

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: P968164

Luminaire Tested: **NAV-SB5B-722-U-T2R-HSS**

Issue Date: 1/21/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P968164  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB5B-722-U-T2R-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(5) 70 CRI, 2200K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II  
ROADWAY OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: -

**Summary**

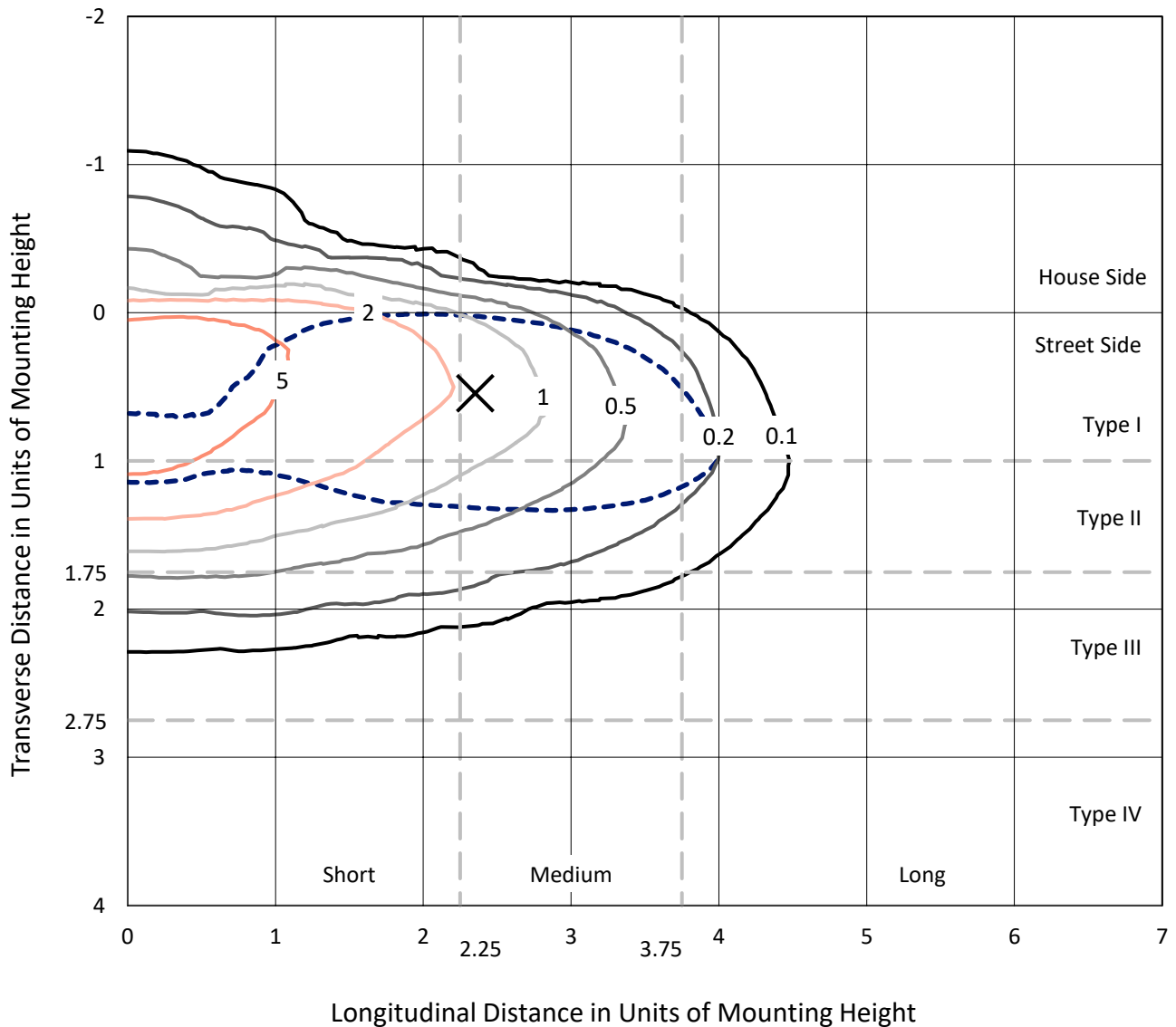
Lumens per Lamp: N/A  
Luminaire Lumens: 20392.4 lumens  
Efficiency: N/A  
Efficacy: 111.6 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B1 - U0 - G3  
  
Input Watts (W): 182.7  
Input Voltage (V): NR  
Input Current (Ain): 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: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

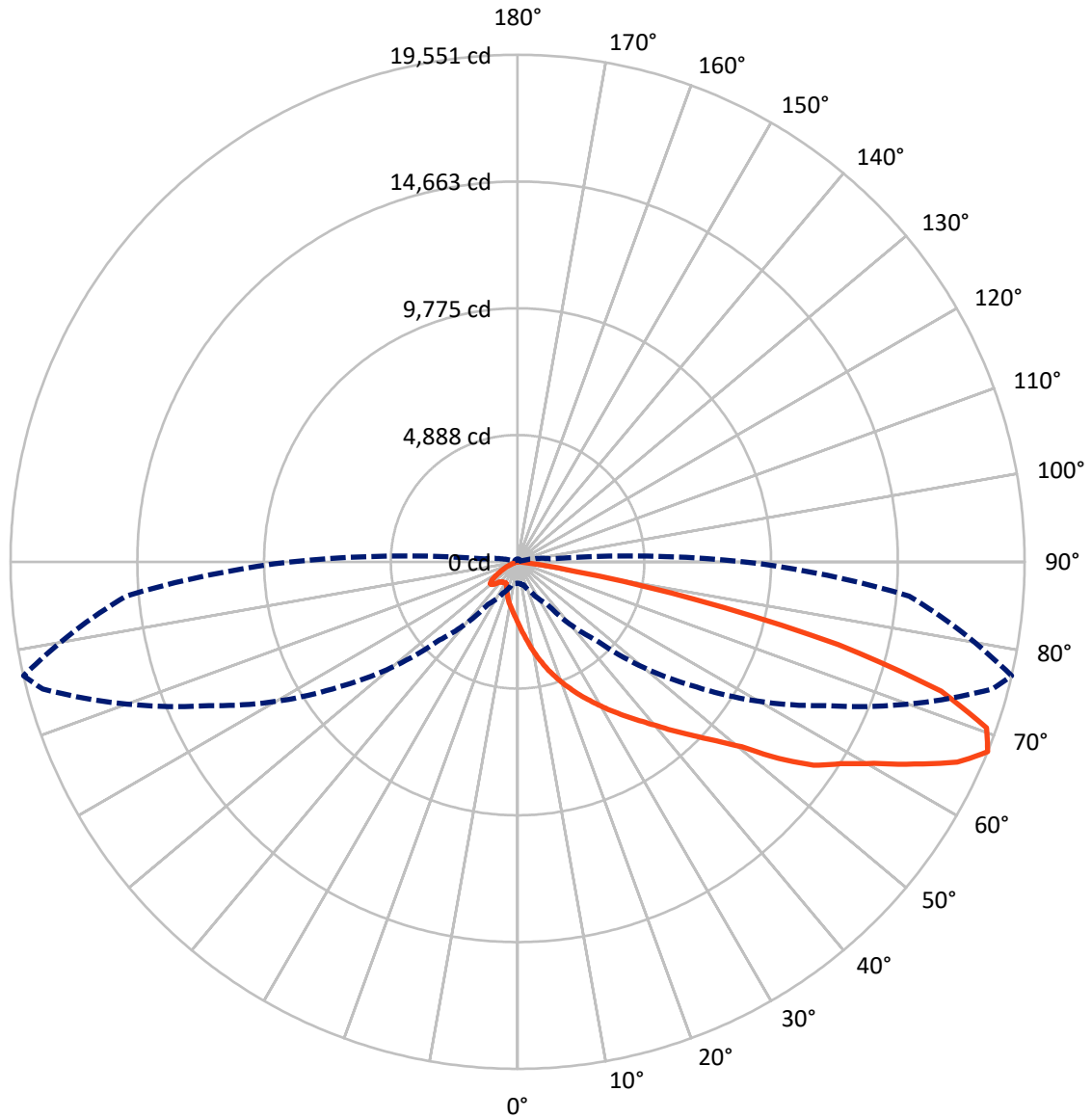
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.8 fc  
 Type II - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 77-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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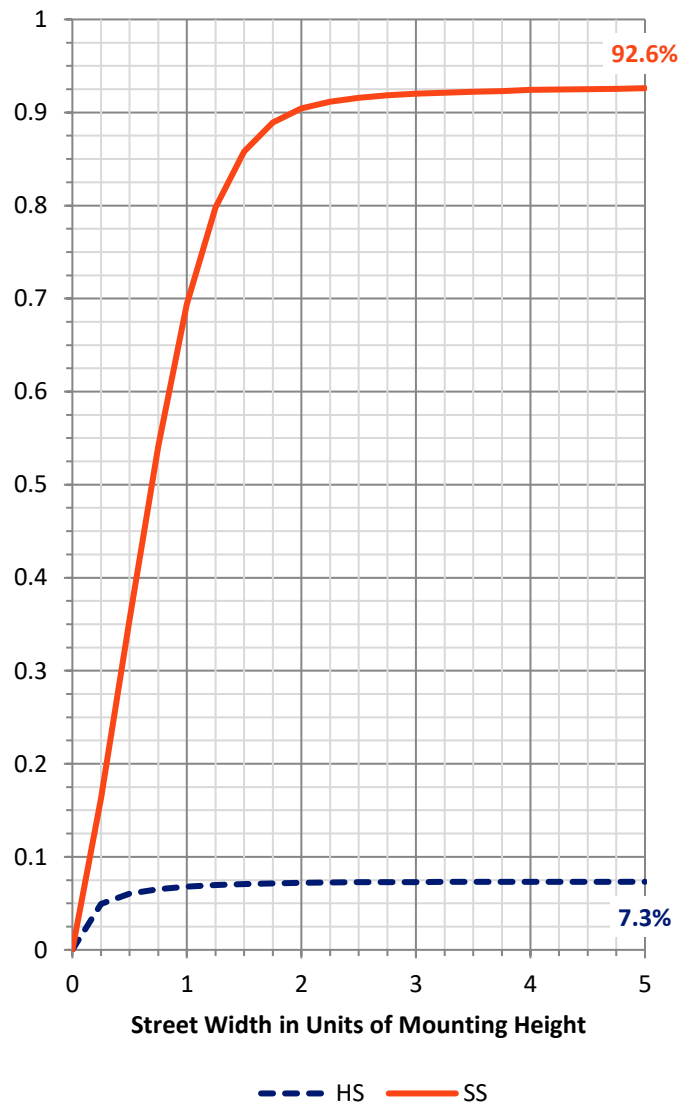
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 1500.3   | 0.0    | 1500.3  |
|                    | % Fixture | 7.4      | 0.0    | 7.4     |
| <b>Street Side</b> | Lumens    | 18892.1  | 0.0    | 18892.1 |
|                    | % Fixture | 92.6     | 0.0    | 92.6    |
| <b>Total</b>       | Lumens    | 20392.4  | 0.0    | 20392.4 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 240.0   | 1.2       |
| 10°-20°   | 840.5   | 4.1       |
| 20°-30°   | 1621.9  | 8.0       |
| 30°-40°   | 2815.8  | 13.8      |
| 40°-50°   | 4088.3  | 20.0      |
| 50°-60°   | 4694.9  | 23.0      |
| 60°-70°   | 4076.1  | 20.0      |
| 70°-80°   | 1919.9  | 9.4       |
| 80°-90°   | 94.9    | 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°    | 20392.4 | 100.0     |
| 0°-180°   | 20392.4 | 100.0     |

**Coefficient of Utilization**

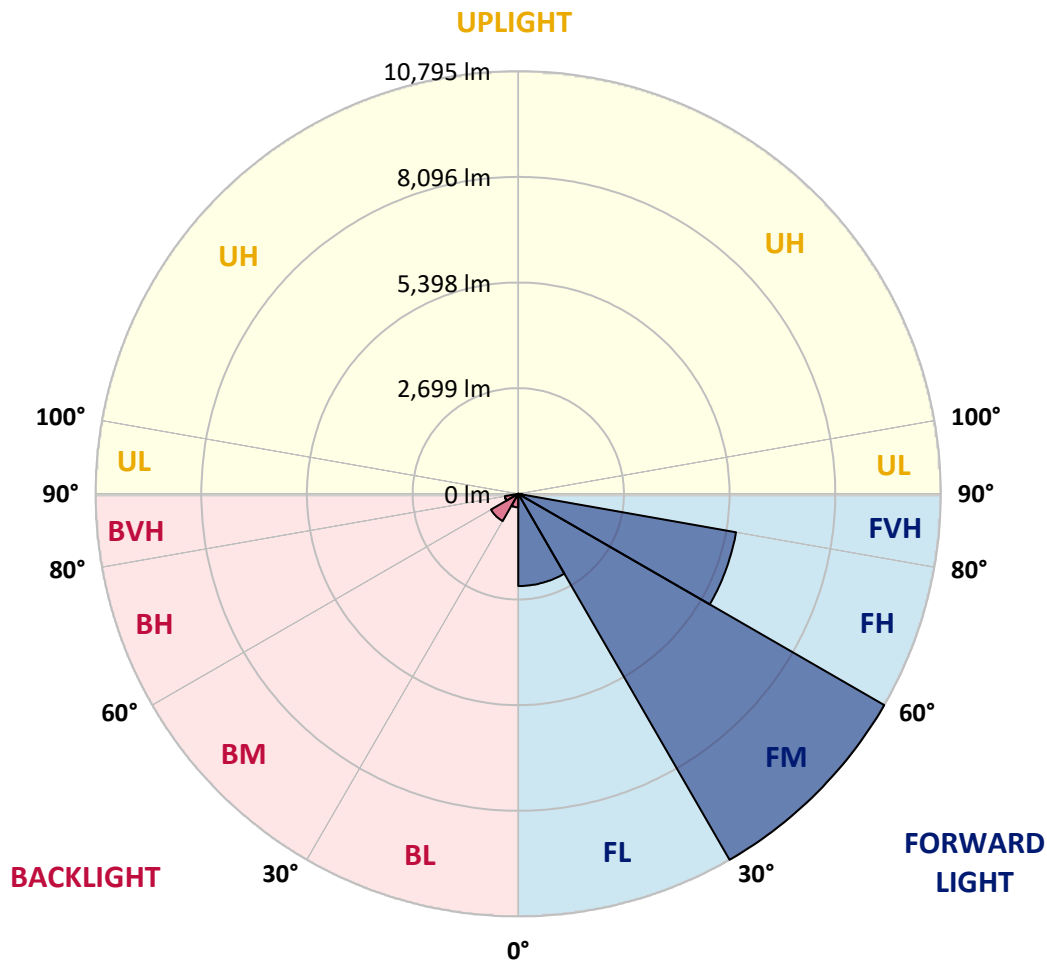


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|---------|-----------|-------------------------|------|---------|
|                |         |           | B                       | U    | G       |
| FL (0°-30°)    | 2355.1  | 11.5      |                         |      |         |
| FM (30°-60°)   | 10795.2 | 52.9      |                         |      |         |
| FH (60°-80°)   | 5648.6  | 27.7      |                         |      | G3/7500 |
| FVH (80°-90°)  | 93.2    | 0.5       |                         |      | G1/100  |
| BL (0°-30°)    | 347.3   | 1.7       | B1/500                  |      |         |
| BM (30°-60°)   | 803.9   | 3.9       | B1/1000                 |      |         |
| BH (60°-80°)   | 347.3   | 1.7       | B1/500                  |      | G1/500  |
| BVH (80°-90°)  | 1.7     | 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-G3**  
 Type II Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 77°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 2351.6  | 2351.6  | 2351.6  | 2351.6  | 2351.6  | 2351.6  | 2351.6  | 2351.6  | 2351.6  | 2351.6  | 2351.6  |
| 2.5°  | 3255.7  | 3275.9  | 3246.8  | 3191.1  | 3107.5  | 3053.1  | 2920.1  | 2794.8  | 2655.5  | 2611.1  | 2471.9  |
| 5°    | 3968.6  | 3986.3  | 3953.4  | 3892.6  | 3781.2  | 3674.8  | 3500.1  | 3238.0  | 2965.7  | 2878.3  | 2631.4  |
| 7.5°  | 4496.7  | 4506.8  | 4494.1  | 4438.5  | 4332.1  | 4211.7  | 4016.8  | 3706.5  | 3302.6  | 3206.3  | 2827.7  |
| 10°   | 4876.5  | 4909.4  | 4905.6  | 4884.1  | 4813.3  | 4715.7  | 4508.1  | 4154.7  | 3679.9  | 3555.8  | 3049.3  |
| 12.5° | 5128.6  | 5165.3  | 5186.8  | 5235.0  | 5231.1  | 5169.1  | 4986.7  | 4613.2  | 4056.0  | 3910.4  | 3298.8  |
| 15°   | 5202.0  | 5241.2  | 5323.5  | 5435.0  | 5533.8  | 5565.4  | 5437.5  | 5062.7  | 4470.1  | 4283.9  | 3554.5  |
| 17.5° | 5160.3  | 5221.0  | 5319.7  | 5495.7  | 5712.3  | 5855.4  | 5841.5  | 5497.1  | 4846.2  | 4633.4  | 3805.3  |
| 20°   | 5252.6  | 5310.9  | 5388.1  | 5536.3  | 5788.3  | 6047.9  | 6151.7  | 5912.4  | 5219.7  | 4996.9  | 4068.6  |
| 22.5° | 5764.3  | 5754.1  | 5761.7  | 5785.8  | 5936.5  | 6193.6  | 6407.6  | 6289.8  | 5589.5  | 5361.6  | 4347.2  |
| 25°   | 6574.7  | 6529.1  | 6451.9  | 6321.4  | 6283.5  | 6407.6  | 6630.4  | 6624.1  | 5979.5  | 5735.1  | 4632.2  |
| 27.5° | 7504.1  | 7496.5  | 7315.5  | 7001.5  | 6824.1  | 6776.1  | 6882.4  | 6949.5  | 6365.8  | 6104.9  | 4918.4  |
| 30°   | 8394.3  | 8414.6  | 8170.3  | 7820.7  | 7495.3  | 7306.6  | 7210.4  | 7258.5  | 6758.3  | 6503.7  | 5213.4  |
| 32.5° | 9169.3  | 9190.9  | 8925.0  | 8515.9  | 8113.3  | 7885.3  | 7682.7  | 7563.7  | 7186.3  | 6909.0  | 5537.6  |
| 35°   | 9824.0  | 9845.5  | 9540.4  | 9088.4  | 8659.0  | 8452.7  | 8223.5  | 7898.0  | 7616.9  | 7358.6  | 5898.5  |
| 37.5° | 10409.1 | 10402.7 | 9993.8  | 9537.8  | 9116.1  | 8952.9  | 8832.5  | 8309.6  | 8060.1  | 7810.6  | 6298.6  |
| 40°   | 10754.8 | 10781.4 | 10431.8 | 9929.2  | 9520.1  | 9401.1  | 9393.5  | 8819.8  | 8571.7  | 8329.8  | 6736.8  |
| 42.5° | 10856.1 | 10902.9 | 10649.6 | 10236.9 | 9865.8  | 9736.7  | 9935.5  | 9372.0  | 9166.8  | 8931.3  | 7231.9  |
| 45°   | 10673.7 | 10719.3 | 10604.1 | 10318.0 | 10101.4 | 10017.8 | 10401.5 | 9944.3  | 9802.5  | 9569.5  | 7790.3  |
| 47.5° | 10141.9 | 10198.9 | 10226.7 | 10165.9 | 10163.4 | 10248.3 | 10819.4 | 10547.1 | 10557.2 | 10319.2 | 8437.4  |
| 50°   | 9112.4  | 9208.6  | 9464.4  | 9679.7  | 10012.7 | 10430.6 | 11225.9 | 11200.5 | 11408.2 | 11203.0 | 9280.8  |
| 52.5° | 7240.8  | 7377.5  | 8258.8  | 8847.7  | 9596.2  | 10396.4 | 11672.9 | 12249.1 | 12901.2 | 12601.0 | 10469.9 |
| 55°   | 5818.7  | 5818.7  | 6535.4  | 7637.2  | 8783.1  | 10171.0 | 11867.9 | 12930.3 | 13918.1 | 13847.1 | 11306.9 |
| 57.5° | 4743.6  | 4800.6  | 5257.7  | 6231.5  | 7606.7  | 9634.1  | 11988.2 | 13358.3 | 14737.3 | 14685.4 | 12124.9 |
| 60°   | 2927.7  | 3050.5  | 3914.2  | 4875.3  | 6268.3  | 8678.1  | 11912.2 | 13791.4 | 15731.4 | 15773.2 | 13110.2 |
| 62.5° | 1648.7  | 1694.3  | 2079.3  | 3507.7  | 4874.1  | 7392.7  | 11331.0 | 14033.3 | 17002.8 | 17180.0 | 14125.7 |
| 65°   | 1138.4  | 1161.2  | 1309.3  | 2183.1  | 3378.5  | 5885.9  | 10195.1 | 13882.6 | 18276.7 | 18635.0 | 14986.8 |
| 67.5° | 826.9   | 838.3   | 930.7   | 1333.4  | 2004.6  | 4267.5  | 8414.6  | 13122.8 | 18951.6 | 19550.5 | 15151.4 |
| 70°   | 635.7   | 643.3   | 710.4   | 876.3   | 1184.0  | 2633.9  | 6111.3  | 11612.1 | 18462.8 | 19178.3 | 14308.1 |
| 72.5° | 516.7   | 524.3   | 576.2   | 648.3   | 785.2   | 1557.6  | 3703.9  | 9430.2  | 16305.0 | 17077.5 | 12180.7 |
| 75°   | 435.6   | 445.8   | 492.6   | 539.5   | 615.4   | 1000.4  | 1737.4  | 6567.1  | 12261.7 | 12768.2 | 8470.4  |
| 77.5° | 241.9   | 222.8   | 400.2   | 447.0   | 519.2   | 633.1   | 812.9   | 3864.8  | 6867.2  | 7007.7  | 3758.4  |
| 80°   | 150.7   | 155.8   | 317.9   | 359.7   | 398.9   | 319.1   | 372.3   | 1487.9  | 2380.7  | 2261.7  | 728.2   |
| 82.5° | 8.8     | 20.3    | 244.4   | 259.6   | 273.6   | 136.7   | 140.5   | 505.2   | 573.6   | 526.7   | 129.1   |
| 85°   | 0.0     | 0.0     | 111.4   | 89.9    | 95.0    | 39.3    | 40.5    | 117.8   | 77.3    | 83.5    | 25.3    |
| 87.5° | 0.0     | 0.0     | 0.0     | 2.6     | 0.0     | 3.8     | 7.6     | 10.1    | 3.8     | 5.0     | 8.8     |
| 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°    | 2351.6 | 2351.6 | 2351.6 | 2351.6 | 2351.6 | 2351.6 | 2351.6 | 2351.6 | 2351.6 | 2351.6 | 2351.6 |
| 2.5°  | 2383.2 | 2294.6 | 2114.8 | 1938.7 | 1795.6 | 1662.7 | 1567.7 | 1477.7 | 1432.2 | 1429.7 | 1427.1 |
| 5°    | 2455.4 | 2269.2 | 1909.6 | 1591.7 | 1336.0 | 1130.8 | 997.8  | 902.9  | 854.7  | 838.3  | 835.8  |
| 7.5°  | 2556.7 | 2276.8 | 1729.8 | 1287.8 | 986.5  | 810.5  | 734.4  | 704.1  | 693.9  | 682.5  | 680.0  |
| 10°   | 2684.6 | 2294.6 | 1569.0 | 1037.1 | 777.6  | 688.9  | 658.5  | 645.9  | 638.3  | 630.6  | 628.1  |
| 12.5° | 2827.7 | 2311.1 | 1409.4 | 861.1  | 683.8  | 638.3  | 616.7  | 601.5  | 591.3  | 582.5  | 579.9  |
| 15°   | 2967.0 | 2321.1 | 1243.5 | 738.3  | 635.7  | 599.0  | 576.2  | 559.8  | 545.8  | 535.7  | 534.3  |
| 17.5° | 3105.0 | 2335.1 | 1087.7 | 664.8  | 596.4  | 559.8  | 536.9  | 516.7  | 505.2  | 493.8  | 492.6  |
| 20°   | 3258.3 | 2332.6 | 940.8  | 612.8  | 557.2  | 520.5  | 496.4  | 477.4  | 466.0  | 453.4  | 452.0  |
| 22.5° | 3400.0 | 2319.9 | 811.7  | 568.6  | 516.7  | 481.2  | 454.6  | 435.6  | 424.2  | 414.1  | 412.8  |
| 25°   | 3563.4 | 2309.7 | 704.1  | 528.1  | 478.7  | 443.2  | 414.1  | 396.4  | 383.7  | 374.8  | 373.6  |
| 27.5° | 3720.4 | 2294.6 | 625.6  | 491.3  | 442.0  | 407.7  | 379.9  | 359.7  | 348.2  | 341.9  | 341.9  |
| 30°   | 3874.9 | 2290.8 | 596.4  | 455.9  | 409.0  | 374.8  | 347.0  | 328.0  | 319.1  | 316.6  | 315.3  |
| 32.5° | 4061.0 | 2300.9 | 609.1  | 443.2  | 378.6  | 344.4  | 317.9  | 303.9  | 295.1  | 295.1  | 295.1  |
| 35°   | 4259.9 | 2298.4 | 628.1  | 454.6  | 358.3  | 314.1  | 293.8  | 285.0  | 276.0  | 276.0  | 276.0  |
| 37.5° | 4509.4 | 2302.1 | 643.3  | 473.6  | 350.8  | 288.7  | 277.4  | 265.9  | 260.9  | 260.9  | 260.9  |
| 40°   | 4881.7 | 2427.5 | 635.7  | 490.1  | 348.2  | 271.0  | 248.2  | 244.4  | 240.6  | 240.6  | 240.6  |
| 42.5° | 5337.5 | 2699.7 | 645.9  | 491.3  | 347.0  | 258.3  | 228.0  | 235.5  | 226.6  | 225.4  | 224.2  |
| 45°   | 5836.5 | 2997.4 | 710.4  | 464.7  | 345.7  | 251.9  | 217.8  | 226.6  | 212.8  | 212.8  | 212.8  |
| 47.5° | 6331.5 | 3292.4 | 776.2  | 426.7  | 341.9  | 250.7  | 208.9  | 203.9  | 200.1  | 201.3  | 201.3  |
| 50°   | 7014.1 | 3533.0 | 801.6  | 374.8  | 333.0  | 248.2  | 192.5  | 193.7  | 191.2  | 193.7  | 193.7  |
| 52.5° | 7757.4 | 3583.7 | 771.2  | 316.6  | 307.7  | 240.6  | 181.1  | 186.1  | 184.9  | 187.4  | 187.4  |
| 55°   | 8220.9 | 3529.2 | 636.9  | 263.4  | 268.4  | 210.2  | 169.6  | 179.8  | 179.8  | 179.8  | 179.8  |
| 57.5° | 8699.6 | 3297.4 | 452.0  | 214.0  | 222.8  | 172.2  | 159.6  | 173.5  | 172.2  | 171.0  | 171.0  |
| 60°   | 9044.0 | 2922.7 | 297.6  | 176.0  | 177.3  | 141.9  | 148.1  | 163.4  | 162.1  | 155.8  | 155.8  |
| 62.5° | 9301.1 | 2508.6 | 191.2  | 149.4  | 135.5  | 127.9  | 135.5  | 148.1  | 143.1  | 129.1  | 126.6  |
| 65°   | 9271.9 | 1934.9 | 146.9  | 127.9  | 111.4  | 111.4  | 117.8  | 129.1  | 114.0  | 91.2   | 88.7   |
| 67.5° | 8731.3 | 1309.3 | 121.6  | 107.6  | 93.7   | 92.5   | 97.5   | 107.6  | 97.5   | 77.3   | 74.7   |
| 70°   | 7765.0 | 856.0  | 97.5   | 83.5   | 74.7   | 68.4   | 78.5   | 92.5   | 82.3   | 62.0   | 59.6   |
| 72.5° | 6302.4 | 521.7  | 73.5   | 60.8   | 54.4   | 44.3   | 62.0   | 76.0   | 65.8   | 45.6   | 43.0   |
| 75°   | 4077.6 | 265.9  | 50.6   | 39.3   | 29.1   | 26.5   | 45.6   | 57.0   | 45.6   | 27.9   | 24.1   |
| 77.5° | 1560.0 | 111.4  | 27.9   | 17.7   | 15.2   | 12.7   | 25.3   | 34.2   | 19.0   | 6.4    | 5.0    |
| 80°   | 300.1  | 46.8   | 13.9   | 8.8    | 7.6    | 5.0    | 3.8    | 2.6    | 0.0    | 0.0    | 0.0    |
| 82.5° | 52.0   | 15.2   | 5.0    | 2.6    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 17.7   | 2.6    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 6.4    | 0.0    | 0.0    | 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)