

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: P882098

Luminaire Tested: **NAV-SB1D-760-U-T3-HSS**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P882098  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB1D-760-U-T3-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(1) 70 CRI, 5700K, 900mA LIGHTSQUARE WITH 26 LEDS AND TYPE III OPTICS  
WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

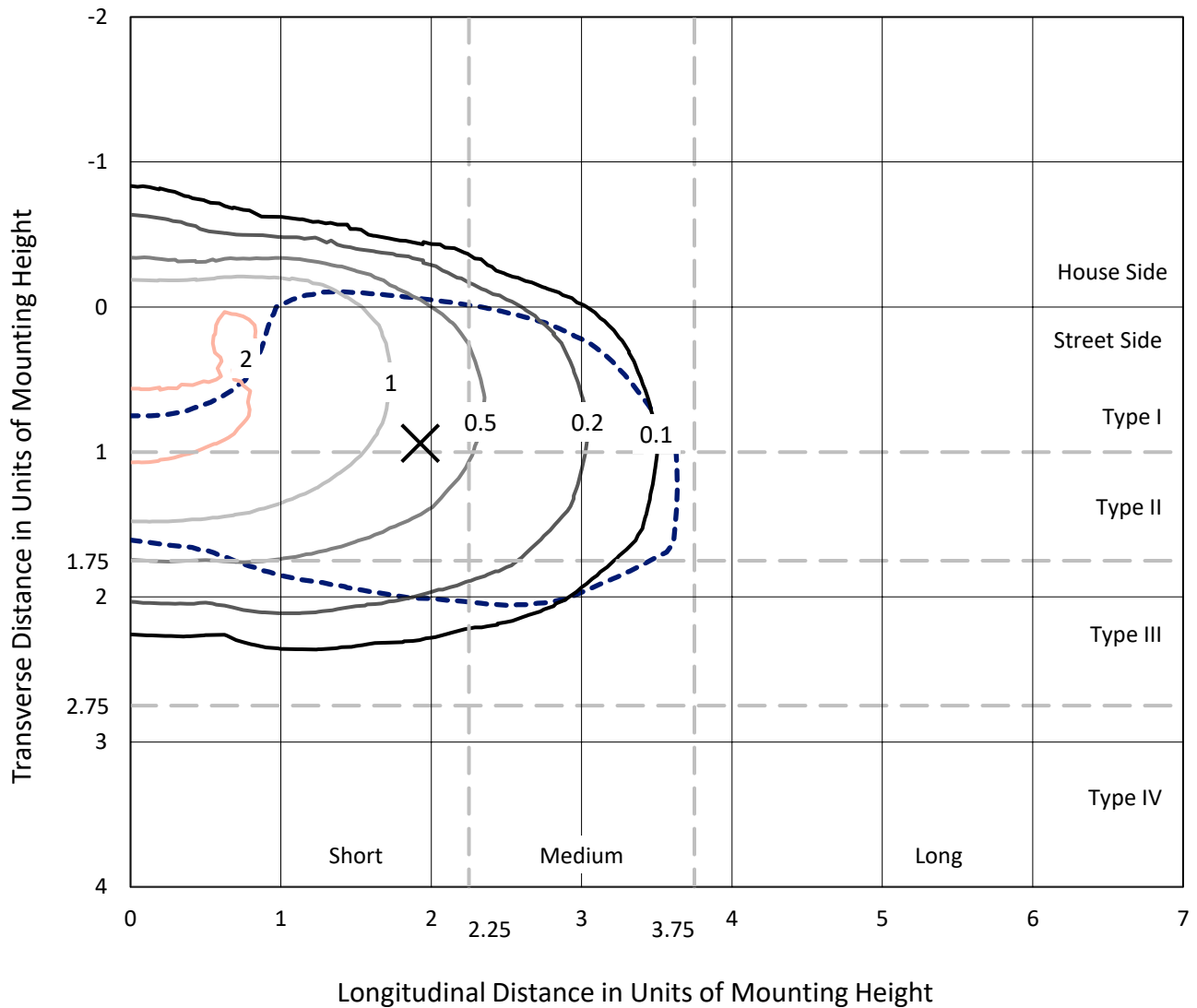
Lumens per Lamp: N/A  
Luminaire Lumens: 8612 lumens  
Efficiency: N/A  
Efficacy: 108.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 79.6  
Input Voltage (V): 120.0  
Input Current (Ain): 0.638  
Voltage Rise (V): NR  
Power Factor: 0.997  
Total Harmonic Distortion (THDi): 6.673  
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

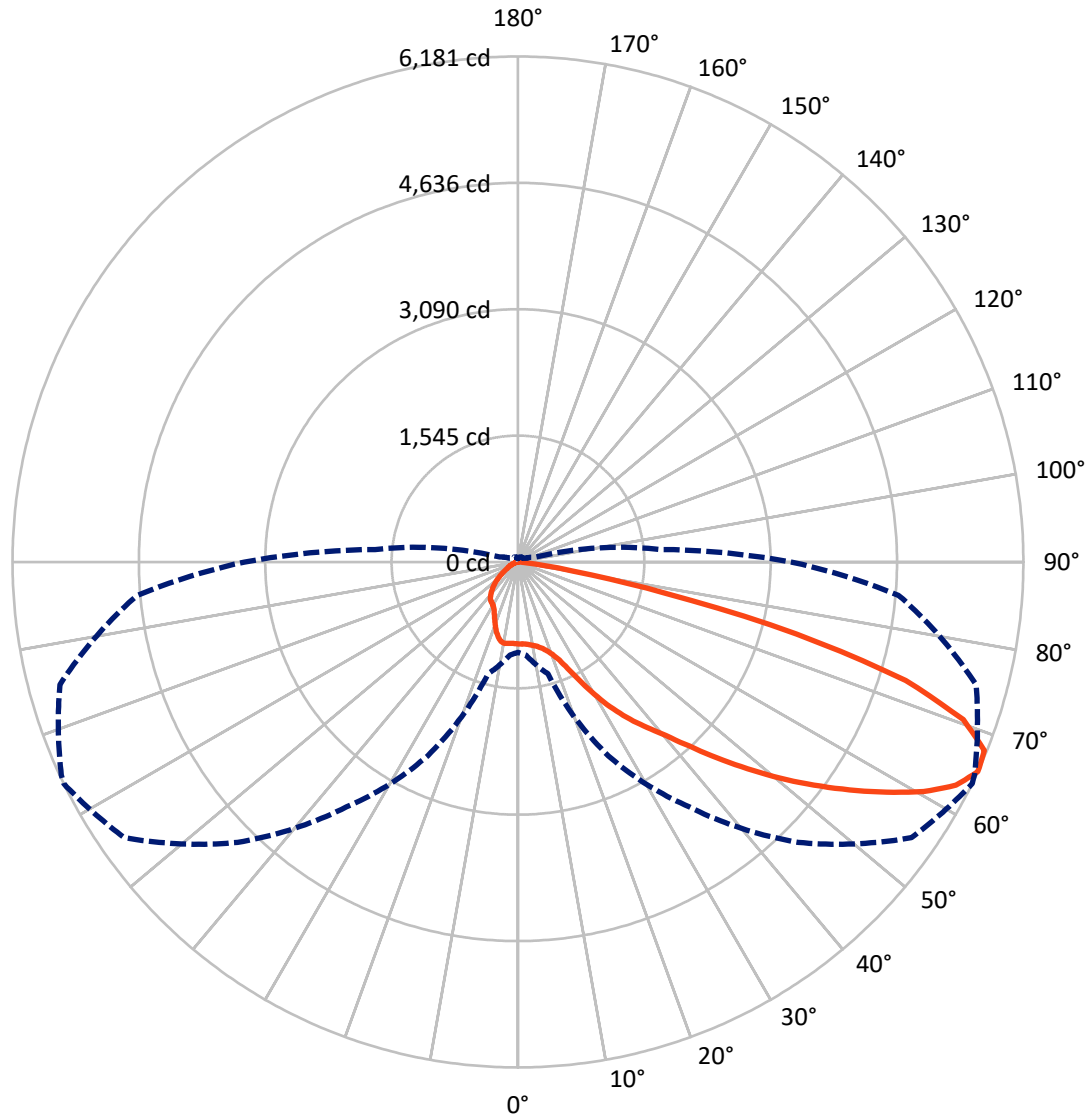
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.5 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 64-Deg Lateral    - - - Horizontal Cone Through 65-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1151.7   | 0.0    | 1151.7 |
|                    | % Fixture | 13.4     | 0.0    | 13.4   |
| <b>Street Side</b> | Lumens    | 7460.3   | 0.0    | 7460.3 |
|                    | % Fixture | 86.6     | 0.0    | 86.6   |
| <b>Total</b>       | Lumens    | 8612.0   | 0.0    | 8612.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 92.4   | 1.1       |
| 10°-20°   | 250.7  | 2.9       |
| 20°-30°   | 475.0  | 5.5       |
| 30°-40°   | 961.1  | 11.2      |
| 40°-50°   | 1637.3 | 19.0      |
| 50°-60°   | 2226.5 | 25.9      |
| 60°-70°   | 2090.8 | 24.3      |
| 70°-80°   | 837.7  | 9.7       |
| 80°-90°   | 40.6   | 0.5       |
| 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°    | 8612.0 | 100.0     |
| 0°-180°   | 8612.0 | 100.0     |

**Coefficient of Utilization**



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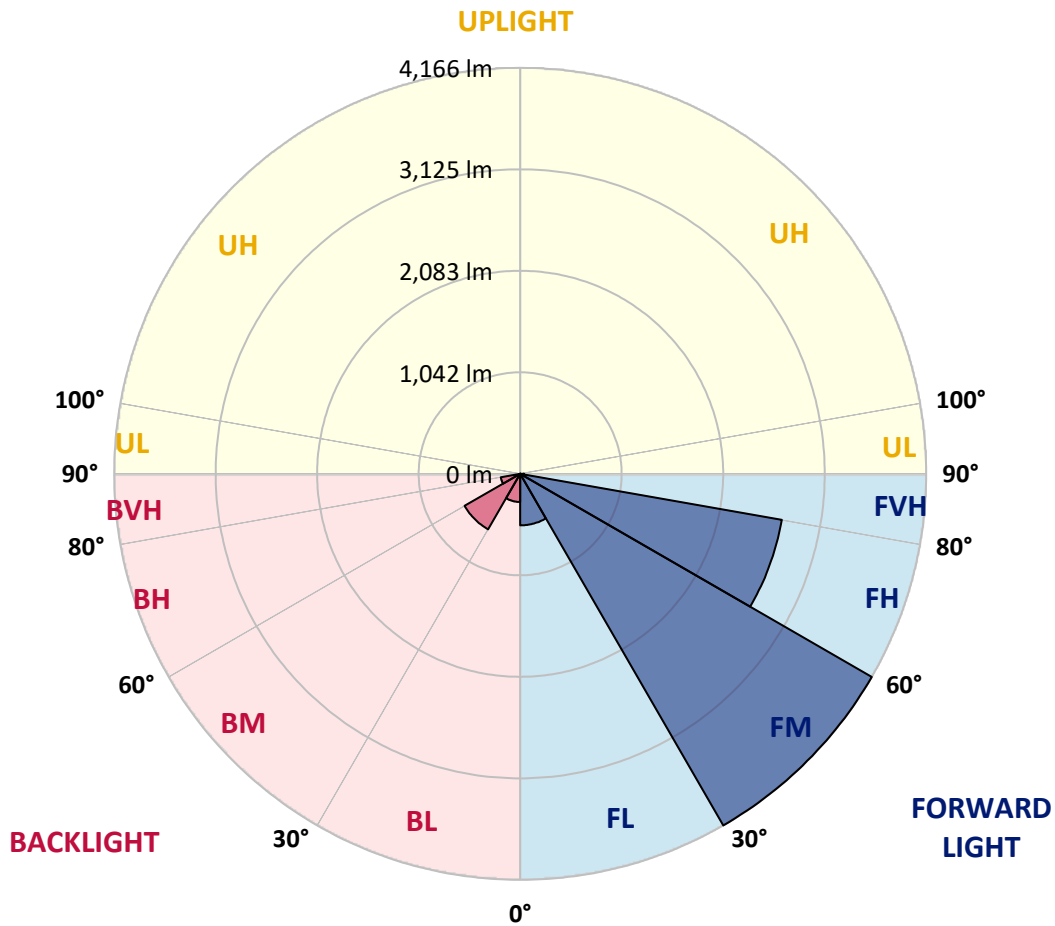
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 528.9  | 6.1       |                         |      |         |
| FM (30°-60°)   | 4166.5 | 48.4      |                         |      |         |
| FH (60°-80°)   | 2726.4 | 31.7      |                         |      | G2/5000 |
| FVH (80°-90°)  | 38.6   | 0.4       |                         |      | G1/100  |
| BL (0°-30°)    | 289.2  | 3.4       | B1/500                  |      |         |
| BM (30°-60°)   | 658.4  | 7.6       | B1/1000                 |      |         |
| BH (60°-80°)   | 202.1  | 2.3       | B1/500                  |      | G1/500  |
| BVH (80°-90°)  | 2.0    | 0.0       |                         |      | G0/10   |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

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

Type III Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 64°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 |
| 2.5°  | 998.2  | 1005.1 | 1003.4 | 1001.7 | 1001.1 | 1002.2 | 1002.8 | 1002.2 | 1002.2 | 1002.2 | 1002.8 |
| 5°    | 979.1  | 984.9  | 984.9  | 989.0  | 994.7  | 1001.7 | 1006.9 | 1008.0 | 1009.2 | 1010.9 | 1010.3 |
| 7.5°  | 942.8  | 947.4  | 950.9  | 964.1  | 978.6  | 997.0  | 1012.6 | 1020.7 | 1021.9 | 1028.2 | 1030.5 |
| 10°   | 918.0  | 923.7  | 929.5  | 943.4  | 964.1  | 991.9  | 1018.4 | 1038.0 | 1040.9 | 1055.9 | 1062.9 |
| 12.5° | 916.8  | 922.6  | 930.1  | 945.1  | 969.3  | 998.8  | 1031.1 | 1059.4 | 1064.6 | 1086.5 | 1101.0 |
| 15°   | 928.9  | 935.8  | 942.8  | 961.3  | 987.2  | 1023.0 | 1057.7 | 1092.9 | 1098.1 | 1129.3 | 1144.8 |
| 17.5° | 953.7  | 963.0  | 968.2  | 986.7  | 1014.4 | 1054.2 | 1099.8 | 1140.2 | 1144.8 | 1181.2 | 1200.8 |
| 20°   | 1002.8 | 1013.8 | 1015.5 | 1030.5 | 1057.7 | 1100.4 | 1154.7 | 1204.9 | 1210.7 | 1252.2 | 1274.2 |
| 22.5° | 1104.4 | 1120.0 | 1106.2 | 1113.7 | 1137.9 | 1180.6 | 1239.5 | 1303.0 | 1311.1 | 1358.5 | 1378.1 |
| 25°   | 1283.4 | 1305.3 | 1269.5 | 1256.8 | 1267.2 | 1311.7 | 1385.6 | 1465.8 | 1475.1 | 1513.2 | 1523.0 |
| 27.5° | 1635.0 | 1606.7 | 1552.4 | 1499.3 | 1468.1 | 1493.5 | 1576.7 | 1676.0 | 1687.5 | 1724.5 | 1712.9 |
| 30°   | 2021.2 | 1996.4 | 1923.1 | 1805.3 | 1731.4 | 1727.4 | 1804.2 | 1915.0 | 1928.3 | 1963.5 | 1928.3 |
| 32.5° | 2408.0 | 2384.4 | 2304.7 | 2159.8 | 2031.6 | 1968.1 | 2021.2 | 2144.2 | 2151.1 | 2173.6 | 2121.7 |
| 35°   | 2788.5 | 2764.2 | 2684.6 | 2536.2 | 2378.6 | 2234.3 | 2223.9 | 2362.4 | 2364.7 | 2388.4 | 2311.0 |
| 37.5° | 3171.3 | 3151.1 | 3066.2 | 2920.7 | 2765.4 | 2566.2 | 2469.8 | 2569.1 | 2572.0 | 2595.1 | 2514.8 |
| 40°   | 3444.3 | 3453.0 | 3394.7 | 3282.1 | 3148.7 | 2931.1 | 2745.8 | 2789.1 | 2771.8 | 2810.4 | 2762.5 |
| 42.5° | 3678.7 | 3696.1 | 3645.3 | 3588.7 | 3511.3 | 3319.6 | 3087.6 | 3080.0 | 3052.3 | 3073.1 | 3023.5 |
| 45°   | 3881.4 | 3895.8 | 3850.2 | 3836.9 | 3835.2 | 3700.7 | 3461.1 | 3416.1 | 3377.4 | 3373.3 | 3313.9 |
| 47.5° | 3955.9 | 3983.6 | 4003.2 | 4047.7 | 4134.2 | 4077.7 | 3847.3 | 3777.5 | 3734.2 | 3702.4 | 3608.3 |
| 50°   | 3984.1 | 4013.6 | 4080.6 | 4209.9 | 4414.8 | 4439.1 | 4231.8 | 4153.3 | 4100.2 | 4042.5 | 3903.9 |
| 52.5° | 3946.0 | 3998.6 | 4088.6 | 4306.3 | 4603.6 | 4728.9 | 4600.7 | 4532.0 | 4471.4 | 4377.3 | 4171.8 |
| 55°   | 3721.5 | 3774.0 | 3958.2 | 4305.1 | 4697.7 | 4932.1 | 4949.4 | 4918.8 | 4850.7 | 4702.3 | 4388.3 |
| 57.5° | 3248.1 | 3326.0 | 3617.5 | 4158.5 | 4696.0 | 5107.0 | 5291.2 | 5313.2 | 5236.9 | 5024.5 | 4558.6 |
| 60°   | 2592.2 | 2697.9 | 3053.5 | 3833.5 | 4551.1 | 5201.7 | 5590.8 | 5700.5 | 5619.7 | 5342.0 | 4696.6 |
| 62.5° | 1808.8 | 1931.2 | 2267.7 | 3324.3 | 4219.7 | 5133.6 | 5809.7 | 6012.3 | 5951.1 | 5626.1 | 4749.7 |
| 65°   | 1103.3 | 1142.5 | 1413.9 | 2615.9 | 3656.2 | 4848.4 | 5877.2 | 6180.9 | 6160.7 | 5799.8 | 4671.2 |
| 67.5° | 734.9  | 767.8  | 845.8  | 1793.8 | 2838.1 | 4278.6 | 5715.6 | 6151.4 | 6157.2 | 5771.6 | 4383.7 |
| 70°   | 442.8  | 471.1  | 521.9  | 1043.2 | 1839.4 | 3386.6 | 5215.0 | 5776.2 | 5809.7 | 5393.4 | 3838.7 |
| 72.5° | 182.4  | 201.5  | 247.7  | 472.8  | 952.6  | 2149.4 | 4152.7 | 4959.3 | 5037.2 | 4534.9 | 2946.1 |
| 75°   | 103.3  | 113.2  | 145.5  | 237.3  | 413.4  | 1001.7 | 2515.4 | 3520.5 | 3635.4 | 3125.7 | 1772.4 |
| 77.5° | 68.7   | 73.3   | 94.1   | 153.6  | 232.7  | 341.8  | 1075.0 | 1834.2 | 2053.6 | 1707.2 | 767.3  |
| 80°   | 46.2   | 50.2   | 64.7   | 102.8  | 151.3  | 146.6  | 342.4  | 679.5  | 836.0  | 586.6  | 187.1  |
| 82.5° | 31.2   | 31.8   | 46.2   | 67.5   | 95.8   | 71.0   | 101.0  | 211.3  | 265.6  | 169.7  | 71.0   |
| 85°   | 17.9   | 17.3   | 34.1   | 39.3   | 42.7   | 29.4   | 30.6   | 63.5   | 83.1   | 71.6   | 40.4   |
| 87.5° | 2.3    | 3.5    | 13.3   | 10.4   | 5.8    | 6.4    | 6.4    | 11.0   | 16.2   | 17.3   | 8.7    |
| 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):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 |
| 2.5°  | 1002.8 | 1002.2 | 1000.5 | 998.8  | 994.7  | 992.4  | 993.6  | 992.4  | 991.9  | 992.4  | 994.7  |
| 5°    | 1010.3 | 1008.6 | 1004.0 | 998.2  | 990.1  | 980.3  | 974.0  | 964.7  | 956.1  | 950.9  | 952.0  |
| 7.5°  | 1030.5 | 1028.8 | 1022.4 | 1006.3 | 980.3  | 939.3  | 901.8  | 868.9  | 844.1  | 829.6  | 830.2  |
| 10°   | 1062.9 | 1060.0 | 1050.2 | 1014.4 | 946.2  | 856.8  | 782.3  | 720.5  | 680.1  | 661.0  | 659.3  |
| 12.5° | 1101.0 | 1097.5 | 1080.2 | 1006.9 | 881.6  | 741.9  | 639.1  | 570.4  | 532.9  | 516.1  | 514.4  |
| 15°   | 1146.0 | 1141.4 | 1107.3 | 971.1  | 787.5  | 614.9  | 520.8  | 469.4  | 445.1  | 430.1  | 430.7  |
| 17.5° | 1202.0 | 1193.9 | 1127.5 | 917.4  | 685.3  | 517.9  | 448.0  | 409.3  | 388.0  | 373.5  | 372.4  |
| 20°   | 1274.7 | 1261.5 | 1143.7 | 853.3  | 591.2  | 456.7  | 398.9  | 366.6  | 350.4  | 337.7  | 335.4  |
| 22.5° | 1376.4 | 1357.3 | 1163.3 | 784.0  | 524.8  | 414.5  | 362.6  | 338.9  | 325.6  | 311.2  | 308.9  |
| 25°   | 1502.2 | 1479.7 | 1187.6 | 719.9  | 479.2  | 378.2  | 336.0  | 316.4  | 300.8  | 284.0  | 282.3  |
| 27.5° | 1678.3 | 1637.9 | 1216.4 | 667.4  | 439.9  | 347.0  | 311.8  | 289.8  | 271.9  | 258.1  | 255.2  |
| 30°   | 1874.6 | 1808.2 | 1241.8 | 635.6  | 404.1  | 318.1  | 280.0  | 258.1  | 241.3  | 231.5  | 229.8  |
| 32.5° | 2060.5 | 1970.4 | 1258.6 | 621.8  | 371.8  | 285.2  | 245.4  | 221.7  | 209.0  | 206.1  | 207.8  |
| 35°   | 2236.0 | 2117.1 | 1256.8 | 608.5  | 342.9  | 252.3  | 211.3  | 187.1  | 177.2  | 179.0  | 179.0  |
| 37.5° | 2438.1 | 2273.5 | 1244.7 | 587.7  | 319.3  | 222.3  | 181.9  | 160.5  | 151.8  | 152.4  | 154.7  |
| 40°   | 2673.0 | 2454.2 | 1237.2 | 548.5  | 293.3  | 194.6  | 157.6  | 140.3  | 133.9  | 131.6  | 131.1  |
| 42.5° | 2923.6 | 2629.2 | 1238.4 | 504.0  | 261.0  | 169.7  | 140.9  | 126.4  | 120.7  | 118.9  | 118.4  |
| 45°   | 3175.3 | 2796.0 | 1240.1 | 457.8  | 226.9  | 150.7  | 128.7  | 116.6  | 113.2  | 110.8  | 110.8  |
| 47.5° | 3412.0 | 2938.0 | 1207.8 | 408.2  | 193.4  | 136.2  | 118.9  | 110.8  | 108.0  | 105.1  | 105.1  |
| 50°   | 3632.6 | 3032.7 | 1129.8 | 350.4  | 166.8  | 124.7  | 111.4  | 105.7  | 102.8  | 99.9   | 99.9   |
| 52.5° | 3804.0 | 3047.7 | 1001.1 | 291.0  | 148.4  | 116.0  | 106.8  | 101.6  | 98.1   | 95.3   | 94.7   |
| 55°   | 3880.2 | 2953.6 | 818.1  | 235.6  | 133.9  | 108.5  | 102.2  | 97.0   | 92.9   | 90.1   | 89.5   |
| 57.5° | 3860.6 | 2755.6 | 637.9  | 189.4  | 120.1  | 101.0  | 96.4   | 92.9   | 88.3   | 83.7   | 83.1   |
| 60°   | 3764.2 | 2490.6 | 480.9  | 157.6  | 107.4  | 92.9   | 90.1   | 87.2   | 80.8   | 73.9   | 72.7   |
| 62.5° | 3597.3 | 2157.5 | 342.9  | 130.5  | 93.5   | 83.7   | 82.6   | 80.2   | 71.0   | 58.3   | 57.2   |
| 65°   | 3342.2 | 1752.8 | 230.9  | 108.5  | 80.2   | 73.3   | 73.9   | 69.9   | 57.7   | 43.3   | 42.1   |
| 67.5° | 2969.2 | 1281.7 | 147.8  | 88.9   | 67.0   | 61.2   | 61.8   | 59.5   | 49.1   | 36.9   | 35.2   |
| 70°   | 2494.1 | 848.7  | 96.4   | 67.5   | 53.7   | 47.3   | 50.8   | 51.4   | 41.6   | 30.0   | 28.9   |
| 72.5° | 1828.4 | 501.1  | 67.5   | 50.2   | 39.3   | 32.9   | 41.6   | 42.7   | 33.5   | 22.5   | 21.4   |
| 75°   | 1042.1 | 237.9  | 50.8   | 36.4   | 24.2   | 23.1   | 32.3   | 32.3   | 23.1   | 15.0   | 13.9   |
| 77.5° | 437.6  | 99.3   | 35.8   | 23.7   | 13.9   | 13.3   | 21.9   | 20.2   | 11.5   | 6.9    | 6.9    |
| 80°   | 126.4  | 44.5   | 19.1   | 11.5   | 5.8    | 5.2    | 8.7    | 6.4    | 2.9    | 1.2    | 1.2    |
| 82.5° | 49.7   | 19.6   | 7.5    | 4.6    | 2.3    | 2.3    | 1.2    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 29.4   | 8.1    | 3.5    | 1.7    | 0.6    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 7.5    | 1.7    | 1.2    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 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)