

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: P965529

Luminaire Tested: **NAV-SB4A-722-U-T2R-HSS**

Issue Date: 1/21/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P965529  
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-SB4A-722-U-T2R-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 70 CRI, 2200K, 350mA 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: 12888.4 lumens  
Efficiency: N/A  
Efficacy: 113.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B1 - U0 - G2

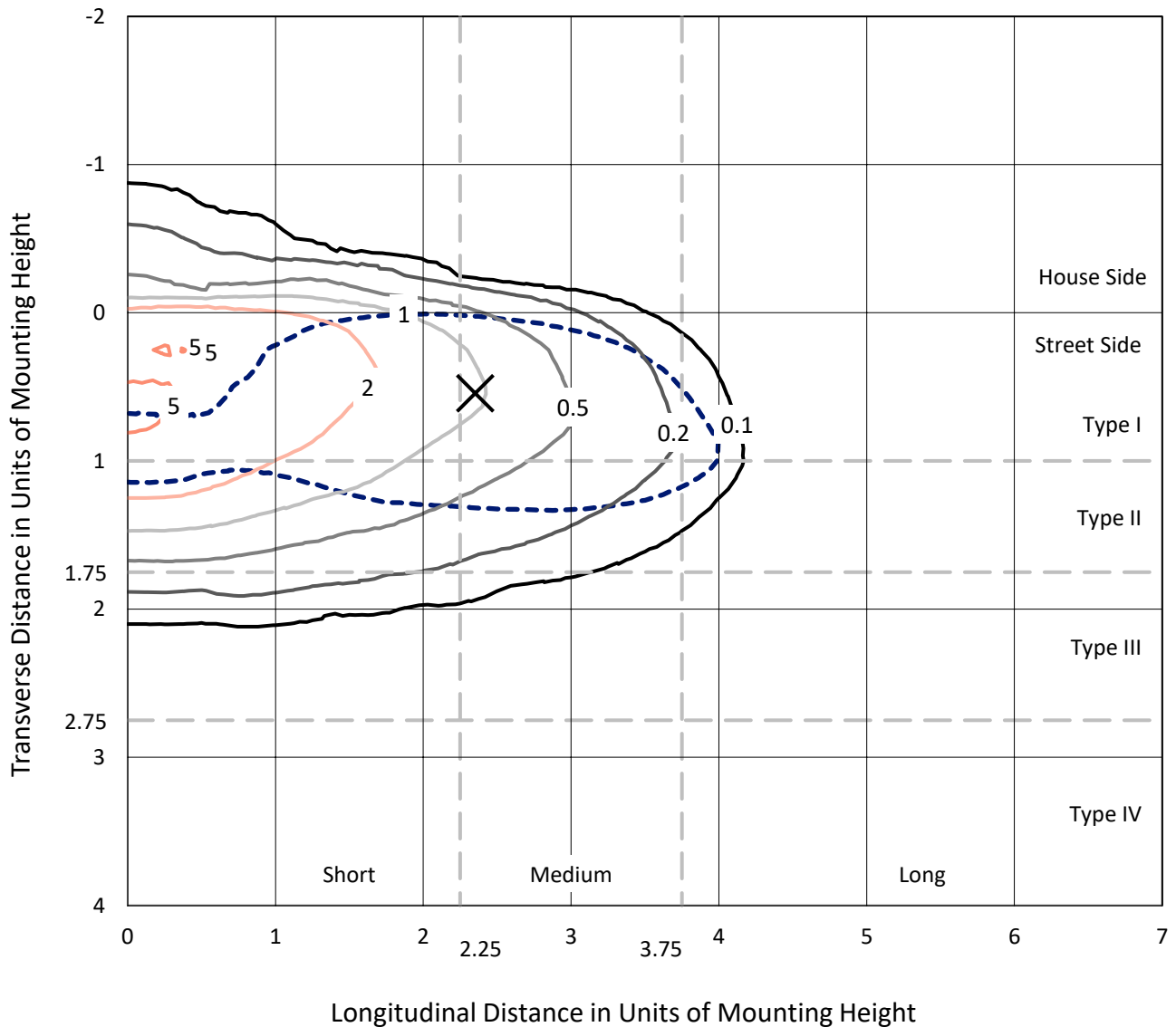
Input Watts (W): 114  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

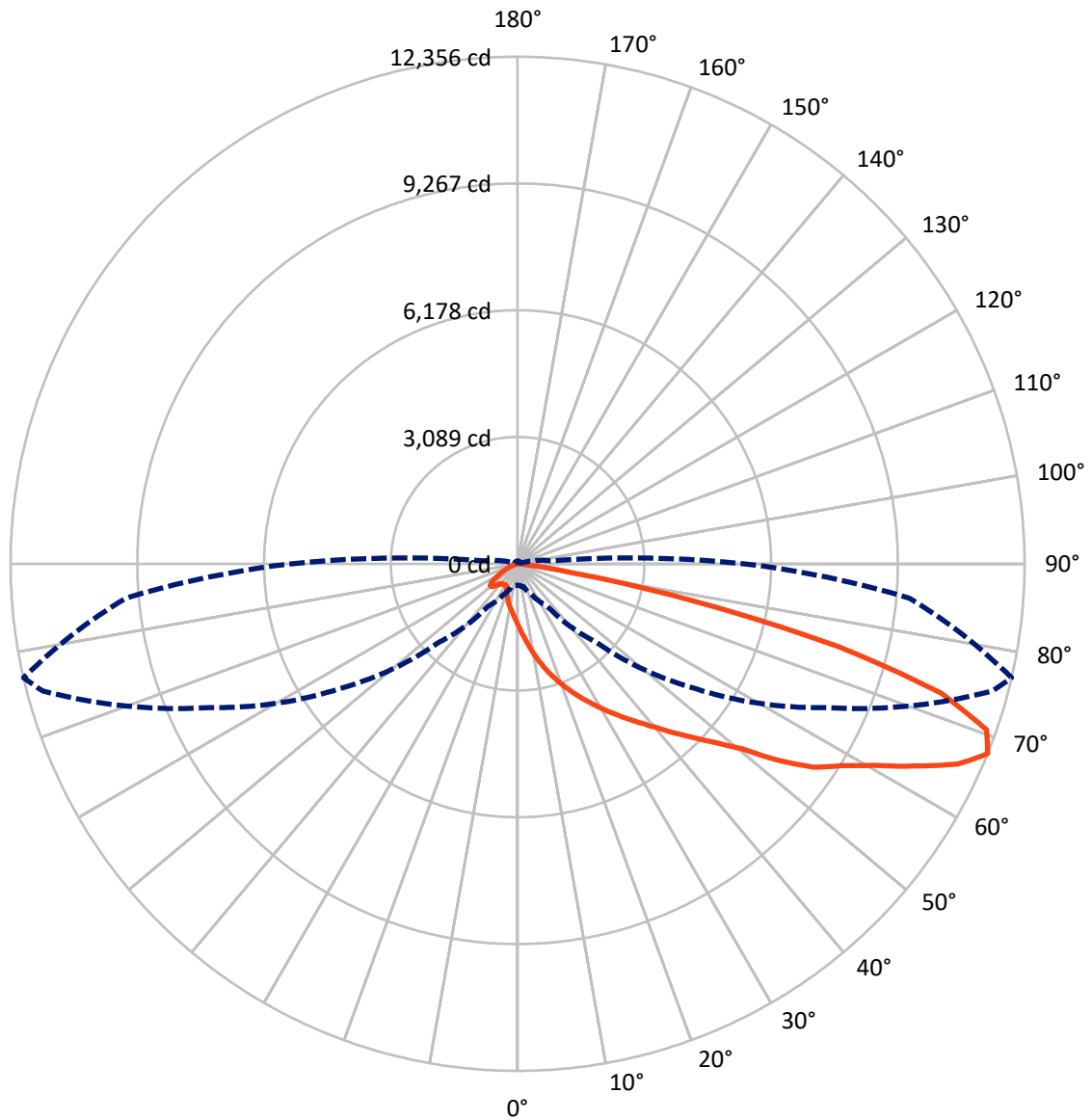
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.6 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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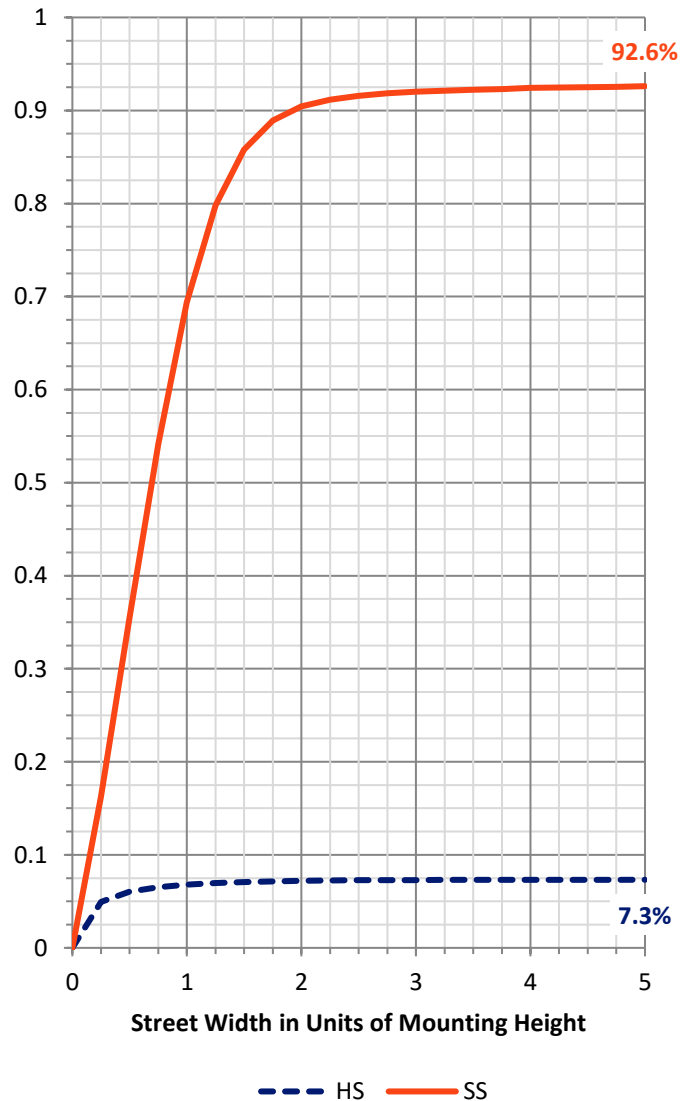
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 948.2    | 0.0    | 948.2   |
|                    | % Fixture | 7.4      | 0.0    | 7.4     |
| <b>Street Side</b> | Lumens    | 11940.2  | 0.0    | 11940.2 |
|                    | % Fixture | 92.6     | 0.0    | 92.6    |
| <b>Total</b>       | Lumens    | 12888.4  | 0.0    | 12888.4 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 151.7   | 1.2       |
| 10°-20°   | 531.2   | 4.1       |
| 20°-30°   | 1025.1  | 8.0       |
| 30°-40°   | 1779.6  | 13.8      |
| 40°-50°   | 2583.9  | 20.0      |
| 50°-60°   | 2967.3  | 23.0      |
| 60°-70°   | 2576.2  | 20.0      |
| 70°-80°   | 1213.4  | 9.4       |
| 80°-90°   | 60.0    | 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°    | 12888.4 | 100.0     |
| 0°-180°   | 12888.4 | 100.0     |

**Coefficient of Utilization**

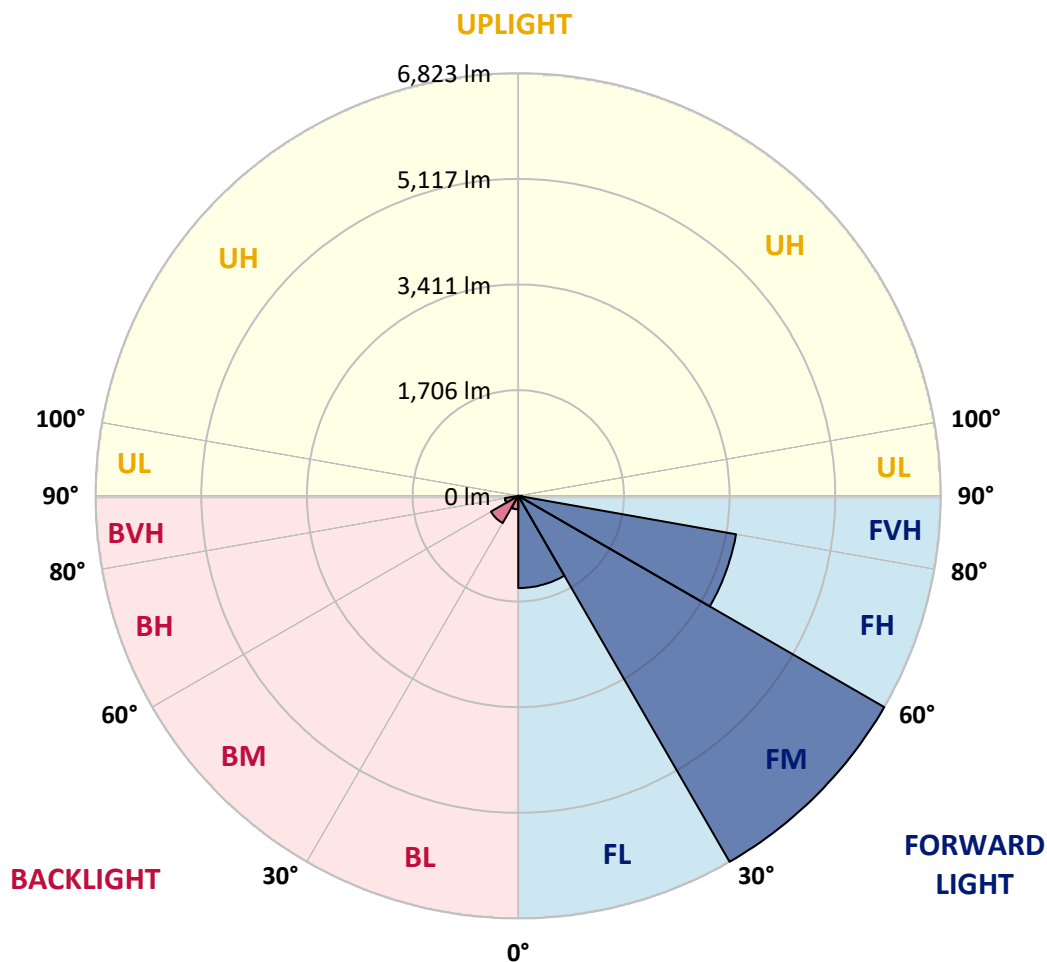


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 1488.5 | 11.5      |                         |      |         |
| FM (30°-60°)   | 6822.8 | 52.9      |                         |      |         |
| FH (60°-80°)   | 3570.0 | 27.7      |                         |      | G2/5000 |
| FVH (80°-90°)  | 58.9   | 0.5       |                         |      | G1/100  |
| BL (0°-30°)    | 219.5  | 1.7       | B1/500                  |      |         |
| BM (30°-60°)   | 508.1  | 3.9       | B1/1000                 |      |         |
| BH (60°-80°)   | 219.5  | 1.7       | B1/500                  |      | G1/500  |
| BVH (80°-90°)  | 1.1    | 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 II Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°     | 77°     | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|--------|
| 0°    | 1486.2 | 1486.2 | 1486.2 | 1486.2 | 1486.2 | 1486.2 | 1486.2 | 1486.2 | 1486.2  | 1486.2  | 1486.2 |
| 2.5°  | 2057.7 | 2070.5 | 2052.0 | 2016.8 | 1964.0 | 1929.6 | 1845.6 | 1766.4 | 1678.3  | 1650.2  | 1562.2 |
| 5°    | 2508.3 | 2519.4 | 2498.6 | 2460.2 | 2389.8 | 2322.5 | 2212.2 | 2046.4 | 1874.4  | 1819.2  | 1663.1 |
| 7.5°  | 2842.0 | 2848.4 | 2840.4 | 2805.1 | 2738.0 | 2661.9 | 2538.6 | 2342.5 | 2087.3  | 2026.4  | 1787.2 |
| 10°   | 3082.1 | 3102.9 | 3100.5 | 3086.9 | 3042.1 | 2980.4 | 2849.2 | 2625.8 | 2325.7  | 2247.3  | 1927.2 |
| 12.5° | 3241.4 | 3264.5 | 3278.2 | 3308.6 | 3306.1 | 3267.0 | 3151.7 | 2915.6 | 2563.4  | 2471.4  | 2084.8 |
| 15°   | 3287.8 | 3312.6 | 3364.6 | 3435.0 | 3497.4 | 3517.5 | 3436.6 | 3199.7 | 2825.2  | 2707.5  | 2246.5 |
| 17.5° | 3261.3 | 3299.8 | 3362.2 | 3473.4 | 3610.3 | 3700.8 | 3691.9 | 3474.2 | 3062.9  | 2928.4  | 2405.0 |
| 20°   | 3319.8 | 3356.6 | 3405.5 | 3499.0 | 3658.3 | 3822.4 | 3888.0 | 3736.7 | 3299.0  | 3158.1  | 2571.4 |
| 22.5° | 3643.2 | 3636.7 | 3641.5 | 3656.7 | 3751.9 | 3914.4 | 4049.7 | 3975.3 | 3532.7  | 3388.6  | 2747.5 |
| 25°   | 4155.3 | 4126.5 | 4077.7 | 3995.2 | 3971.3 | 4049.7 | 4190.5 | 4186.5 | 3779.2  | 3624.7  | 2927.6 |
| 27.5° | 4742.8 | 4738.0 | 4623.5 | 4425.0 | 4313.0 | 4282.6 | 4349.8 | 4392.2 | 4023.2  | 3858.4  | 3108.5 |
| 30°   | 5305.4 | 5318.2 | 5163.7 | 4942.9 | 4737.1 | 4617.9 | 4557.0 | 4587.5 | 4271.4  | 4110.5  | 3295.0 |
| 32.5° | 5795.2 | 5808.8 | 5640.8 | 5382.3 | 5127.8 | 4983.7 | 4855.6 | 4780.4 | 4541.9  | 4366.6  | 3499.9 |
| 35°   | 6208.9 | 6222.6 | 6029.7 | 5744.0 | 5472.7 | 5342.2 | 5197.4 | 4991.6 | 4814.0  | 4650.7  | 3727.9 |
| 37.5° | 6578.8 | 6574.8 | 6316.3 | 6028.1 | 5761.6 | 5658.3 | 5582.4 | 5251.8 | 5094.1  | 4936.4  | 3980.9 |
| 40°   | 6797.2 | 6814.0 | 6593.1 | 6275.4 | 6016.9 | 5941.6 | 5936.9 | 5574.4 | 5417.4  | 5264.6  | 4257.7 |
| 42.5° | 6861.2 | 6890.9 | 6730.8 | 6469.9 | 6235.4 | 6153.8 | 6279.4 | 5923.3 | 5793.6  | 5644.8  | 4570.7 |
| 45°   | 6746.0 | 6774.8 | 6702.0 | 6521.2 | 6384.2 | 6331.4 | 6573.9 | 6285.0 | 6195.4  | 6048.1  | 4923.7 |
| 47.5° | 6409.8 | 6445.9 | 6463.4 | 6425.1 | 6423.5 | 6477.1 | 6838.1 | 6666.0 | 6672.3  | 6521.9  | 5332.6 |
| 50°   | 5759.2 | 5820.1 | 5981.7 | 6117.7 | 6328.2 | 6592.3 | 7094.9 | 7079.0 | 7210.2  | 7080.5  | 5865.7 |
| 52.5° | 4576.3 | 4662.7 | 5219.8 | 5591.9 | 6064.9 | 6570.8 | 7377.4 | 7741.6 | 8153.8  | 7964.1  | 6617.1 |
| 55°   | 3677.5 | 3677.5 | 4130.5 | 4826.8 | 5551.1 | 6428.3 | 7500.7 | 8172.2 | 8796.4  | 8751.7  | 7146.2 |
| 57.5° | 2998.0 | 3034.1 | 3322.9 | 3938.5 | 4807.6 | 6088.9 | 7576.7 | 8442.7 | 9314.3  | 9281.5  | 7663.2 |
| 60°   | 1850.3 | 1928.0 | 2473.8 | 3081.3 | 3961.6 | 5484.7 | 7528.7 | 8716.4 | 9942.5  | 9968.9  | 8285.8 |
| 62.5° | 1042.0 | 1070.8 | 1314.2 | 2216.9 | 3080.4 | 4672.4 | 7161.4 | 8869.3 | 10746.1 | 10858.1 | 8927.8 |
| 65°   | 719.4  | 733.9  | 827.6  | 1379.8 | 2135.3 | 3719.9 | 6443.5 | 8774.0 | 11551.2 | 11777.7 | 9471.9 |
| 67.5° | 522.6  | 529.8  | 588.2  | 842.8  | 1266.9 | 2697.1 | 5318.2 | 8293.8 | 11977.7 | 12356.3 | 9576.0 |
| 70°   | 401.8  | 406.6  | 449.0  | 553.8  | 748.4  | 1664.7 | 3862.4 | 7339.0 | 11668.8 | 12121.0 | 9043.0 |
| 72.5° | 326.6  | 331.4  | 364.2  | 409.8  | 496.2  | 984.4  | 2341.0 | 5960.1 | 10305.0 | 10793.2 | 7698.4 |
| 75°   | 275.3  | 281.7  | 311.3  | 340.9  | 389.0  | 632.2  | 1098.1 | 4150.5 | 7749.6  | 8069.7  | 5353.4 |
| 77.5° | 152.8  | 140.8  | 252.9  | 282.5  | 328.1  | 400.2  | 513.8  | 2442.6 | 4340.2  | 4429.0  | 2375.3 |
| 80°   | 95.2   | 98.4   | 200.9  | 227.3  | 252.2  | 201.7  | 235.3  | 940.4  | 1504.6  | 1429.4  | 460.2  |
| 82.5° | 5.6    | 12.8   | 154.5  | 164.1  | 172.9  | 86.4   | 88.9   | 319.3  | 362.5   | 332.9   | 81.6   |
| 85°   | 0.0    | 0.0    | 70.4   | 56.8   | 60.1   | 24.8   | 25.6   | 74.4   | 48.8    | 52.8    | 16.0   |
| 87.5° | 0.0    | 0.0    | 0.0    | 1.6    | 0.0    | 2.4    | 4.8    | 6.4    | 2.4     | 3.2     | 5.6    |
| 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°    | 1486.2 | 1486.2 | 1486.2 | 1486.2 | 1486.2 | 1486.2 | 1486.2 | 1486.2 | 1486.2 | 1486.2 | 1486.2 |
| 2.5°  | 1506.2 | 1450.2 | 1336.6 | 1225.3 | 1134.9 | 1050.8 | 990.8  | 934.0  | 905.2  | 903.5  | 902.0  |
| 5°    | 1551.8 | 1434.2 | 1206.9 | 1006.0 | 844.4  | 714.7  | 630.7  | 570.6  | 540.2  | 529.8  | 528.2  |
| 7.5°  | 1615.9 | 1439.0 | 1093.3 | 814.0  | 623.5  | 512.2  | 464.2  | 445.0  | 438.6  | 431.4  | 429.8  |
| 10°   | 1696.7 | 1450.2 | 991.6  | 655.5  | 491.4  | 435.4  | 416.2  | 408.2  | 403.3  | 398.5  | 397.0  |
| 12.5° | 1787.2 | 1460.6 | 890.7  | 544.3  | 432.1  | 403.3  | 389.8  | 380.2  | 373.7  | 368.2  | 366.5  |
| 15°   | 1875.1 | 1467.0 | 786.0  | 466.6  | 401.8  | 378.5  | 364.2  | 353.7  | 344.9  | 338.6  | 337.7  |
| 17.5° | 1962.4 | 1475.8 | 687.5  | 420.1  | 377.0  | 353.7  | 339.4  | 326.6  | 319.3  | 312.1  | 311.3  |
| 20°   | 2059.2 | 1474.3 | 594.6  | 387.3  | 352.2  | 328.9  | 313.8  | 301.8  | 294.5  | 286.5  | 285.7  |
| 22.5° | 2148.9 | 1466.2 | 513.0  | 359.4  | 326.6  | 304.1  | 287.3  | 275.3  | 268.1  | 261.7  | 260.9  |
| 25°   | 2252.1 | 1459.8 | 445.0  | 333.7  | 302.5  | 280.1  | 261.7  | 250.5  | 242.5  | 236.9  | 236.1  |
| 27.5° | 2351.4 | 1450.2 | 395.3  | 310.6  | 279.3  | 257.7  | 240.1  | 227.3  | 220.1  | 216.1  | 216.1  |
| 30°   | 2449.0 | 1447.8 | 377.0  | 288.1  | 258.5  | 236.9  | 219.2  | 207.3  | 201.7  | 200.1  | 199.3  |
| 32.5° | 2566.7 | 1454.2 | 385.0  | 280.1  | 239.3  | 217.7  | 200.9  | 192.1  | 186.4  | 186.4  | 186.4  |
| 35°   | 2692.4 | 1452.6 | 397.0  | 287.3  | 226.5  | 198.4  | 185.6  | 180.1  | 174.5  | 174.5  | 174.5  |
| 37.5° | 2850.0 | 1455.0 | 406.6  | 299.3  | 221.7  | 182.4  | 175.3  | 168.1  | 164.8  | 164.8  | 164.8  |
| 40°   | 3085.2 | 1534.2 | 401.8  | 309.8  | 220.1  | 171.3  | 156.8  | 154.5  | 152.1  | 152.1  | 152.1  |
| 42.5° | 3373.4 | 1706.3 | 408.2  | 310.6  | 219.2  | 163.3  | 144.0  | 148.8  | 143.3  | 142.5  | 141.7  |
| 45°   | 3688.8 | 1894.4 | 449.0  | 293.8  | 218.5  | 159.3  | 137.7  | 143.3  | 134.5  | 134.5  | 134.5  |
| 47.5° | 4001.7 | 2080.9 | 490.6  | 269.7  | 216.1  | 158.5  | 132.0  | 128.8  | 126.5  | 127.2  | 127.2  |
| 50°   | 4433.0 | 2233.0 | 506.7  | 236.9  | 210.5  | 156.8  | 121.7  | 122.5  | 120.8  | 122.5  | 122.5  |
| 52.5° | 4902.9 | 2264.9 | 487.4  | 200.1  | 194.4  | 152.1  | 114.5  | 117.7  | 116.8  | 118.5  | 118.5  |
| 55°   | 5195.7 | 2230.5 | 402.5  | 166.5  | 169.6  | 132.8  | 107.2  | 113.7  | 113.7  | 113.7  | 113.7  |
| 57.5° | 5498.3 | 2084.0 | 285.7  | 135.3  | 140.8  | 108.9  | 100.9  | 109.7  | 108.9  | 108.0  | 108.0  |
| 60°   | 5716.0 | 1847.2 | 188.1  | 111.2  | 112.0  | 89.7   | 93.7   | 103.2  | 102.4  | 98.4   | 98.4   |
| 62.5° | 5878.5 | 1585.5 | 120.8  | 94.4   | 85.6   | 80.9   | 85.6   | 93.7   | 90.4   | 81.6   | 80.1   |
| 65°   | 5860.0 | 1222.9 | 92.9   | 80.9   | 70.4   | 70.4   | 74.4   | 81.6   | 72.1   | 57.6   | 56.1   |
| 67.5° | 5518.3 | 827.6  | 76.9   | 68.1   | 59.2   | 58.4   | 61.6   | 68.1   | 61.6   | 48.8   | 47.3   |
| 70°   | 4907.6 | 541.0  | 61.6   | 52.8   | 47.3   | 43.3   | 49.6   | 58.4   | 52.1   | 39.3   | 37.6   |
| 72.5° | 3983.3 | 329.7  | 46.4   | 38.4   | 34.4   | 28.0   | 39.3   | 48.0   | 41.6   | 28.8   | 27.2   |
| 75°   | 2577.1 | 168.1  | 32.0   | 24.8   | 18.4   | 16.8   | 28.8   | 36.0   | 28.8   | 17.6   | 15.2   |
| 77.5° | 986.0  | 70.4   | 17.6   | 11.2   | 9.6    | 8.0    | 16.0   | 21.6   | 12.0   | 4.0    | 3.2    |
| 80°   | 189.7  | 29.6   | 8.8    | 5.6    | 4.8    | 3.2    | 2.4    | 1.6    | 0.0    | 0.0    | 0.0    |
| 82.5° | 32.8   | 9.6    | 3.2    | 1.6    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 11.2   | 1.6    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 4.0    | 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)