

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: LUMARK

Report Number: P881951

Luminaire Tested: **NAV-SB1C-830-U-T4FT**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P881951  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-24)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB1C-830-U-T4FT  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(1) 80 CRI, 3000K, 615mA LIGHTSQUARE WITH 26 LEDS AND TYPE IV FORWARD  
THROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

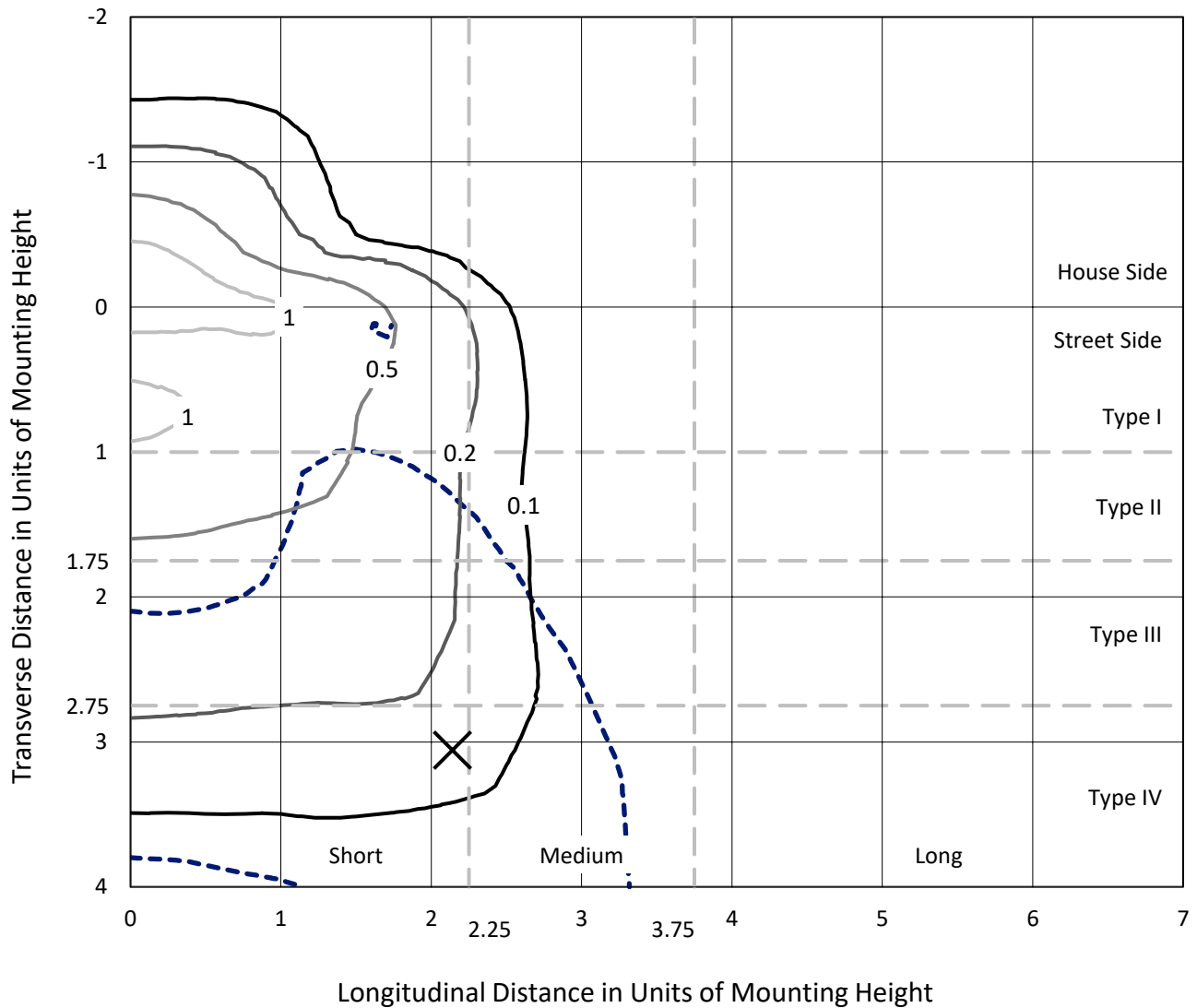
Lumens per Lamp: N/A  
Luminaire Lumens: 6482 lumens  
Efficiency: N/A  
Efficacy: 119.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 54.4  
Input Voltage (V): 120.0  
Input Current (Ain): 0.437  
Voltage Rise (V): NR  
Power Factor: 0.993  
Total Harmonic Distortion (THDi): 9.314  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

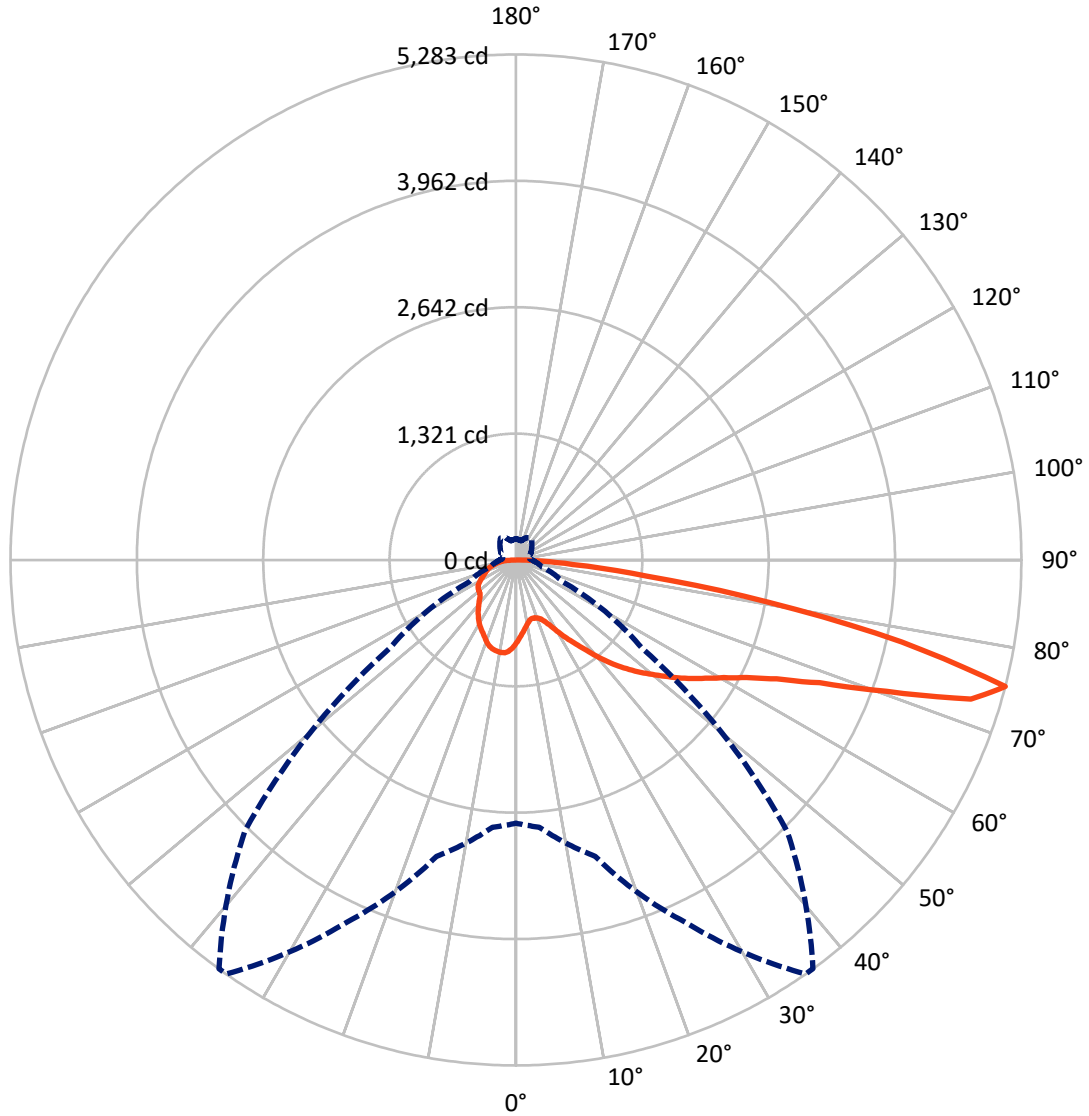
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.5 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral      - - - Horizontal Cone Through 75-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1542.6   | 0.0    | 1542.6 |
|                    | % Fixture | 23.8     | 0.0    | 23.8   |
| <b>Street Side</b> | Lumens    | 4939.4   | 0.0    | 4939.4 |
|                    | % Fixture | 76.2     | 0.0    | 76.2   |
| <b>Total</b>       | Lumens    | 6482.0   | 0.0    | 6482.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 81.8   | 1.3       |
| 10°-20°   | 235.9  | 3.6       |
| 20°-30°   | 396.1  | 6.1       |
| 30°-40°   | 615.6  | 9.5       |
| 40°-50°   | 913.8  | 14.1      |
| 50°-60°   | 1261.5 | 19.5      |
| 60°-70°   | 1530.5 | 23.6      |
| 70°-80°   | 1264.8 | 19.5      |
| 80°-90°   | 181.9  | 2.8       |
| 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°    | 6482.0 | 100.0     |
| 0°-180°   | 6482.0 | 100.0     |

**Coefficient of Utilization**



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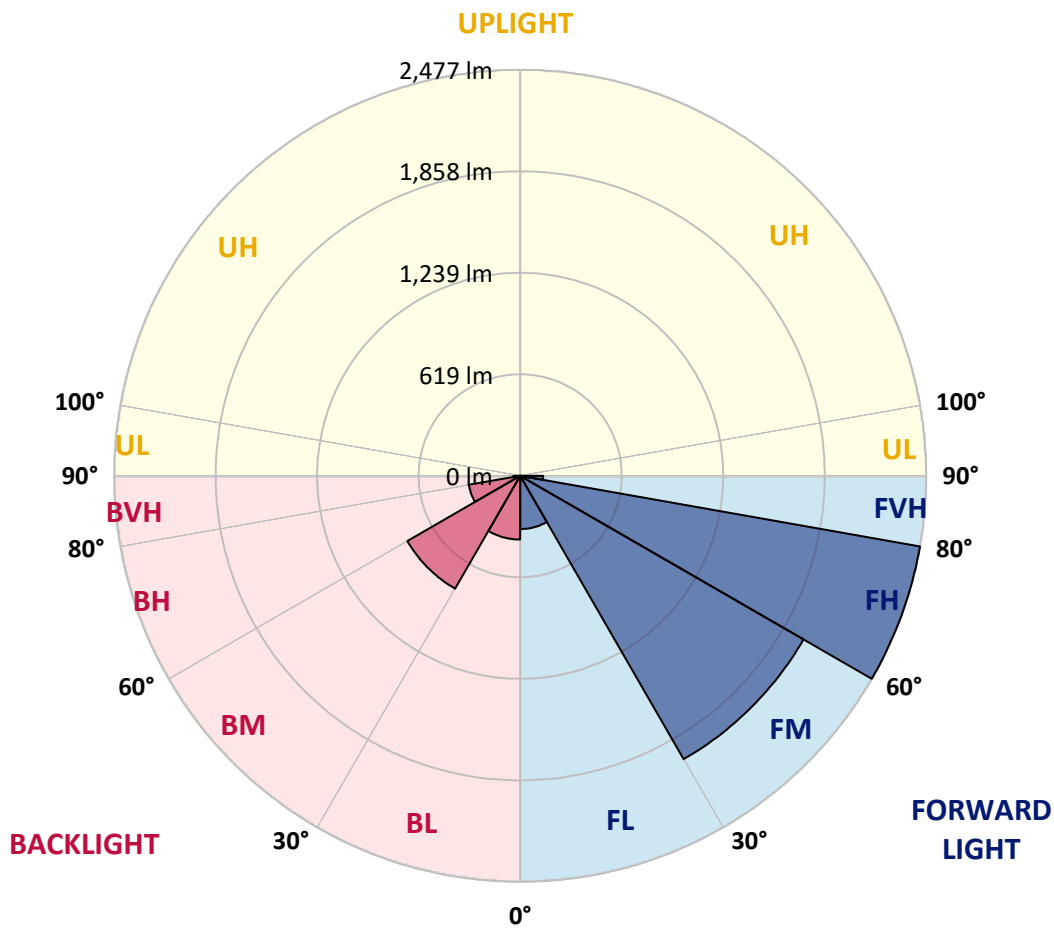
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 325.1  | 5.0       |                         |      |         |
| FM (30°-60°)   | 1996.1 | 30.8      |                         |      |         |
| FH (60°-80°)   | 2477.3 | 38.2      |                         |      | G2/5000 |
| FVH (80°-90°)  | 141.0  | 2.2       |                         |      | G2/225  |
| BL (0°-30°)    | 388.7  | 6.0       | B1/500                  |      |         |
| BM (30°-60°)   | 794.8  | 12.3      | B1/1000                 |      |         |
| BH (60°-80°)   | 318.0  | 4.9       | B1/500                  |      | G1/500  |
| BVH (80°-90°)  | 41.0   | 0.6       |                         |      | G1/100  |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G2**

Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 36°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 863.8  | 863.8  | 863.8  | 863.8  | 863.8  | 863.8  | 863.8  | 863.8  | 863.8  | 863.8  | 863.8  |
| 2.5°  | 796.5  | 801.4  | 803.5  | 802.4  | 807.7  | 807.0  | 814.4  | 823.5  | 836.1  | 848.4  | 866.2  |
| 5°    | 735.2  | 740.4  | 745.0  | 749.2  | 759.3  | 762.5  | 774.1  | 791.6  | 814.7  | 838.2  | 867.6  |
| 7.5°  | 678.1  | 682.6  | 689.6  | 697.3  | 714.5  | 717.6  | 736.9  | 764.3  | 796.5  | 830.8  | 871.5  |
| 10°   | 631.4  | 636.0  | 643.4  | 652.1  | 673.5  | 677.4  | 701.9  | 738.3  | 780.4  | 823.8  | 875.7  |
| 12.5° | 611.5  | 612.9  | 617.1  | 625.8  | 644.4  | 646.9  | 673.8  | 715.5  | 764.6  | 818.6  | 882.0  |
| 15°   | 610.4  | 613.2  | 613.6  | 618.1  | 633.5  | 634.6  | 659.5  | 700.8  | 754.8  | 817.5  | 891.5  |
| 17.5° | 620.9  | 623.0  | 619.9  | 622.7  | 635.7  | 637.4  | 657.0  | 693.8  | 751.6  | 822.1  | 907.6  |
| 20°   | 649.0  | 650.7  | 641.3  | 637.4  | 646.9  | 648.3  | 667.5  | 698.4  | 754.8  | 831.5  | 929.6  |
| 22.5° | 708.5  | 709.6  | 686.5  | 670.7  | 671.4  | 672.1  | 688.9  | 716.9  | 767.1  | 848.7  | 957.7  |
| 25°   | 801.4  | 800.7  | 763.9  | 733.4  | 715.9  | 712.0  | 723.3  | 747.1  | 787.7  | 871.5  | 993.8  |
| 27.5° | 910.0  | 904.8  | 868.0  | 822.4  | 784.2  | 778.6  | 776.2  | 786.3  | 817.2  | 901.6  | 1037.9 |
| 30°   | 1032.7 | 1027.8 | 988.2  | 928.6  | 875.7  | 866.6  | 843.4  | 838.2  | 861.0  | 942.6  | 1099.2 |
| 32.5° | 1167.2 | 1164.1 | 1116.8 | 1044.6 | 973.8  | 963.3  | 924.4  | 910.4  | 928.2  | 1004.6 | 1184.7 |
| 35°   | 1280.1 | 1277.3 | 1238.0 | 1163.7 | 1077.2 | 1064.2 | 1024.6 | 1008.8 | 1018.0 | 1084.2 | 1296.5 |
| 37.5° | 1382.0 | 1380.6 | 1347.0 | 1288.5 | 1199.1 | 1183.3 | 1138.8 | 1133.6 | 1131.8 | 1189.0 | 1432.1 |
| 40°   | 1476.6 | 1473.1 | 1438.1 | 1407.3 | 1341.0 | 1326.7 | 1287.4 | 1282.9 | 1269.5 | 1317.9 | 1585.6 |
| 42.5° | 1581.4 | 1572.3 | 1521.5 | 1507.1 | 1489.3 | 1477.3 | 1453.9 | 1454.6 | 1425.1 | 1463.3 | 1748.2 |
| 45°   | 1666.9 | 1661.7 | 1609.5 | 1601.0 | 1620.3 | 1615.4 | 1635.7 | 1641.0 | 1583.9 | 1615.8 | 1917.1 |
| 47.5° | 1758.7 | 1753.8 | 1709.7 | 1703.7 | 1755.9 | 1757.3 | 1829.2 | 1830.9 | 1738.8 | 1774.1 | 2086.4 |
| 50°   | 1871.9 | 1864.9 | 1821.1 | 1828.5 | 1887.0 | 1892.2 | 2023.6 | 2011.7 | 1881.4 | 1935.0 | 2254.2 |
| 52.5° | 1946.5 | 1950.8 | 1941.3 | 1953.2 | 2033.1 | 2038.0 | 2215.0 | 2184.5 | 2022.6 | 2093.7 | 2418.9 |
| 55°   | 2001.6 | 2010.0 | 2039.4 | 2066.7 | 2187.3 | 2192.2 | 2395.4 | 2348.8 | 2139.6 | 2240.9 | 2573.8 |
| 57.5° | 2072.3 | 2060.4 | 2115.4 | 2168.7 | 2333.8 | 2346.7 | 2571.0 | 2507.2 | 2243.4 | 2367.7 | 2680.0 |
| 60°   | 2174.0 | 2165.6 | 2208.3 | 2287.2 | 2497.8 | 2518.4 | 2756.7 | 2649.8 | 2319.4 | 2468.3 | 2700.6 |
| 62.5° | 2380.0 | 2359.0 | 2365.6 | 2435.4 | 2704.5 | 2731.8 | 2966.3 | 2774.2 | 2357.2 | 2507.6 | 2589.9 |
| 65°   | 2688.0 | 2651.9 | 2618.3 | 2666.7 | 2995.7 | 3022.7 | 3202.8 | 2872.0 | 2343.2 | 2431.5 | 2295.9 |
| 67.5° | 3075.9 | 3040.2 | 2998.8 | 3044.4 | 3424.6 | 3446.0 | 3494.7 | 2927.0 | 2232.8 | 2138.6 | 1776.2 |
| 70°   | 3395.9 | 3382.5 | 3432.0 | 3619.4 | 4109.7 | 4110.4 | 3868.9 | 2881.5 | 1930.4 | 1516.2 | 1027.8 |
| 72.5° | 3353.5 | 3345.4 | 3605.8 | 4185.3 | 4973.1 | 4954.5 | 4223.2 | 2536.6 | 1300.4 | 684.0  | 385.1  |
| 75°   | 2751.1 | 2803.3 | 3206.6 | 4175.2 | 5283.2 | 5280.7 | 4006.3 | 1612.6 | 537.9  | 283.5  | 199.0  |
| 77.5° | 1475.2 | 1557.9 | 2081.8 | 3082.6 | 4124.4 | 4186.4 | 2816.6 | 564.2  | 230.9  | 181.5  | 137.7  |
| 80°   | 481.1  | 553.3  | 829.8  | 1569.5 | 2680.0 | 2668.4 | 1207.2 | 221.5  | 158.0  | 128.6  | 95.3   |
| 82.5° | 204.3  | 212.7  | 370.7  | 741.1  | 1375.4 | 1354.0 | 384.4  | 127.2  | 111.1  | 88.0   | 58.9   |
| 85°   | 79.9   | 89.4   | 163.6  | 342.7  | 595.7  | 582.7  | 138.8  | 63.1   | 71.1   | 57.5   | 35.0   |
| 87.5° | 26.3   | 31.9   | 58.5   | 117.4  | 185.4  | 178.7  | 34.0   | 21.7   | 30.8   | 26.3   | 12.6   |
| 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°    | 863.8  | 863.8  | 863.8  | 863.8 | 863.8 | 863.8 | 863.8 | 863.8 | 863.8 | 863.8 | 863.8 |
| 2.5°  | 871.1  | 876.7  | 883.4  | 893.2 | 901.6 | 908.6 | 916.0 | 920.5 | 922.3 | 927.5 | 927.2 |
| 5°    | 877.4  | 889.7  | 906.2  | 922.3 | 938.1 | 947.5 | 955.9 | 960.1 | 964.0 | 966.8 | 967.5 |
| 7.5°  | 887.9  | 903.7  | 929.6  | 950.7 | 964.0 | 971.7 | 977.3 | 975.9 | 977.3 | 978.0 | 979.1 |
| 10°   | 897.1  | 919.1  | 950.0  | 969.9 | 980.1 | 980.5 | 979.1 | 974.2 | 971.7 | 972.0 | 972.7 |
| 12.5° | 907.9  | 932.5  | 965.7  | 982.6 | 985.4 | 977.7 | 971.7 | 963.3 | 960.1 | 958.7 | 958.0 |
| 15°   | 922.6  | 950.7  | 982.9  | 989.2 | 982.2 | 972.4 | 962.2 | 948.6 | 941.6 | 936.0 | 937.7 |
| 17.5° | 940.5  | 971.3  | 996.2  | 991.7 | 976.6 | 960.5 | 944.0 | 923.3 | 909.0 | 903.0 | 903.4 |
| 20°   | 965.4  | 993.1  | 1006.4 | 986.4 | 963.6 | 939.1 | 911.1 | 885.8 | 872.5 | 866.6 | 865.9 |
| 22.5° | 995.5  | 1022.2 | 1016.2 | 977.3 | 945.1 | 905.8 | 870.8 | 852.2 | 845.5 | 841.3 | 842.0 |
| 25°   | 1031.6 | 1054.4 | 1023.2 | 964.0 | 914.6 | 861.7 | 834.7 | 828.7 | 825.6 | 822.4 | 822.4 |
| 27.5° | 1078.6 | 1090.8 | 1028.5 | 944.4 | 866.9 | 814.7 | 804.9 | 806.0 | 804.9 | 799.6 | 800.7 |
| 30°   | 1140.6 | 1138.1 | 1033.4 | 912.5 | 812.3 | 772.3 | 773.0 | 777.6 | 778.3 | 774.8 | 776.5 |
| 32.5° | 1222.2 | 1197.4 | 1035.8 | 871.1 | 760.0 | 735.2 | 735.9 | 740.8 | 744.3 | 738.3 | 741.1 |
| 35°   | 1321.1 | 1266.4 | 1032.0 | 819.3 | 719.8 | 699.8 | 694.5 | 695.9 | 697.0 | 691.4 | 695.2 |
| 37.5° | 1436.3 | 1343.8 | 1014.8 | 761.8 | 686.5 | 665.1 | 653.9 | 644.4 | 638.8 | 633.5 | 637.1 |
| 40°   | 1562.8 | 1428.3 | 983.3  | 705.7 | 649.3 | 628.3 | 611.5 | 593.6 | 574.7 | 567.7 | 570.8 |
| 42.5° | 1695.3 | 1515.2 | 945.1  | 652.1 | 606.6 | 589.4 | 571.5 | 545.6 | 517.2 | 502.8 | 504.6 |
| 45°   | 1832.7 | 1604.2 | 907.6  | 599.2 | 562.8 | 555.4 | 534.7 | 503.5 | 472.7 | 454.5 | 453.1 |
| 47.5° | 1967.2 | 1688.3 | 852.6  | 545.9 | 521.8 | 529.8 | 513.7 | 485.0 | 450.6 | 421.9 | 418.7 |
| 50°   | 2095.8 | 1767.1 | 762.5  | 492.0 | 488.5 | 522.1 | 506.7 | 465.3 | 426.1 | 389.3 | 386.2 |
| 52.5° | 2223.4 | 1830.9 | 647.2  | 442.9 | 470.6 | 520.0 | 497.6 | 452.0 | 404.0 | 365.5 | 361.3 |
| 55°   | 2331.7 | 1863.9 | 536.1  | 400.9 | 444.7 | 502.1 | 486.7 | 436.3 | 372.8 | 331.8 | 328.3 |
| 57.5° | 2393.3 | 1837.2 | 443.6  | 359.5 | 408.9 | 472.7 | 468.2 | 402.6 | 335.7 | 304.2 | 300.0 |
| 60°   | 2366.7 | 1729.3 | 367.9  | 323.4 | 374.9 | 440.8 | 435.9 | 369.3 | 307.3 | 277.5 | 273.3 |
| 62.5° | 2219.9 | 1523.6 | 308.0  | 291.9 | 344.1 | 408.2 | 403.7 | 343.8 | 285.6 | 256.9 | 252.3 |
| 65°   | 1924.1 | 1239.4 | 261.4  | 265.6 | 312.9 | 369.0 | 375.6 | 322.4 | 268.4 | 240.4 | 235.8 |
| 67.5° | 1467.5 | 897.8  | 225.0  | 242.8 | 282.4 | 330.4 | 349.7 | 307.0 | 254.1 | 227.4 | 223.2 |
| 70°   | 836.4  | 509.9  | 194.1  | 220.8 | 255.5 | 294.7 | 329.7 | 294.7 | 238.6 | 216.6 | 213.8 |
| 72.5° | 317.1  | 234.1  | 167.8  | 198.7 | 229.5 | 264.6 | 307.7 | 275.4 | 220.8 | 204.3 | 201.5 |
| 75°   | 169.2  | 142.6  | 141.2  | 172.8 | 199.7 | 235.1 | 280.0 | 256.5 | 207.4 | 215.9 | 222.9 |
| 77.5° | 115.3  | 100.9  | 118.1  | 147.9 | 167.1 | 202.5 | 250.5 | 227.8 | 179.8 | 179.1 | 165.0 |
| 80°   | 79.9   | 71.5   | 96.0   | 119.1 | 129.3 | 170.3 | 218.7 | 195.5 | 146.5 | 136.7 | 130.7 |
| 82.5° | 48.0   | 46.6   | 71.8   | 89.0  | 91.5  | 131.4 | 181.2 | 164.0 | 119.8 | 104.4 | 105.1 |
| 85°   | 26.3   | 27.7   | 45.9   | 52.2  | 53.3  | 91.8  | 141.9 | 126.8 | 92.2  | 77.4  | 78.1  |
| 87.5° | 7.4    | 9.5    | 16.8   | 20.7  | 25.6  | 47.7  | 84.4  | 75.3  | 46.3  | 32.2  | 32.2  |
| 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)