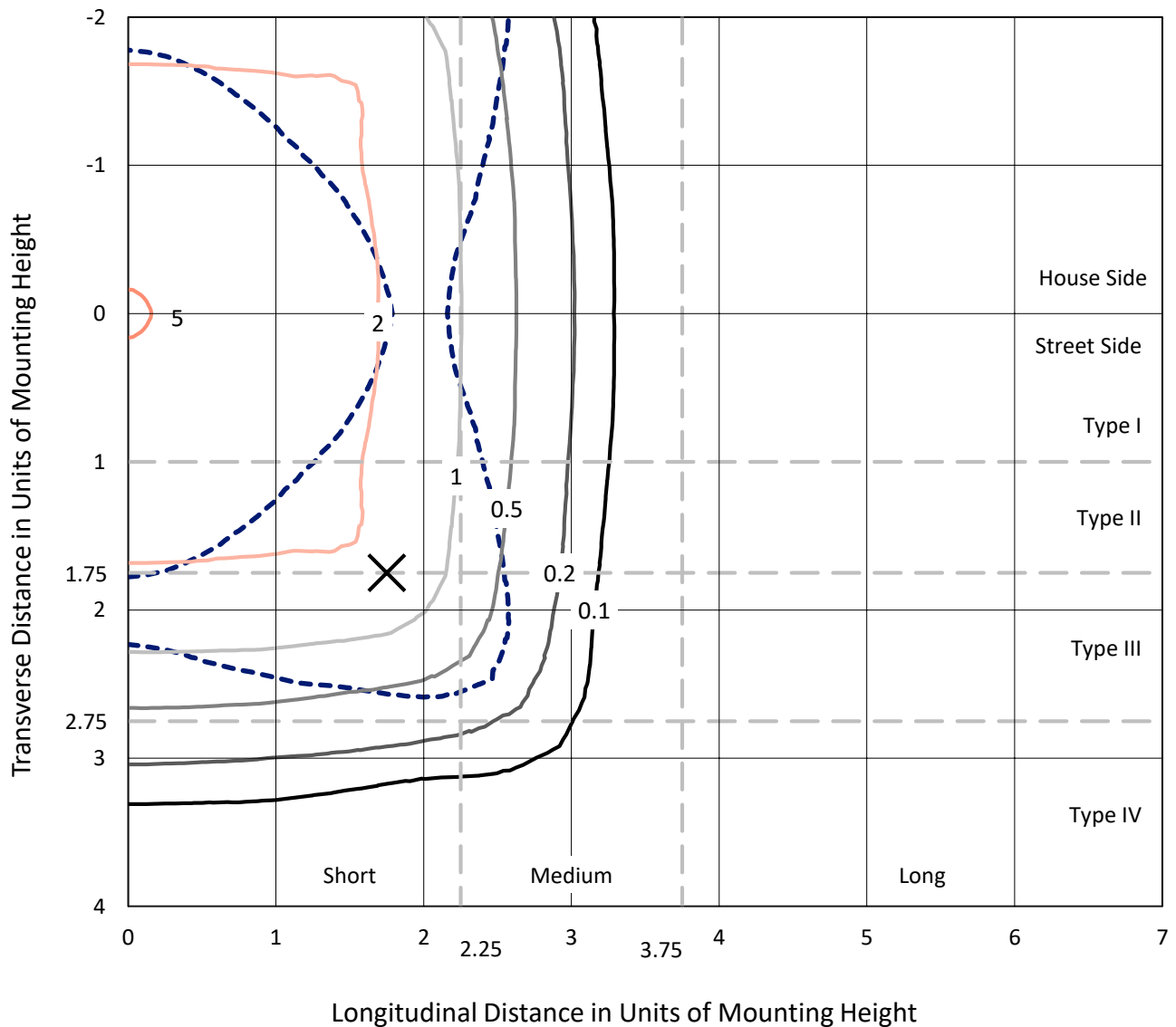
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

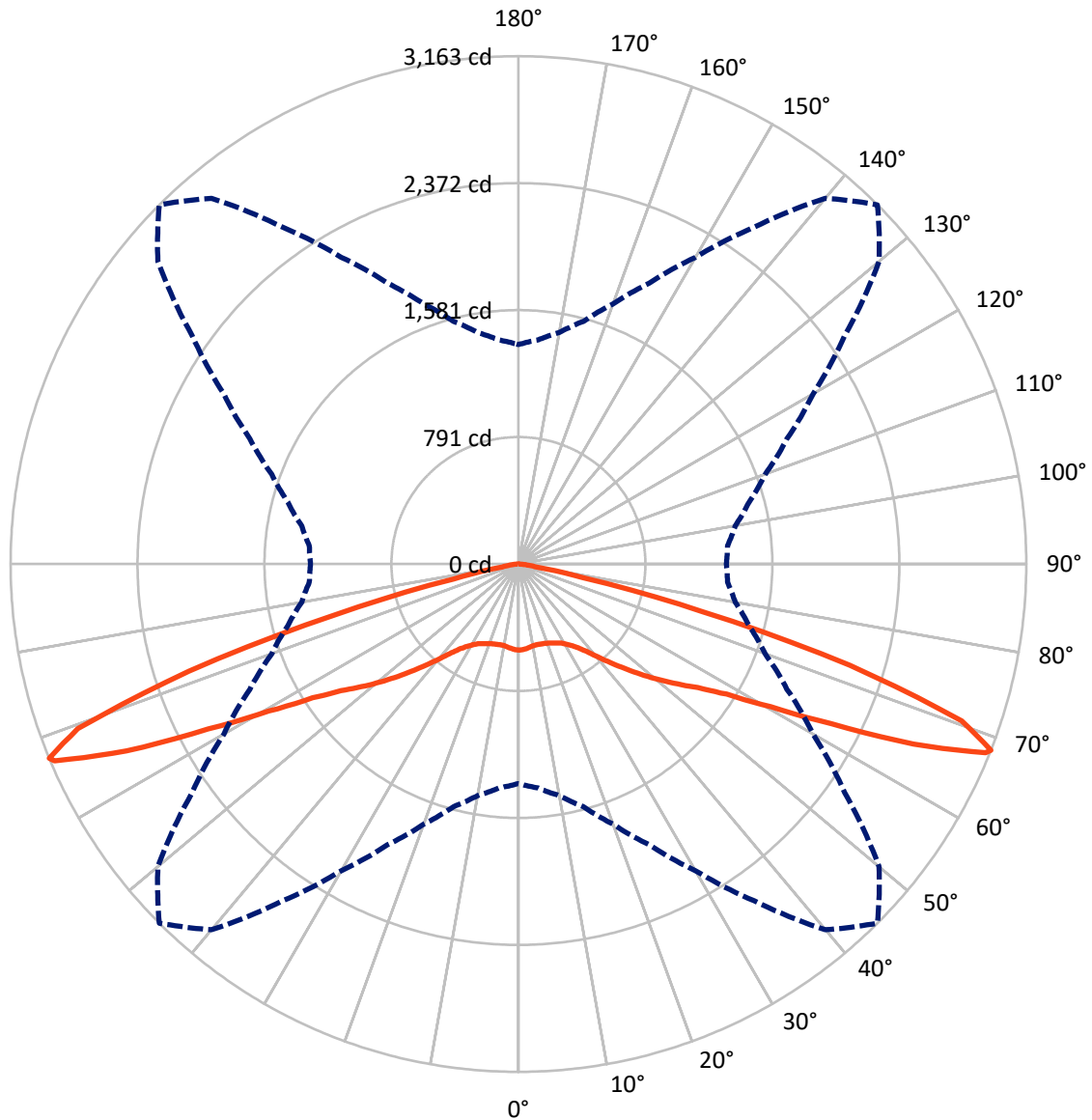
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.4 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 2688.8 | 0.0 | 2688.8 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 2688.8 | 0.0 | 2688.8 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 5377.7 | 0.0 | 5377.7 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 50.2 | 0.9 |
| 10°-20° | 145.6 | 2.7 |
| 20°-30° | 247.5 | 4.6 |
| 30°-40° | 405.0 | 7.5 |
| 40°-50° | 723.8 | 13.5 |
| 50°-60° | 1222.4 | 22.7 |
| 60°-70° | 1895.5 | 35.2 |
| 70°-80° | 651.7 | 12.1 |
| 80°-90° | 35.8 | 0.7 |
| 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° | 5377.7 | 100.0 |
| 0°-180° | 5377.7 | 100.0 |



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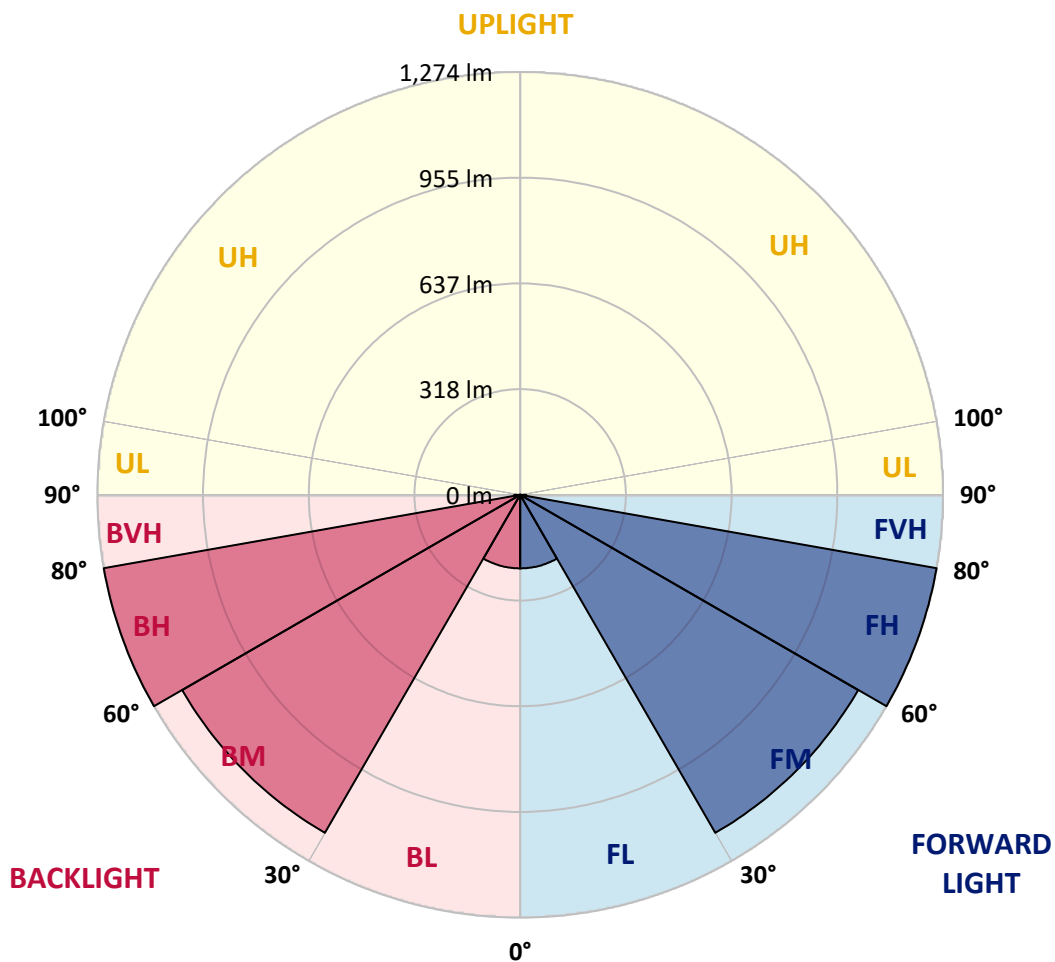
CATALOG NUMBER: NVN-AF-01-LED-U-5MQ-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 221.6 | 4.1 | | | |
| FM | (30°-60°) | 1175.6 | 21.9 | | | |
| FH | (60°-80°) | 1273.6 | 23.7 | | | G1/1800 |
| FVH | (80°-90°) | 17.9 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 221.6 | 4.1 | B1/500 | | |
| BM | (30°-60°) | 1175.6 | 21.9 | B2/2500 | | |
| BH | (60°-80°) | 1273.6 | 23.7 | B3/2500 | | G1/1800 |
| BVH | (80°-90°) | 17.9 | 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-G1

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 536.4 | 536.4 | 536.4 | 536.4 | 536.4 | 536.4 | 536.4 | 536.4 | 536.4 | 536.4 | 536.4 |
| 2.5° | 538.8 | 538.8 | 539.4 | 539.1 | 538.1 | 537.0 | 536.1 | 535.1 | 534.5 | 533.8 | 533.2 |
| 5° | 533.2 | 533.2 | 534.1 | 533.5 | 532.9 | 531.8 | 531.2 | 530.2 | 529.5 | 528.9 | 529.2 |
| 7.5° | 525.9 | 526.5 | 527.2 | 526.9 | 525.6 | 525.3 | 524.3 | 524.0 | 523.2 | 522.3 | 522.6 |
| 10° | 519.7 | 520.0 | 520.6 | 520.3 | 520.0 | 518.9 | 518.6 | 518.3 | 518.0 | 516.7 | 516.4 |
| 12.5° | 513.4 | 514.0 | 514.7 | 515.1 | 514.7 | 515.1 | 515.4 | 515.7 | 515.4 | 514.7 | 514.7 |
| 15° | 508.4 | 509.1 | 510.0 | 511.1 | 511.4 | 513.4 | 514.7 | 516.0 | 517.0 | 517.3 | 516.4 |
| 17.5° | 505.8 | 506.8 | 508.1 | 510.0 | 511.8 | 514.0 | 516.4 | 518.3 | 520.0 | 520.3 | 519.4 |
| 20° | 505.4 | 506.5 | 508.4 | 510.8 | 513.7 | 516.7 | 520.3 | 523.2 | 524.9 | 525.9 | 524.9 |
| 22.5° | 507.8 | 509.1 | 511.8 | 514.7 | 518.3 | 522.3 | 526.9 | 530.2 | 533.5 | 534.8 | 533.8 |
| 25° | 514.3 | 515.7 | 518.6 | 522.3 | 526.2 | 531.2 | 535.8 | 540.0 | 543.4 | 545.0 | 543.7 |
| 27.5° | 528.3 | 528.6 | 531.8 | 535.8 | 540.4 | 544.6 | 550.6 | 552.6 | 555.3 | 556.9 | 555.3 |
| 30° | 547.6 | 548.3 | 551.3 | 557.5 | 561.8 | 567.4 | 570.7 | 572.6 | 575.6 | 577.3 | 575.3 |
| 32.5° | 577.3 | 578.0 | 580.5 | 586.5 | 590.4 | 594.7 | 598.6 | 600.0 | 602.9 | 605.0 | 602.6 |
| 35° | 619.1 | 620.4 | 622.7 | 626.7 | 629.9 | 633.2 | 636.2 | 635.3 | 637.2 | 639.9 | 637.5 |
| 37.5° | 676.4 | 676.1 | 676.7 | 679.6 | 683.0 | 685.0 | 689.6 | 687.2 | 689.3 | 691.5 | 690.2 |
| 40° | 743.3 | 743.3 | 742.9 | 748.2 | 749.5 | 751.5 | 756.4 | 753.4 | 756.1 | 758.7 | 756.4 |
| 42.5° | 819.3 | 820.6 | 822.2 | 826.5 | 830.2 | 830.8 | 833.1 | 831.9 | 835.1 | 837.4 | 835.1 |
| 45° | 906.9 | 908.9 | 910.8 | 920.8 | 922.4 | 923.7 | 925.4 | 921.1 | 924.6 | 926.7 | 926.0 |
| 47.5° | 997.8 | 1001.4 | 1005.7 | 1015.9 | 1022.4 | 1025.4 | 1026.7 | 1021.8 | 1022.1 | 1025.1 | 1025.4 |
| 50° | 1100.5 | 1104.5 | 1108.8 | 1120.3 | 1126.6 | 1131.8 | 1133.4 | 1127.9 | 1128.5 | 1130.9 | 1131.5 |
| 52.5° | 1195.4 | 1200.0 | 1209.2 | 1224.7 | 1233.6 | 1242.8 | 1243.5 | 1236.5 | 1239.5 | 1241.1 | 1239.8 |
| 55° | 1284.6 | 1290.6 | 1302.7 | 1323.5 | 1339.7 | 1357.8 | 1365.9 | 1358.4 | 1358.4 | 1357.0 | 1356.4 |
| 57.5° | 1388.7 | 1395.3 | 1407.8 | 1431.8 | 1454.2 | 1480.2 | 1502.6 | 1510.2 | 1524.0 | 1528.6 | 1521.4 |
| 60° | 1545.5 | 1552.3 | 1565.2 | 1596.8 | 1625.2 | 1663.0 | 1699.8 | 1729.8 | 1778.6 | 1804.9 | 1781.2 |
| 62.5° | 1688.7 | 1699.2 | 1729.5 | 1784.8 | 1846.1 | 1916.2 | 1997.5 | 2055.5 | 2144.1 | 2188.2 | 2128.7 |
| 65° | 1656.1 | 1677.4 | 1736.8 | 1823.7 | 1950.2 | 2102.3 | 2267.9 | 2427.0 | 2610.1 | 2704.0 | 2582.7 |
| 67.5° | 1446.7 | 1464.8 | 1528.6 | 1629.8 | 1787.5 | 1997.2 | 2254.8 | 2584.1 | 2961.7 | 3137.6 | 2923.2 |
| 68° | 1366.7 | 1400.5 | 1464.0 | 1564.5 | 1723.6 | 1929.7 | 2204.7 | 2560.3 | 2972.6 | 3162.7 | 2931.2 |
| 70° | 1047.8 | 1060.0 | 1120.9 | 1211.2 | 1382.7 | 1585.0 | 1862.6 | 2267.9 | 2733.8 | 2929.5 | 2691.4 |
| 72.5° | 497.9 | 505.1 | 544.6 | 633.6 | 742.6 | 907.3 | 1152.3 | 1534.5 | 1954.4 | 2157.9 | 1920.5 |
| 75° | 182.4 | 184.1 | 193.3 | 214.4 | 255.2 | 317.1 | 434.7 | 672.5 | 995.5 | 1187.1 | 999.4 |
| 77.5° | 98.5 | 98.8 | 102.4 | 107.7 | 114.9 | 123.2 | 141.0 | 189.0 | 304.9 | 414.9 | 322.0 |
| 80° | 61.9 | 61.6 | 65.2 | 69.5 | 74.5 | 78.4 | 80.0 | 85.6 | 96.5 | 112.9 | 103.7 |
| 82.5° | 31.6 | 34.6 | 42.8 | 47.5 | 54.6 | 56.0 | 54.3 | 54.0 | 57.3 | 61.9 | 63.9 |
| 85° | 17.5 | 15.4 | 22.7 | 30.3 | 32.9 | 34.0 | 34.3 | 32.2 | 31.6 | 31.0 | 32.6 |
| 87.5° | 8.9 | 8.2 | 9.9 | 15.1 | 16.2 | 13.2 | 13.5 | 11.6 | 7.9 | 7.9 | 8.2 |
| 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° | 536.4 | 536.4 | 536.4 | 536.4 | 536.4 | 536.4 | 536.4 | 536.4 |
| 2.5° | 532.4 | 532.9 | 532.1 | 532.1 | 532.1 | 532.4 | 532.1 | 531.8 |
| 5° | 528.3 | 528.9 | 528.9 | 529.2 | 529.5 | 529.5 | 529.5 | 529.5 |
| 7.5° | 521.9 | 522.3 | 522.9 | 522.9 | 522.9 | 522.9 | 522.9 | 522.9 |
| 10° | 516.0 | 515.4 | 515.1 | 514.3 | 514.3 | 513.4 | 513.7 | 514.0 |
| 12.5° | 513.0 | 511.8 | 511.1 | 510.0 | 509.4 | 508.4 | 508.4 | 508.8 |
| 15° | 514.3 | 512.4 | 510.5 | 509.7 | 509.1 | 508.4 | 507.8 | 508.1 |
| 17.5° | 517.0 | 514.7 | 512.4 | 511.1 | 509.7 | 508.8 | 508.4 | 508.8 |
| 20° | 522.6 | 519.4 | 515.7 | 513.4 | 510.8 | 510.0 | 509.1 | 510.0 |
| 22.5° | 530.2 | 526.2 | 521.6 | 517.3 | 514.3 | 513.0 | 511.8 | 512.7 |
| 25° | 539.4 | 535.1 | 530.5 | 525.6 | 522.3 | 521.3 | 519.7 | 519.7 |
| 27.5° | 552.3 | 548.6 | 544.6 | 540.0 | 536.7 | 535.8 | 533.2 | 533.2 |
| 30° | 572.6 | 569.1 | 565.4 | 561.5 | 558.1 | 557.2 | 553.9 | 553.9 |
| 32.5° | 599.7 | 595.7 | 593.4 | 590.1 | 587.5 | 585.8 | 581.9 | 581.5 |
| 35° | 635.9 | 632.3 | 632.0 | 629.6 | 627.0 | 627.4 | 623.4 | 622.7 |
| 37.5° | 687.9 | 685.0 | 686.0 | 683.9 | 681.7 | 683.6 | 681.3 | 681.3 |
| 40° | 754.4 | 753.4 | 754.4 | 753.1 | 753.4 | 753.8 | 751.8 | 752.5 |
| 42.5° | 834.8 | 832.2 | 838.1 | 837.4 | 836.5 | 839.0 | 834.4 | 831.1 |
| 45° | 927.3 | 926.4 | 932.2 | 933.2 | 931.3 | 932.9 | 924.6 | 924.3 |
| 47.5° | 1027.8 | 1027.8 | 1033.1 | 1032.4 | 1030.4 | 1030.7 | 1020.8 | 1014.6 |
| 50° | 1132.5 | 1131.8 | 1137.1 | 1135.8 | 1133.1 | 1132.8 | 1122.6 | 1116.3 |
| 52.5° | 1241.5 | 1241.5 | 1249.0 | 1245.4 | 1239.2 | 1236.2 | 1223.7 | 1215.5 |
| 55° | 1362.0 | 1360.3 | 1362.7 | 1350.8 | 1338.6 | 1329.7 | 1314.3 | 1308.0 |
| 57.5° | 1514.5 | 1495.3 | 1478.9 | 1463.7 | 1446.7 | 1436.1 | 1418.0 | 1411.4 |
| 60° | 1730.8 | 1679.8 | 1657.7 | 1627.4 | 1599.1 | 1585.0 | 1560.9 | 1548.0 |
| 62.5° | 2030.5 | 1945.9 | 1885.9 | 1819.1 | 1754.6 | 1709.0 | 1672.5 | 1656.4 |
| 65° | 2376.9 | 2192.5 | 2040.1 | 1896.8 | 1775.2 | 1678.8 | 1625.2 | 1608.3 |
| 67.5° | 2508.7 | 2170.1 | 1907.0 | 1701.5 | 1554.0 | 1439.1 | 1374.8 | 1361.3 |
| 68° | 2480.7 | 2118.7 | 1845.4 | 1635.0 | 1486.9 | 1370.9 | 1307.0 | 1294.9 |
| 70° | 2188.2 | 1787.5 | 1499.0 | 1289.5 | 1151.2 | 1041.0 | 995.8 | 976.4 |
| 72.5° | 1491.8 | 1148.0 | 880.6 | 704.4 | 601.0 | 531.2 | 489.7 | 475.5 |
| 75° | 686.6 | 464.0 | 309.9 | 231.5 | 196.6 | 179.8 | 166.9 | 163.7 |
| 77.5° | 200.2 | 145.6 | 125.1 | 115.9 | 109.0 | 103.1 | 98.8 | 98.5 |
| 80° | 95.1 | 89.2 | 86.6 | 80.7 | 74.5 | 68.8 | 64.9 | 65.6 |
| 82.5° | 63.9 | 62.2 | 62.2 | 56.3 | 46.4 | 39.9 | 32.9 | 29.7 |
| 85° | 34.0 | 35.2 | 37.2 | 35.2 | 30.6 | 22.7 | 14.8 | 16.2 |
| 87.5° | 11.6 | 13.2 | 13.8 | 13.5 | 12.2 | 9.2 | 7.0 | 7.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)