

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: P883946

Luminaire Tested: **NAV-SB4C-740-U-T2-HSS**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P883946  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB4C-740-U-T2-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 70 CRI, 4000K, 615mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

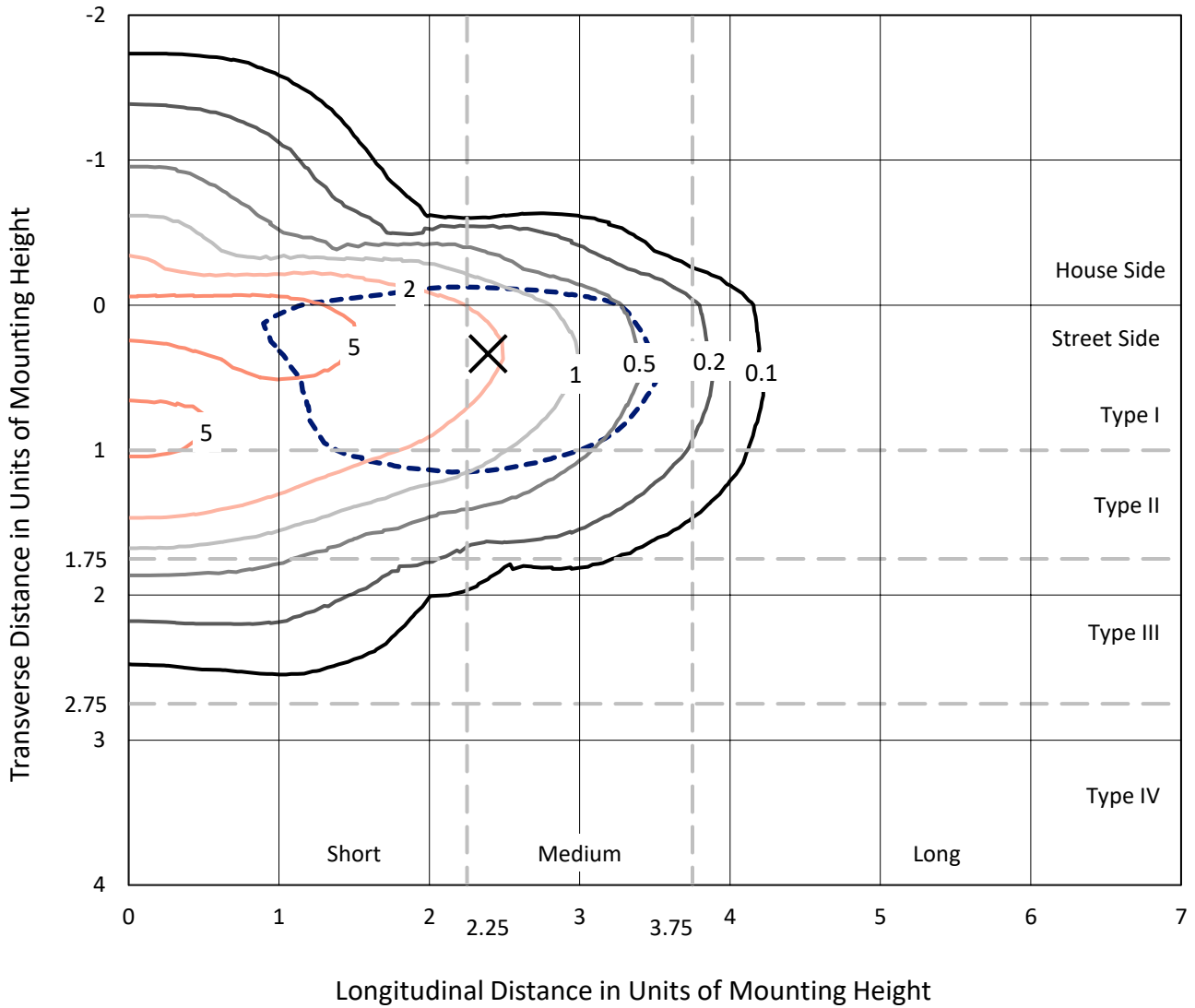
Lumens per Lamp: N/A  
Luminaire Lumens: 23894 lumens  
Efficiency: N/A  
Efficacy: 119.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B3 - U0 - G3  
  
Input Watts (W): 200.7  
Input Voltage (V): 120.0  
Input Current (Ain): 1.714  
Voltage Rise (V): NR  
Power Factor: 0.994  
Total Harmonic Distortion (THDi): 9.472  
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

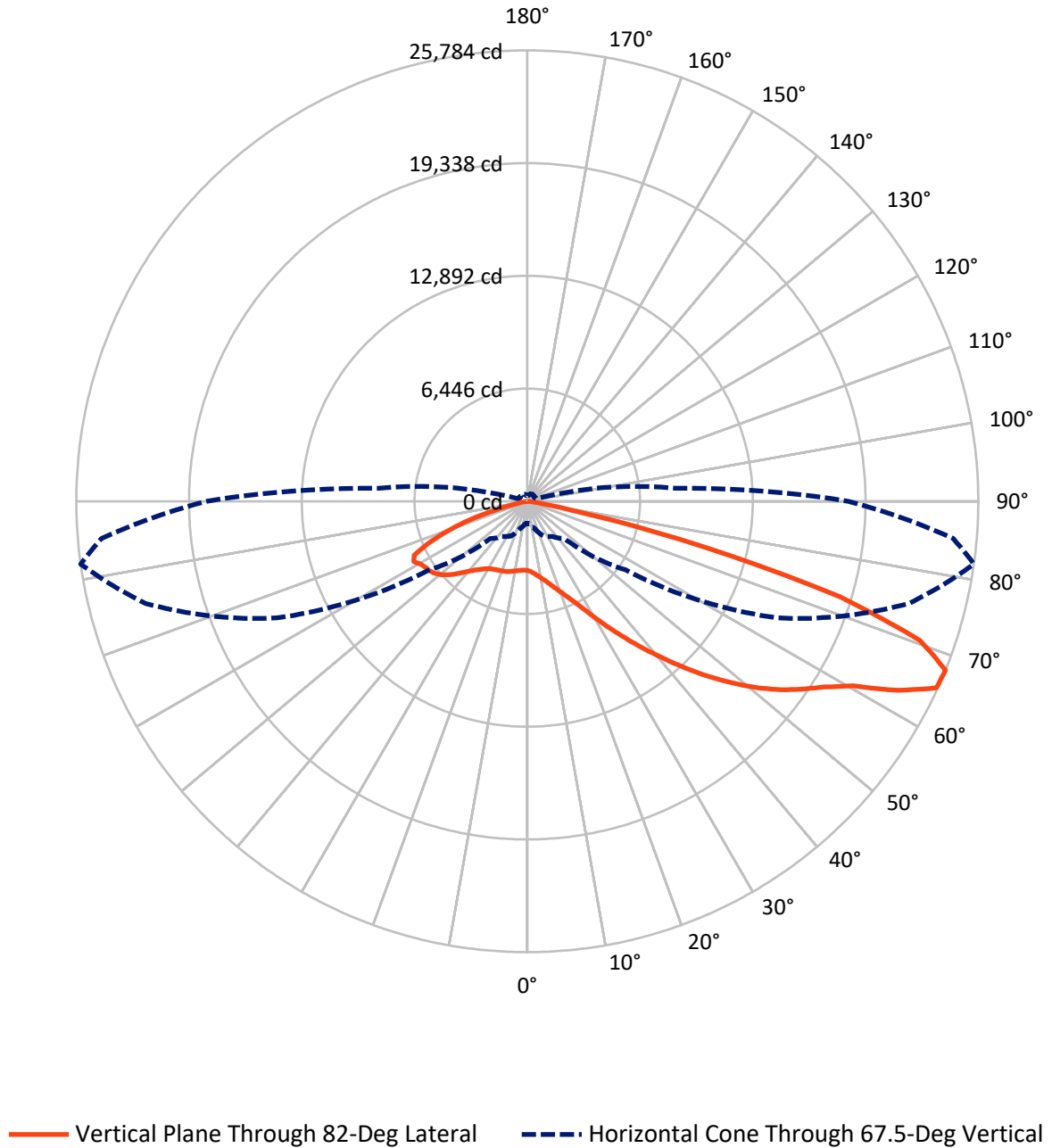
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.4 fc  
 Type II - Medium - N/A

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### Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 4328.2   | 0.0    | 4328.2  |
|                    | % Fixture | 18.1     | 0.0    | 18.1    |
| <b>Street Side</b> | Lumens    | 19565.8  | 0.0    | 19565.8 |
|                    | % Fixture | 81.9     | 0.0    | 81.9    |
| <b>Total</b>       | Lumens    | 23894.0  | 0.0    | 23894.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 352.7   | 1.5       |
| 10°-20°   | 916.4   | 3.8       |
| 20°-30°   | 1467.8  | 6.1       |
| 30°-40°   | 2595.6  | 10.9      |
| 40°-50°   | 4547.7  | 19.0      |
| 50°-60°   | 6065.4  | 25.4      |
| 60°-70°   | 5646.6  | 23.6      |
| 70°-80°   | 2167.2  | 9.1       |
| 80°-90°   | 134.6   | 0.6       |
| 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°    | 23894.0 | 100.0     |
| 0°-180°   | 23894.0 | 100.0     |

**Coefficient of Utilization**



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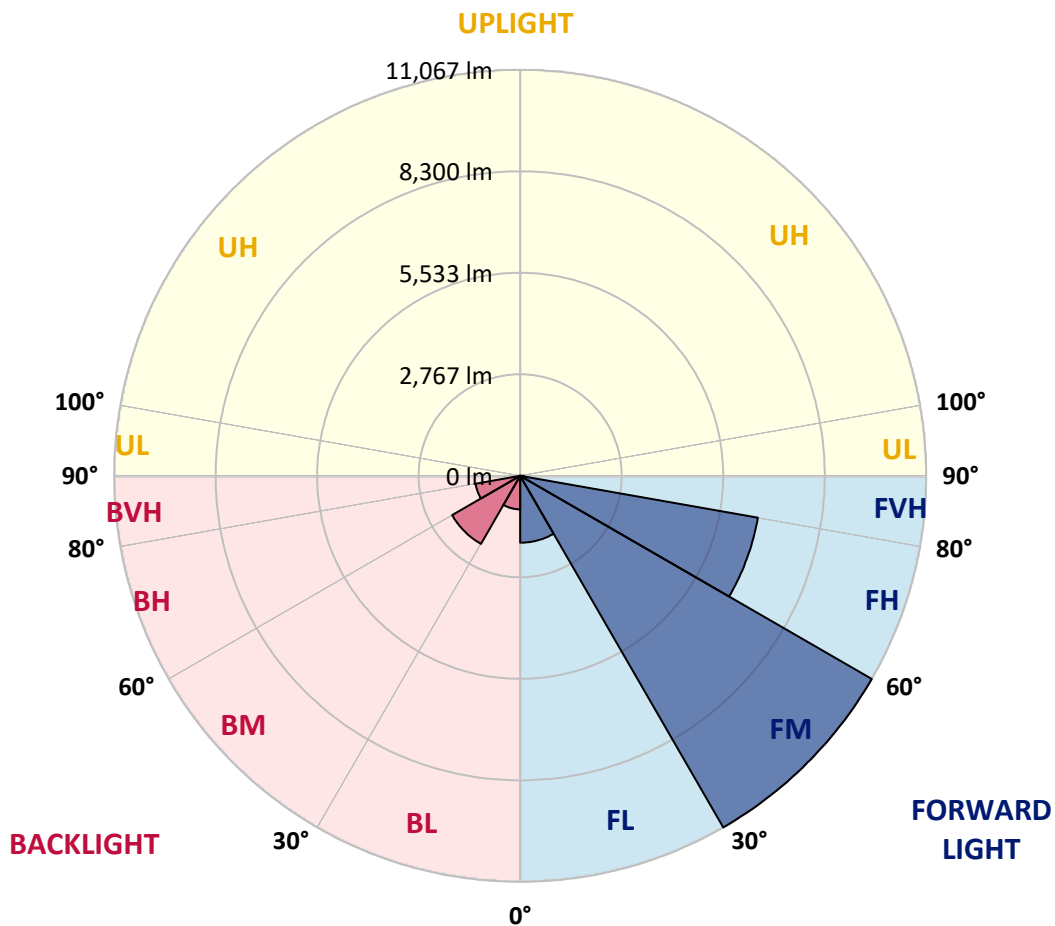
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|---------|-----------|-------------------------|------|---------|
|                |         |           | B                       | U    | G       |
| FL (0°-30°)    | 1822.8  | 7.6       |                         |      |         |
| FM (30°-60°)   | 11066.7 | 46.3      |                         |      |         |
| FH (60°-80°)   | 6578.4  | 27.5      |                         |      | G3/7500 |
| FVH (80°-90°)  | 97.9    | 0.4       |                         |      | G1/100  |
| BL (0°-30°)    | 914.1   | 3.8       | B2/1000                 |      |         |
| BM (30°-60°)   | 2142.0  | 9.0       | B2/2500                 |      |         |
| BH (60°-80°)   | 1235.4  | 5.2       | B3/2500                 |      | G3/2500 |
| BVH (80°-90°)  | 36.7    | 0.2       |                         |      | G1/100  |
| UL (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0     | 0.0       |                         | U0/0 |         |

**BUG Rating: B3-U0-G3**

Type II Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 82°     | 85°     |
|-------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 3958.4 | 3958.4 | 3958.4 | 3958.4  | 3958.4  | 3958.4  | 3958.4  | 3958.4  | 3958.4  | 3958.4  | 3958.4  |
| 2.5°  | 4183.8 | 4207.9 | 4194.1 | 4187.2  | 4175.2  | 4158.0  | 4144.2  | 4101.2  | 4056.5  | 4027.2  | 4016.9  |
| 5°    | 4268.1 | 4292.2 | 4290.4 | 4297.3  | 4305.9  | 4311.1  | 4307.6  | 4259.5  | 4195.8  | 4145.9  | 4116.7  |
| 7.5°  | 4195.8 | 4223.4 | 4245.7 | 4280.1  | 4340.3  | 4404.0  | 4435.0  | 4424.6  | 4359.3  | 4290.4  | 4254.3  |
| 10°   | 3991.1 | 4020.4 | 4073.7 | 4154.5  | 4281.8  | 4419.5  | 4534.7  | 4588.1  | 4546.8  | 4471.1  | 4421.2  |
| 12.5° | 3616.1 | 3645.3 | 3750.3 | 3925.7  | 4139.1  | 4378.2  | 4598.4  | 4741.2  | 4751.5  | 4675.8  | 4617.3  |
| 15°   | 3194.6 | 3223.9 | 3335.7 | 3555.9  | 3881.0  | 4264.6  | 4632.8  | 4902.9  | 4994.1  | 4928.7  | 4858.1  |
| 17.5° | 2933.1 | 2958.9 | 3043.2 | 3220.4  | 3559.3  | 4037.6  | 4620.7  | 5074.9  | 5283.1  | 5231.5  | 5147.2  |
| 20°   | 2854.0 | 2876.4 | 2915.9 | 3039.8  | 3321.9  | 3801.9  | 4541.6  | 5236.6  | 5594.4  | 5565.2  | 5470.6  |
| 22.5° | 2938.3 | 2958.9 | 2971.0 | 3026.0  | 3203.2  | 3647.1  | 4441.8  | 5401.8  | 5955.7  | 5959.1  | 5843.9  |
| 25°   | 3132.7 | 3153.3 | 3139.6 | 3174.0  | 3251.4  | 3598.9  | 4404.0  | 5596.2  | 6409.9  | 6447.7  | 6317.0  |
| 27.5° | 3452.7 | 3454.4 | 3421.7 | 3420.0  | 3432.0  | 3671.1  | 4443.6  | 5804.3  | 6982.7  | 7053.3  | 6891.6  |
| 30°   | 4094.3 | 4068.5 | 3942.9 | 3807.0  | 3745.1  | 3887.9  | 4553.7  | 6050.3  | 7658.8  | 7784.4  | 7581.4  |
| 32.5° | 5083.5 | 5045.7 | 4815.1 | 4490.0  | 4163.1  | 4237.1  | 4751.5  | 6330.7  | 8395.1  | 8622.2  | 8374.5  |
| 35°   | 6157.0 | 6146.7 | 5905.8 | 5422.4  | 4851.3  | 4734.3  | 5073.2  | 6698.9  | 9198.5  | 9559.7  | 9265.6  |
| 37.5° | 7154.8 | 7149.6 | 7012.0 | 6442.6  | 5747.5  | 5427.6  | 5589.3  | 7180.6  | 10058.6 | 10581.6 | 10234.1 |
| 40°   | 8066.5 | 8082.0 | 7944.4 | 7435.2  | 6735.0  | 6317.0  | 6291.2  | 7775.8  | 11015.1 | 11694.6 | 11281.8 |
| 42.5° | 8854.4 | 8871.6 | 8732.3 | 8355.5  | 7710.4  | 7301.0  | 7153.0  | 8505.2  | 11949.3 | 12890.3 | 12401.7 |
| 45°   | 9389.4 | 9496.1 | 9475.5 | 9174.4  | 8711.6  | 8286.7  | 8188.7  | 9420.4  | 13014.1 | 14158.1 | 13585.3 |
| 47.5° | 9540.8 | 9638.9 | 9793.7 | 9835.0  | 9552.9  | 9134.8  | 9251.8  | 10523.1 | 14091.0 | 15427.7 | 14775.7 |
| 50°   | 9167.5 | 9258.7 | 9580.4 | 10008.7 | 10204.9 | 10075.8 | 10285.7 | 11705.0 | 15193.8 | 16693.9 | 15943.8 |
| 52.5° | 8431.2 | 8524.1 | 8930.1 | 9607.9  | 10407.9 | 10813.9 | 11323.1 | 12869.6 | 16262.1 | 17892.9 | 17050.0 |
| 55°   | 7366.4 | 7464.4 | 7985.7 | 8752.9  | 10020.8 | 11118.3 | 12188.4 | 14032.5 | 17240.9 | 18971.5 | 18047.7 |
| 57.5° | 5917.9 | 5990.1 | 6532.0 | 7605.5  | 9047.1  | 10815.6 | 12826.6 | 15302.1 | 18163.0 | 20031.3 | 19036.9 |
| 60°   | 3856.9 | 3920.6 | 4550.2 | 5747.5  | 7433.4  | 9804.0  | 12953.9 | 16717.9 | 19387.9 | 21409.2 | 20370.2 |
| 62.5° | 2565.0 | 2608.0 | 2981.3 | 3860.4  | 5234.9  | 7861.8  | 12209.0 | 17848.2 | 21183.9 | 23807.3 | 22656.4 |
| 65°   | 1759.9 | 1802.9 | 2176.2 | 2788.6  | 3382.1  | 5200.5  | 10067.2 | 17698.5 | 22811.3 | 25711.7 | 24351.0 |
| 67.5° | 1255.8 | 1292.0 | 1608.5 | 2186.5  | 2448.0  | 3020.9  | 6824.5  | 15785.5 | 22577.3 | 25784.0 | 24442.1 |
| 70°   | 899.7  | 920.4  | 1181.9 | 1703.1  | 1945.7  | 1814.9  | 3795.0  | 12073.1 | 19768.1 | 23809.1 | 22580.8 |
| 72.5° | 629.6  | 636.5  | 820.6  | 1297.1  | 1567.2  | 1324.6  | 1806.3  | 8049.3  | 14951.2 | 18687.7 | 17505.8 |
| 75°   | 426.6  | 435.2  | 552.2  | 951.3   | 1257.5  | 1011.5  | 956.5   | 4316.3  | 8777.0  | 10344.2 | 9272.5  |
| 77.5° | 261.5  | 264.9  | 356.1  | 650.3   | 941.0   | 770.7   | 615.9   | 1828.7  | 3395.9  | 3334.0  | 2841.9  |
| 80°   | 147.9  | 147.9  | 227.1  | 404.3   | 641.7   | 497.2   | 431.8   | 777.6   | 1075.2  | 944.4   | 832.6   |
| 82.5° | 82.6   | 84.3   | 165.1  | 251.2   | 424.9   | 294.2   | 237.4   | 359.5   | 464.5   | 411.2   | 357.8   |
| 85°   | 34.4   | 37.8   | 101.5  | 118.7   | 203.0   | 146.2   | 96.3    | 151.4   | 172.0   | 153.1   | 111.8   |
| 87.5° | 3.4    | 5.2    | 31.0   | 22.4    | 24.1    | 29.2    | 13.8    | 29.2    | 24.1    | 24.1    | 17.2    |
| 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):**

|       | 90°     | 95°     | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 3958.4  | 3958.4  | 3958.4 | 3958.4 | 3958.4 | 3958.4 | 3958.4 | 3958.4 | 3958.4 | 3958.4 | 3958.4 |
| 2.5°  | 3984.2  | 3958.4  | 3893.1 | 3817.4 | 3717.6 | 3669.4 | 3604.0 | 3559.3 | 3521.5 | 3524.9 | 3490.5 |
| 5°    | 4061.6  | 3996.3  | 3850.0 | 3667.7 | 3440.6 | 3278.9 | 3106.9 | 2988.2 | 2891.8 | 2871.2 | 2824.7 |
| 7.5°  | 4168.3  | 4065.1  | 3808.8 | 3480.2 | 3096.6 | 2805.8 | 2546.1 | 2379.2 | 2260.5 | 2222.6 | 2184.8 |
| 10°   | 4305.9  | 4156.3  | 3755.4 | 3244.5 | 2692.3 | 2322.4 | 2043.7 | 1913.0 | 1832.1 | 1804.6 | 1784.0 |
| 12.5° | 4465.9  | 4261.2  | 3684.9 | 2957.2 | 2276.0 | 1919.9 | 1742.7 | 1677.3 | 1651.5 | 1642.9 | 1637.7 |
| 15°   | 4667.2  | 4391.9  | 3578.2 | 2616.6 | 1923.3 | 1673.9 | 1598.2 | 1589.6 | 1593.0 | 1589.6 | 1587.8 |
| 17.5° | 4906.3  | 4534.7  | 3404.5 | 2265.6 | 1685.9 | 1548.3 | 1520.8 | 1527.6 | 1536.2 | 1534.5 | 1531.1 |
| 20°   | 5167.8  | 4675.8  | 3182.6 | 1954.3 | 1524.2 | 1458.8 | 1443.3 | 1450.2 | 1457.1 | 1453.7 | 1451.9 |
| 22.5° | 5465.4  | 4827.2  | 2936.6 | 1711.7 | 1415.8 | 1376.2 | 1359.0 | 1360.8 | 1360.8 | 1353.9 | 1350.4 |
| 25°   | 5821.5  | 4994.1  | 2678.5 | 1539.7 | 1333.2 | 1302.3 | 1281.6 | 1274.7 | 1264.4 | 1243.8 | 1240.3 |
| 27.5° | 6246.4  | 5171.2  | 2430.8 | 1419.3 | 1267.9 | 1238.6 | 1214.5 | 1197.3 | 1171.5 | 1137.1 | 1133.7 |
| 30°   | 6724.7  | 5386.3  | 2220.9 | 1343.6 | 1216.3 | 1187.0 | 1159.5 | 1133.7 | 1095.8 | 1052.8 | 1049.4 |
| 32.5° | 7287.2  | 5616.8  | 2067.8 | 1293.7 | 1169.8 | 1138.8 | 1106.2 | 1075.2 | 1033.9 | 990.9  | 992.6  |
| 35°   | 7958.1  | 5895.5  | 1978.4 | 1259.3 | 1133.7 | 1092.4 | 1056.3 | 1021.9 | 990.9  | 953.1  | 949.6  |
| 37.5° | 8685.8  | 6191.4  | 1950.8 | 1242.1 | 1109.6 | 1045.9 | 1004.7 | 980.6  | 977.1  | 954.8  | 953.1  |
| 40°   | 9482.3  | 6542.3  | 1971.5 | 1231.7 | 1083.8 | 1001.2 | 956.5  | 951.3  | 959.9  | 920.4  | 922.1  |
| 42.5° | 10325.3 | 6958.6  | 2005.9 | 1219.7 | 1047.7 | 956.5  | 913.5  | 913.5  | 906.6  | 851.6  | 851.6  |
| 45°   | 11237.0 | 7438.6  | 2040.3 | 1190.5 | 1004.7 | 911.8  | 879.1  | 867.0  | 837.8  | 784.5  | 782.7  |
| 47.5° | 12155.7 | 7927.2  | 2066.1 | 1137.1 | 953.1  | 873.9  | 844.7  | 817.1  | 774.1  | 726.0  | 724.2  |
| 50°   | 13027.9 | 8365.9  | 2038.6 | 1058.0 | 894.6  | 837.8  | 806.8  | 769.0  | 722.5  | 689.8  | 684.7  |
| 52.5° | 13807.2 | 8746.0  | 1921.6 | 965.1  | 832.6  | 799.9  | 772.4  | 732.9  | 695.0  | 660.6  | 657.2  |
| 55°   | 14485.0 | 9054.0  | 1715.1 | 877.4  | 777.6  | 767.3  | 739.7  | 689.8  | 638.2  | 609.0  | 605.5  |
| 57.5° | 15135.3 | 9287.9  | 1457.1 | 805.1  | 727.7  | 731.1  | 689.8  | 645.1  | 596.9  | 566.0  | 562.5  |
| 60°   | 16000.6 | 9601.0  | 1195.6 | 738.0  | 674.4  | 684.7  | 640.0  | 607.3  | 547.1  | 507.5  | 502.3  |
| 62.5° | 17383.7 | 10087.9 | 949.6  | 655.4  | 612.4  | 615.9  | 596.9  | 557.4  | 485.1  | 438.7  | 435.2  |
| 65°   | 18481.3 | 9909.0  | 748.3  | 566.0  | 541.9  | 547.1  | 547.1  | 504.1  | 426.6  | 373.3  | 368.1  |
| 67.5° | 18357.4 | 8484.6  | 596.9  | 478.2  | 474.8  | 478.2  | 490.3  | 454.2  | 378.5  | 335.5  | 328.6  |
| 70°   | 16910.6 | 6748.8  | 478.2  | 397.4  | 412.9  | 404.3  | 438.7  | 414.6  | 340.6  | 297.6  | 292.5  |
| 72.5° | 13798.6 | 4861.6  | 364.7  | 328.6  | 316.5  | 330.3  | 395.7  | 373.3  | 283.9  | 235.7  | 230.5  |
| 75°   | 8063.1  | 2594.2  | 271.8  | 259.8  | 228.8  | 275.2  | 350.9  | 318.3  | 216.8  | 173.8  | 168.6  |
| 77.5° | 2625.2  | 904.9   | 199.6  | 191.0  | 170.3  | 221.9  | 299.3  | 268.4  | 177.2  | 137.6  | 132.5  |
| 80°   | 703.6   | 273.5   | 135.9  | 125.6  | 110.1  | 165.1  | 237.4  | 213.3  | 127.3  | 89.5   | 87.7   |
| 82.5° | 282.1   | 115.3   | 79.1   | 70.5   | 60.2   | 113.5  | 187.5  | 172.0  | 94.6   | 56.8   | 56.8   |
| 85°   | 91.2    | 37.8    | 29.2   | 22.4   | 27.5   | 70.5   | 111.8  | 117.0  | 67.1   | 29.2   | 22.4   |
| 87.5° | 12.0    | 5.2     | 5.2    | 6.9    | 5.2    | 12.0   | 34.4   | 32.7   | 18.9   | 3.4    | 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)