

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: P195493

Luminaire Tested: **NVN-AF-01-LED-U-5WQ-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195493
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-01-LED-U-5WQ-7050
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6356 lumens
Efficiency: N/A
Efficacy: 107.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G2

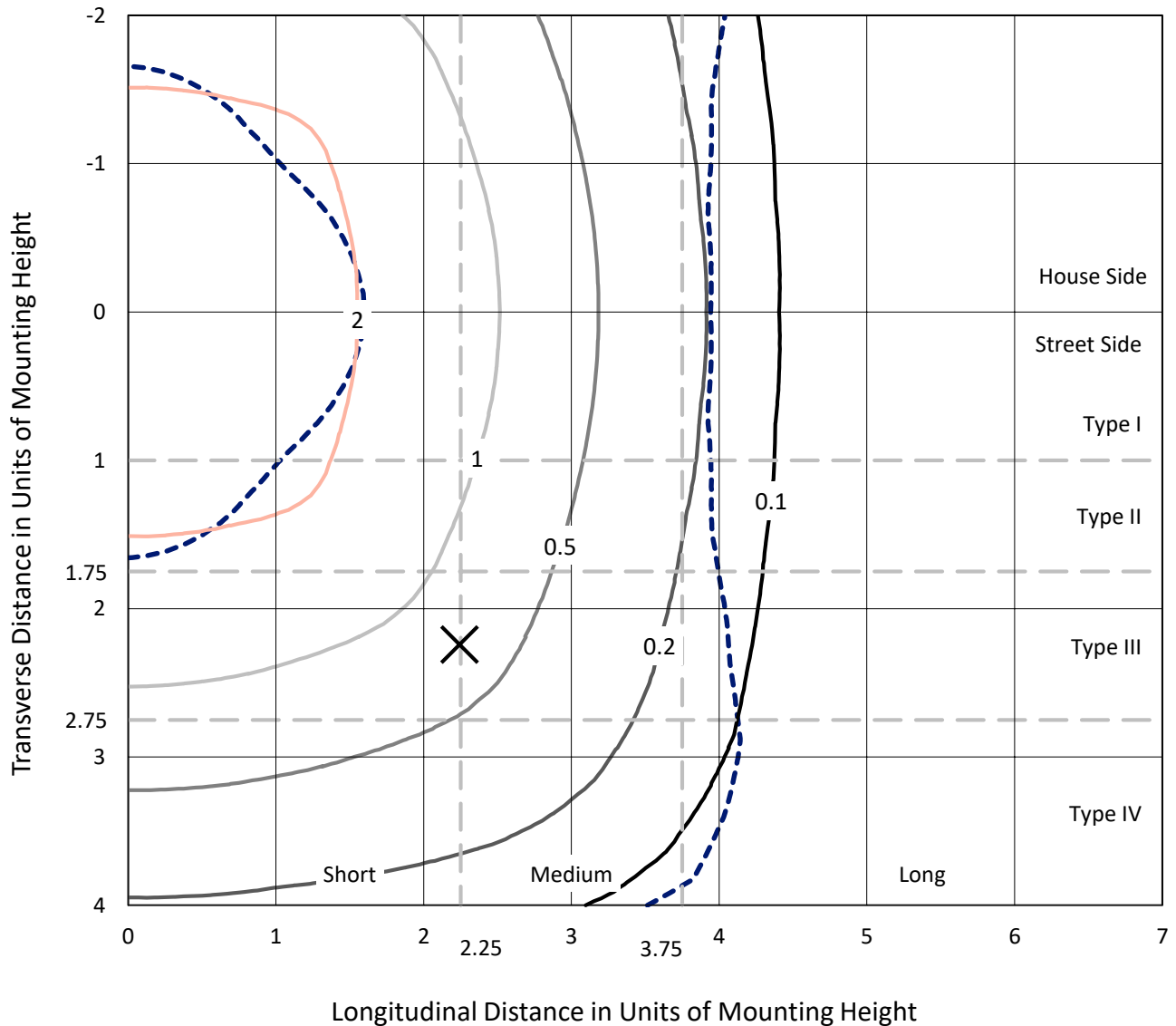
Input Watts (W): 59
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

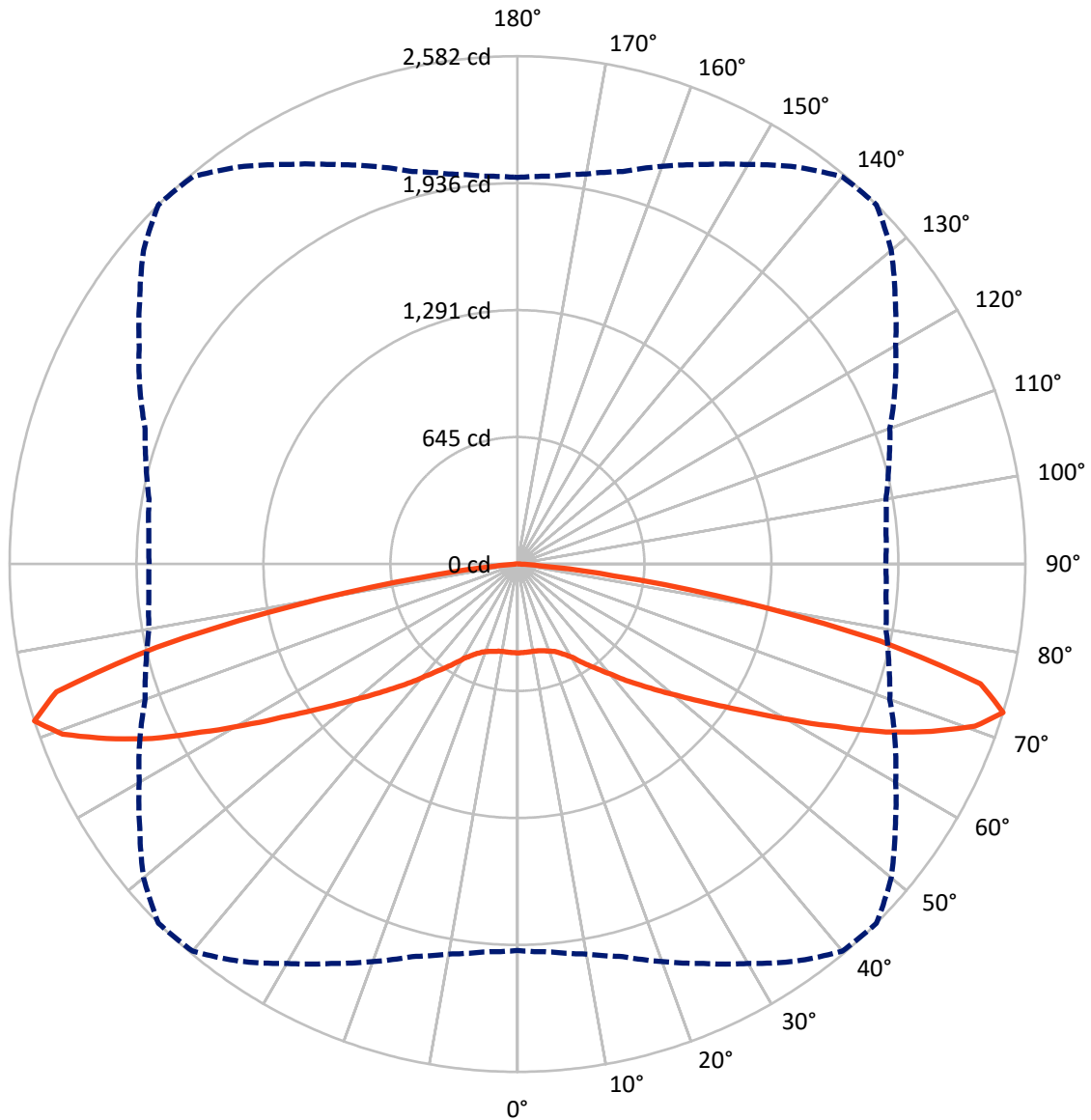
× Max cd
- - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.5 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 | 3178.0 | 0.0 | 3178.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 3178.0 | 0.0 | 3178.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 6356.0 | 0.0 | 6356.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 43.1 | 0.7 |
| 10°-20° | 130.5 | 2.1 |
| 20°-30° | 235.6 | 3.7 |
| 30°-40° | 401.9 | 6.3 |
| 40°-50° | 684.3 | 10.8 |
| 50°-60° | 1101.3 | 17.3 |
| 60°-70° | 1831.5 | 28.8 |
| 70°-80° | 1771.7 | 27.9 |
| 80°-90° | 155.9 | 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° | 6356.0 | 100.0 |
| 0°-180° | 6356.0 | 100.0 |



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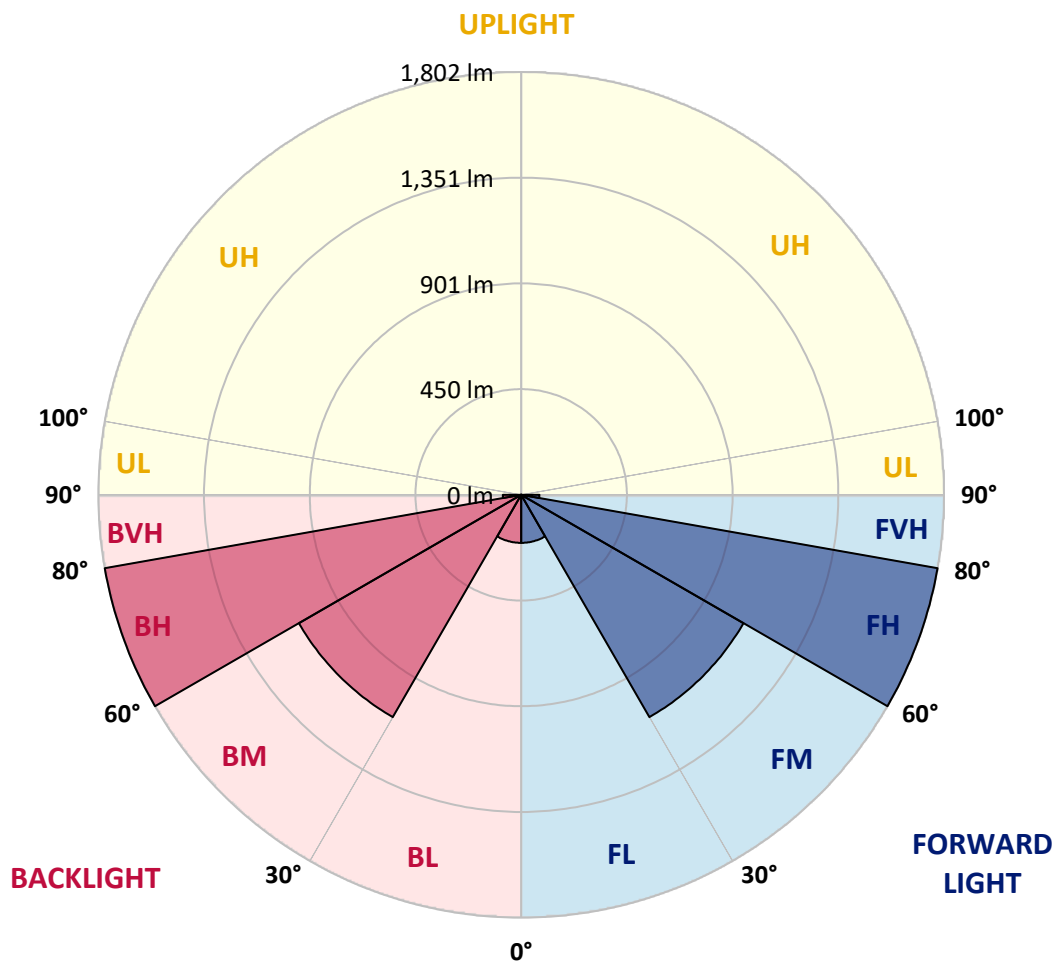
CATALOG NUMBER: NVN-AF-01-LED-U-5WQ-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 204.7 | 3.2 | | | |
| FM | (30°-60°) | 1093.8 | 17.2 | | | |
| FH | (60°-80°) | 1801.6 | 28.3 | | | G2/5000 |
| FVH | (80°-90°) | 78.0 | 1.2 | | | G1/100 |
| BL | (0°-30°) | 204.7 | 3.2 | B1/500 | | |
| BM | (30°-60°) | 1093.8 | 17.2 | B2/2500 | | |
| BH | (60°-80°) | 1801.6 | 28.3 | B3/2500 | | G2/5000 |
| BVH | (80°-90°) | 78.0 | 1.2 | | | 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° | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 |
| 2.5° | 455.4 | 455.4 | 455.8 | 455.4 | 454.6 | 454.2 | 453.0 | 452.3 | 451.5 | 451.1 | 450.3 |
| 5° | 455.8 | 455.8 | 456.2 | 455.8 | 455.0 | 454.2 | 453.4 | 452.3 | 451.5 | 450.7 | 450.3 |
| 7.5° | 457.3 | 457.7 | 458.1 | 457.7 | 456.2 | 455.4 | 454.2 | 453.0 | 451.5 | 450.7 | 449.9 |
| 10° | 460.5 | 460.5 | 460.5 | 460.1 | 458.9 | 457.3 | 455.8 | 454.6 | 452.6 | 450.7 | 449.5 |
| 12.5° | 462.8 | 463.2 | 463.2 | 462.4 | 460.9 | 458.9 | 457.3 | 456.2 | 454.6 | 453.0 | 451.9 |
| 15° | 466.3 | 466.3 | 465.9 | 464.4 | 462.0 | 460.5 | 459.7 | 459.3 | 458.9 | 458.1 | 456.9 |
| 17.5° | 473.4 | 473.0 | 471.8 | 469.5 | 466.7 | 465.6 | 464.8 | 464.8 | 464.8 | 464.4 | 463.6 |
| 20° | 483.6 | 483.6 | 482.0 | 478.1 | 475.7 | 474.6 | 473.4 | 473.4 | 473.4 | 472.2 | 471.0 |
| 22.5° | 500.0 | 500.4 | 498.0 | 493.3 | 490.2 | 487.9 | 486.3 | 485.1 | 483.9 | 483.2 | 481.2 |
| 25° | 522.3 | 521.9 | 519.2 | 513.3 | 510.9 | 508.6 | 505.5 | 503.5 | 501.9 | 500.8 | 498.4 |
| 27.5° | 545.8 | 545.4 | 542.2 | 537.2 | 535.6 | 532.1 | 529.7 | 527.0 | 525.0 | 523.1 | 520.7 |
| 30° | 575.9 | 573.9 | 571.6 | 567.7 | 566.9 | 564.1 | 561.0 | 557.1 | 554.0 | 550.8 | 548.1 |
| 32.5° | 602.9 | 602.9 | 599.4 | 597.4 | 599.0 | 597.8 | 598.2 | 595.8 | 593.9 | 592.7 | 590.0 |
| 35° | 640.4 | 640.4 | 638.9 | 636.5 | 636.9 | 634.2 | 633.8 | 634.2 | 635.7 | 635.7 | 632.6 |
| 37.5° | 690.5 | 691.3 | 686.2 | 685.4 | 683.5 | 679.6 | 677.6 | 678.4 | 681.9 | 683.9 | 679.6 |
| 40° | 752.7 | 754.3 | 752.7 | 747.6 | 745.3 | 738.6 | 734.7 | 734.7 | 737.5 | 739.4 | 737.8 |
| 42.5° | 814.1 | 816.9 | 814.1 | 810.2 | 808.3 | 803.2 | 801.2 | 802.8 | 806.3 | 808.7 | 806.3 |
| 45° | 882.6 | 884.6 | 881.0 | 876.3 | 874.0 | 871.3 | 870.1 | 871.3 | 875.2 | 877.5 | 876.7 |
| 47.5° | 949.9 | 952.6 | 948.3 | 946.4 | 946.4 | 943.6 | 946.8 | 949.9 | 953.4 | 958.9 | 956.5 |
| 50° | 1015.6 | 1019.1 | 1016.4 | 1016.8 | 1019.9 | 1025.0 | 1030.9 | 1037.1 | 1043.4 | 1049.3 | 1050.0 |
| 52.5° | 1074.3 | 1079.8 | 1080.2 | 1087.2 | 1097.0 | 1104.8 | 1121.2 | 1134.9 | 1149.8 | 1154.9 | 1152.5 |
| 55° | 1136.1 | 1143.5 | 1153.3 | 1164.3 | 1179.9 | 1196.0 | 1223.7 | 1248.4 | 1268.0 | 1280.1 | 1278.1 |
| 57.5° | 1224.5 | 1232.0 | 1242.1 | 1260.1 | 1283.6 | 1305.5 | 1343.5 | 1381.8 | 1411.5 | 1429.9 | 1420.9 |
| 60° | 1339.2 | 1347.0 | 1360.3 | 1379.5 | 1410.0 | 1439.7 | 1491.7 | 1546.9 | 1593.1 | 1614.2 | 1597.8 |
| 62.5° | 1491.0 | 1498.4 | 1507.0 | 1532.4 | 1566.5 | 1604.8 | 1670.1 | 1740.9 | 1799.6 | 1820.0 | 1796.9 |
| 65° | 1707.3 | 1716.3 | 1719.0 | 1739.8 | 1773.0 | 1808.6 | 1879.0 | 1958.9 | 2025.8 | 2059.0 | 2012.8 |
| 67.5° | 1951.0 | 1954.6 | 1965.5 | 1989.8 | 2023.8 | 2055.9 | 2111.4 | 2186.9 | 2251.1 | 2269.5 | 2220.2 |
| 70° | 2093.8 | 2100.9 | 2120.0 | 2153.7 | 2194.4 | 2244.8 | 2305.5 | 2386.9 | 2459.6 | 2468.2 | 2405.6 |
| 72.5° | 1964.7 | 1979.2 | 2013.2 | 2065.7 | 2151.0 | 2240.5 | 2345.0 | 2465.1 | 2569.6 | 2581.7 | 2481.1 |
| 75° | 1575.9 | 1592.3 | 1633.0 | 1690.5 | 1791.4 | 1924.4 | 2075.4 | 2255.8 | 2412.3 | 2432.2 | 2299.2 |
| 77.5° | 840.0 | 860.3 | 919.4 | 996.8 | 1140.8 | 1316.9 | 1498.8 | 1704.6 | 1837.6 | 1882.6 | 1786.7 |
| 80° | 211.7 | 222.6 | 251.2 | 296.5 | 394.0 | 536.0 | 692.9 | 914.3 | 1079.4 | 1149.4 | 1079.4 |
| 82.5° | 82.2 | 90.4 | 98.2 | 103.7 | 113.1 | 132.6 | 183.1 | 298.5 | 402.2 | 495.3 | 428.8 |
| 85° | 31.7 | 33.6 | 48.5 | 55.2 | 55.2 | 60.6 | 69.6 | 82.2 | 101.7 | 111.1 | 93.1 |
| 87.5° | 12.5 | 13.7 | 16.8 | 25.8 | 26.6 | 23.5 | 25.0 | 28.2 | 21.5 | 18.0 | 20.3 |
| 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° | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 |
| 2.5° | 449.9 | 449.5 | 448.7 | 449.1 | 448.7 | 448.7 | 448.7 | 448.7 |
| 5° | 449.5 | 449.5 | 448.7 | 448.7 | 448.7 | 449.1 | 448.7 | 448.7 |
| 7.5° | 449.1 | 448.7 | 448.0 | 447.6 | 447.6 | 447.2 | 447.2 | 447.2 |
| 10° | 448.3 | 447.6 | 446.8 | 446.4 | 446.4 | 445.6 | 445.6 | 445.6 |
| 12.5° | 450.3 | 449.1 | 448.3 | 448.0 | 448.0 | 448.0 | 448.3 | 448.3 |
| 15° | 455.8 | 453.4 | 452.3 | 451.9 | 452.3 | 453.0 | 453.4 | 453.8 |
| 17.5° | 461.6 | 459.3 | 457.3 | 456.6 | 456.9 | 458.1 | 459.3 | 460.1 |
| 20° | 469.1 | 467.1 | 464.8 | 464.0 | 464.0 | 465.6 | 466.3 | 467.5 |
| 22.5° | 479.6 | 478.1 | 476.1 | 474.9 | 474.2 | 476.1 | 477.3 | 478.1 |
| 25° | 496.5 | 494.9 | 493.3 | 492.2 | 491.8 | 493.7 | 494.5 | 494.9 |
| 27.5° | 518.8 | 517.2 | 516.4 | 516.0 | 514.9 | 515.6 | 516.8 | 516.4 |
| 30° | 547.7 | 548.9 | 547.7 | 547.7 | 545.8 | 546.5 | 545.8 | 545.0 |
| 32.5° | 586.4 | 585.3 | 581.8 | 579.4 | 576.7 | 576.7 | 575.5 | 574.3 |
| 35° | 625.2 | 621.3 | 619.3 | 620.5 | 619.3 | 620.1 | 618.1 | 616.2 |
| 37.5° | 670.9 | 668.6 | 668.2 | 671.7 | 670.9 | 671.7 | 671.7 | 669.0 |
| 40° | 731.6 | 730.0 | 732.8 | 738.6 | 741.0 | 740.6 | 741.4 | 737.8 |
| 42.5° | 801.2 | 798.5 | 799.7 | 804.7 | 807.5 | 808.3 | 807.9 | 804.7 |
| 45° | 870.9 | 871.6 | 871.6 | 877.1 | 879.9 | 881.4 | 878.7 | 877.5 |
| 47.5° | 949.5 | 950.7 | 947.9 | 951.5 | 952.2 | 955.0 | 952.6 | 950.7 |
| 50° | 1040.3 | 1036.0 | 1029.7 | 1030.9 | 1030.9 | 1030.1 | 1027.4 | 1025.0 |
| 52.5° | 1141.6 | 1131.8 | 1120.1 | 1116.2 | 1111.9 | 1107.6 | 1102.1 | 1097.8 |
| 55° | 1257.0 | 1240.2 | 1219.1 | 1209.3 | 1201.1 | 1191.3 | 1178.8 | 1174.5 |
| 57.5° | 1390.8 | 1361.9 | 1333.7 | 1316.1 | 1295.0 | 1282.0 | 1266.0 | 1265.2 |
| 60° | 1549.6 | 1510.5 | 1460.8 | 1434.6 | 1413.5 | 1398.2 | 1386.1 | 1381.4 |
| 62.5° | 1733.1 | 1665.8 | 1612.2 | 1584.1 | 1559.4 | 1550.0 | 1534.8 | 1536.7 |
| 65° | 1921.3 | 1852.8 | 1800.8 | 1778.1 | 1755.0 | 1748.8 | 1734.7 | 1739.8 |
| 67.5° | 2125.1 | 2068.8 | 2011.7 | 1990.5 | 1969.4 | 1963.2 | 1948.7 | 1953.0 |
| 70° | 2307.8 | 2236.2 | 2171.3 | 2129.8 | 2093.8 | 2064.9 | 2046.5 | 2039.1 |
| 72.5° | 2344.2 | 2220.2 | 2118.1 | 2014.4 | 1954.6 | 1902.1 | 1880.6 | 1872.4 |
| 75° | 2106.4 | 1913.9 | 1768.3 | 1646.7 | 1579.4 | 1503.1 | 1494.9 | 1483.5 |
| 77.5° | 1638.4 | 1419.4 | 1243.3 | 1086.8 | 996.4 | 903.3 | 871.3 | 847.0 |
| 80° | 977.3 | 751.2 | 582.1 | 408.0 | 332.9 | 268.0 | 251.9 | 235.1 |
| 82.5° | 349.8 | 224.2 | 151.0 | 117.8 | 105.2 | 97.0 | 90.8 | 82.5 |
| 85° | 84.5 | 71.2 | 67.3 | 61.0 | 60.2 | 51.3 | 36.4 | 32.5 |
| 87.5° | 27.0 | 24.6 | 25.0 | 23.9 | 25.0 | 18.8 | 15.3 | 13.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)