

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: P966589

Luminaire Tested: **NAV-SB4C-722-U-T3R-HSS**

Issue Date: 1/21/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P966589  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB4C-722-U-T3R-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 70 CRI, 2200K, 615mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III  
ROADWAY OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: -

**Summary**

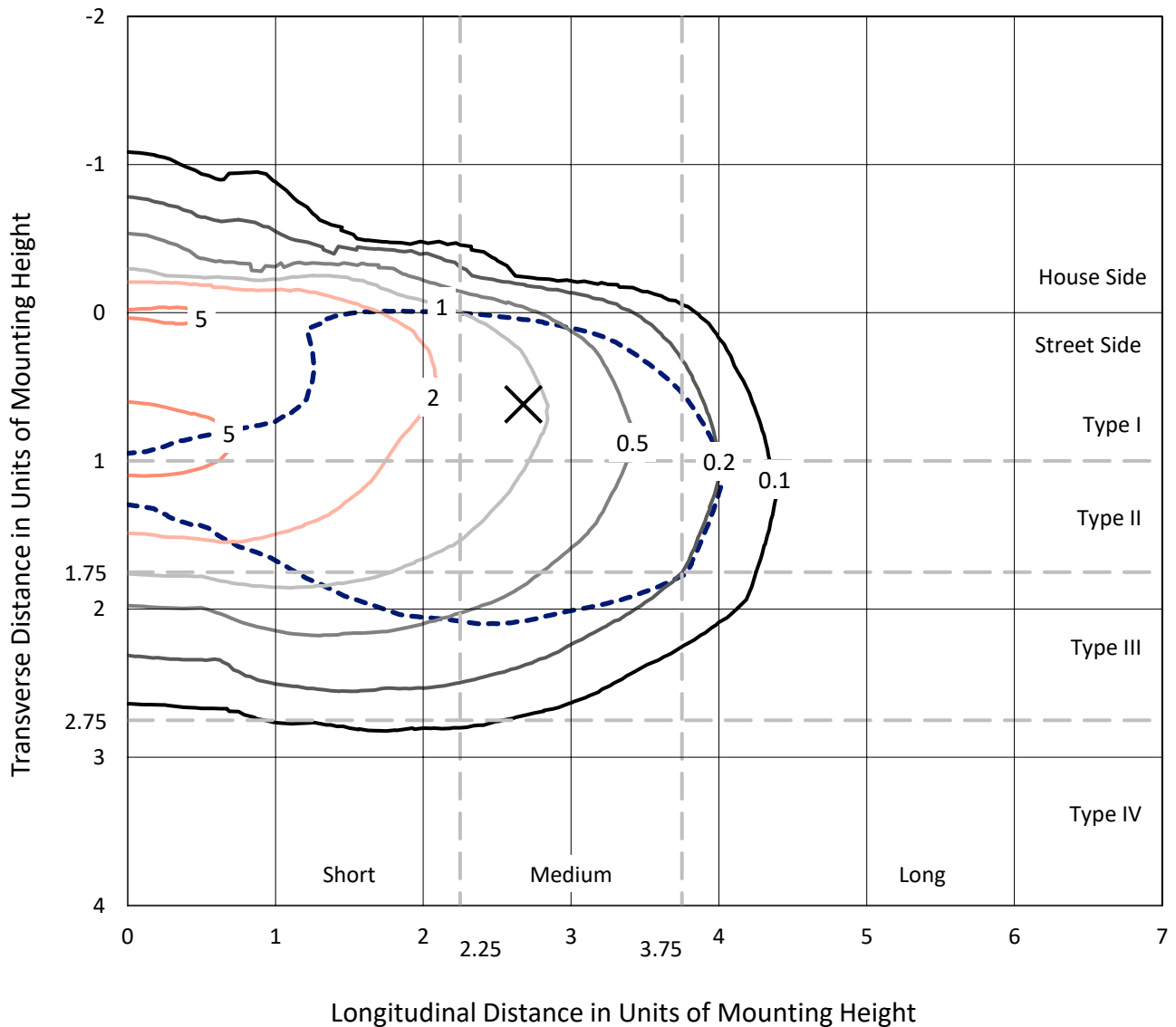
Lumens per Lamp: N/A  
Luminaire Lumens: 21159.1 lumens  
Efficiency: N/A  
Efficacy: 105.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B2 - U0 - G4  
  
Input Watts (W): 200.7  
Input Voltage (V): NR  
Input Current (Ain): 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

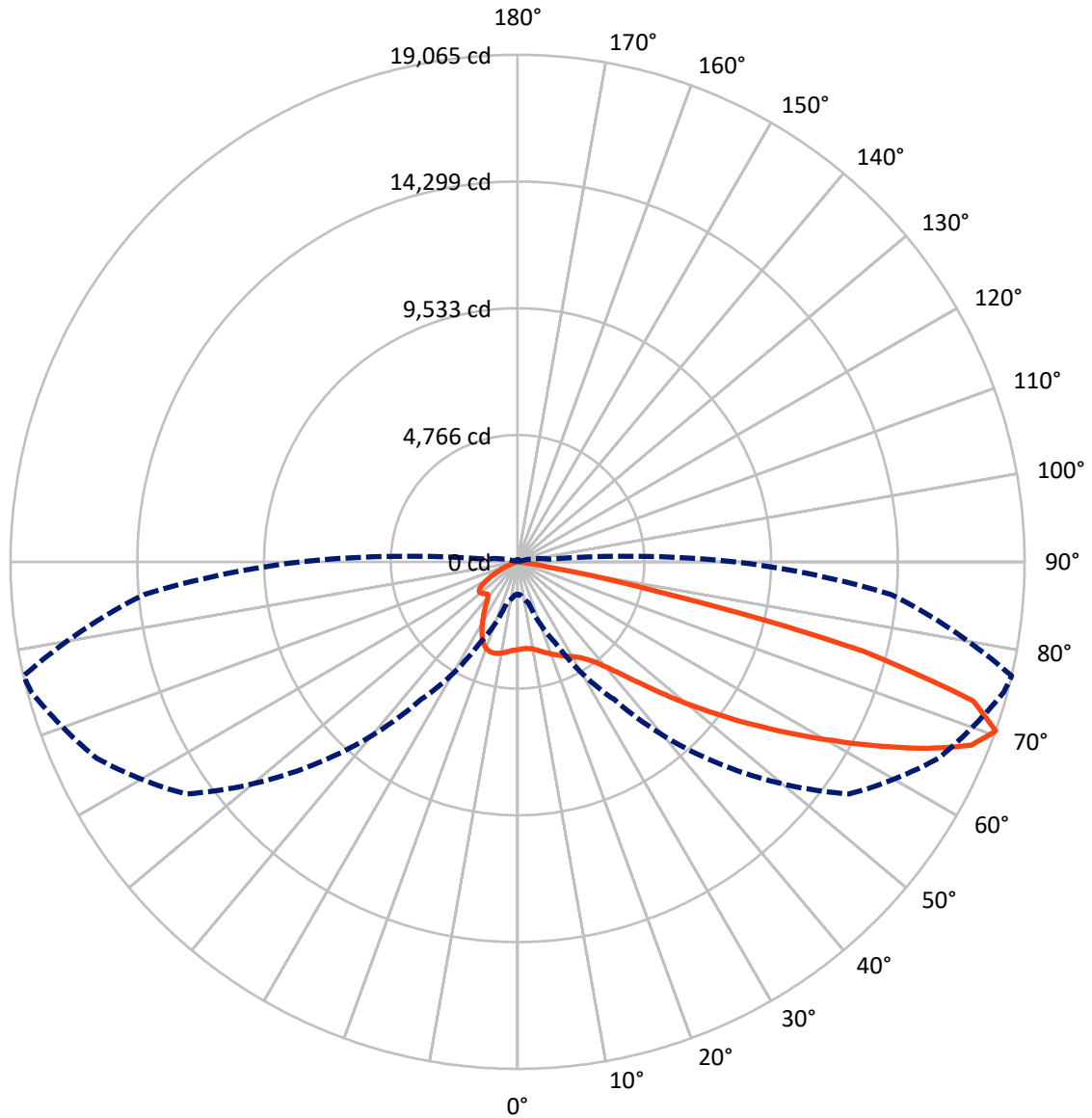
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.2 fc  
 Type III - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 77-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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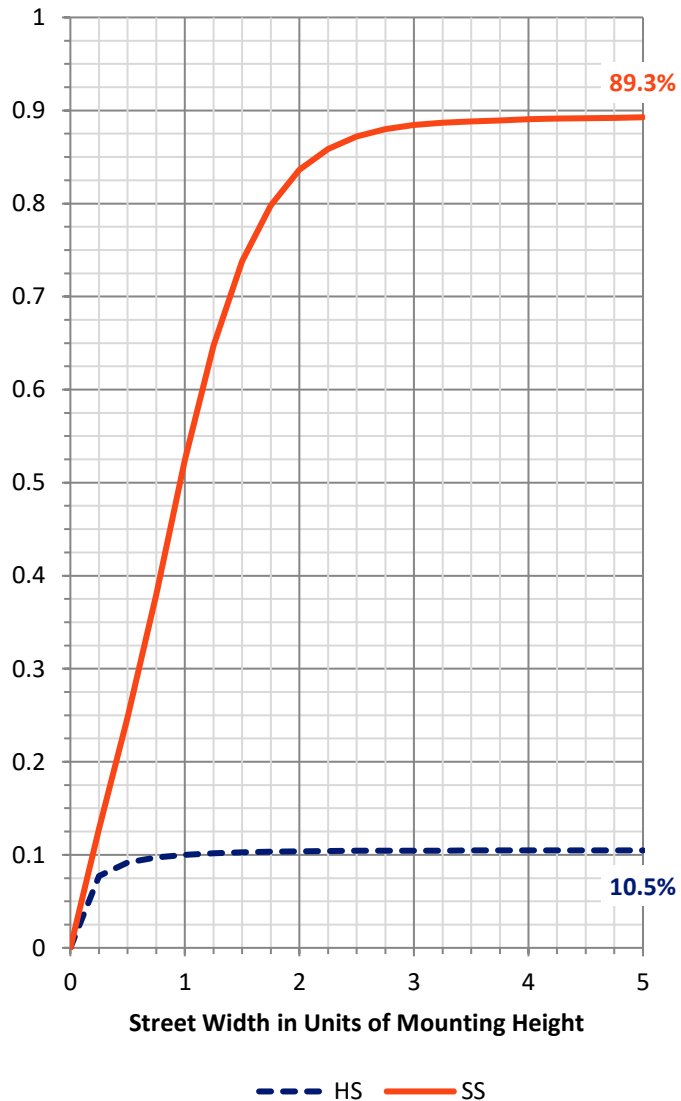
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 2230.5   | 0.0    | 2230.5  |
|                    | % Fixture | 10.5     | 0.0    | 10.5    |
| <b>Street Side</b> | Lumens    | 18928.6  | 0.0    | 18928.6 |
|                    | % Fixture | 89.5     | 0.0    | 89.5    |
| <b>Total</b>       | Lumens    | 21159.1  | 0.0    | 21159.1 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 284.4   | 1.3       |
| 10°-20°   | 675.2   | 3.2       |
| 20°-30°   | 1044.4  | 4.9       |
| 30°-40°   | 1895.1  | 9.0       |
| 40°-50°   | 3577.3  | 16.9      |
| 50°-60°   | 5168.9  | 24.4      |
| 60°-70°   | 5502.2  | 26.0      |
| 70°-80°   | 2915.8  | 13.8      |
| 80°-90°   | 95.7    | 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°    | 21159.1 | 100.0     |
| 0°-180°   | 21159.1 | 100.0     |

**Coefficient of Utilization**

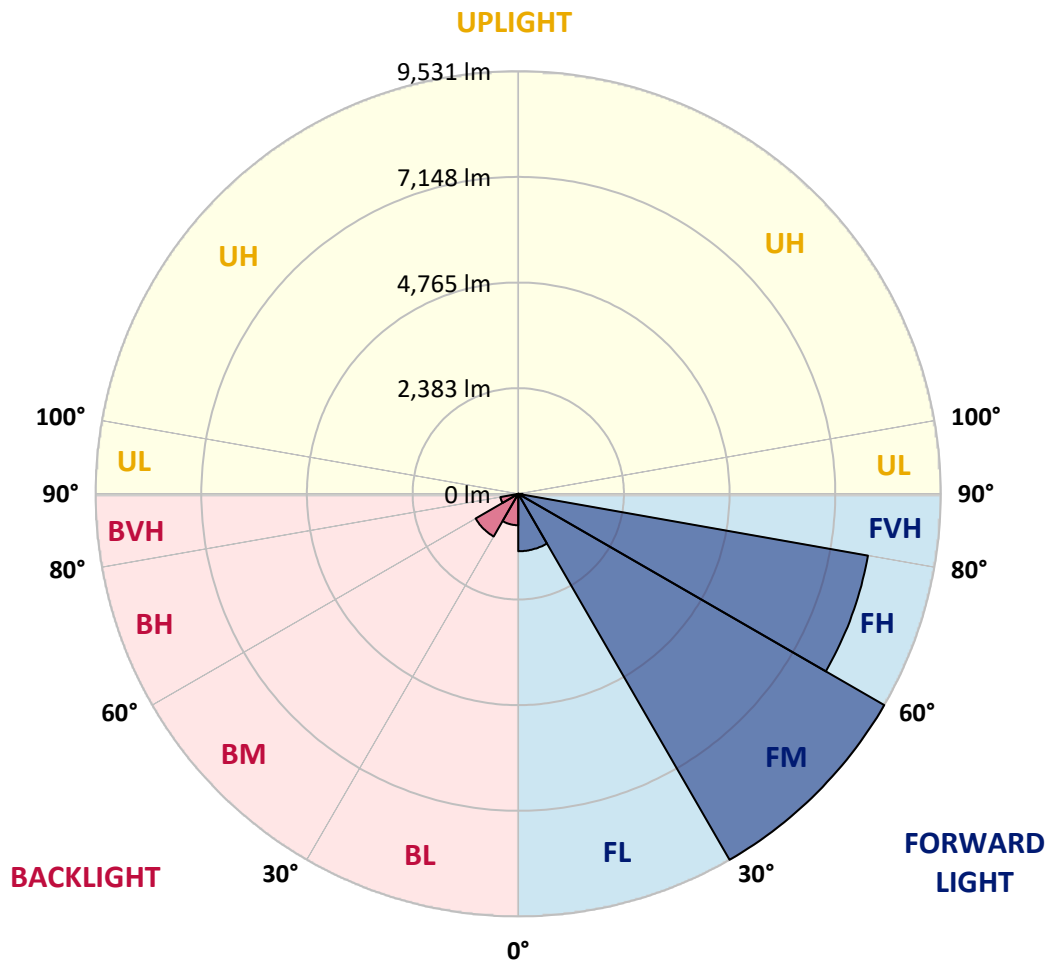


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |          |
|----------------|--------|-----------|-------------------------|------|----------|
|                |        |           | B                       | U    | G        |
| FL (0°-30°)    | 1295.4 | 6.1       |                         |      |          |
| FM (30°-60°)   | 9531.0 | 45.0      |                         |      |          |
| FH (60°-80°)   | 8009.0 | 37.9      |                         |      | G4/12000 |
| FVH (80°-90°)  | 93.2   | 0.4       |                         |      | G1/100   |
| BL (0°-30°)    | 708.7  | 3.3       | B2/1000                 |      |          |
| BM (30°-60°)   | 1110.3 | 5.2       | B2/2500                 |      |          |
| BH (60°-80°)   | 408.9  | 1.9       | B1/500                  |      | G1/500   |
| BVH (80°-90°)  | 2.6    | 0.0       |                         |      | G0/10    |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |          |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |          |

**BUG Rating: B2-U0-G4**  
 Type III Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 77°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 3300.4  | 3300.4  | 3300.4  | 3300.4  | 3300.4  | 3300.4  | 3300.4  | 3300.4  | 3300.4  | 3300.4  | 3300.4  |
| 2.5°  | 3098.7  | 3126.8  | 3122.8  | 3141.4  | 3148.1  | 3174.8  | 3201.6  | 3237.7  | 3277.7  | 3276.4  | 3303.1  |
| 5°    | 2923.6  | 2951.7  | 2958.4  | 2983.8  | 3015.9  | 3057.3  | 3112.0  | 3184.2  | 3259.0  | 3271.1  | 3324.5  |
| 7.5°  | 2716.6  | 2745.9  | 2763.3  | 2814.0  | 2872.9  | 2958.4  | 3047.9  | 3153.4  | 3277.7  | 3295.1  | 3398.0  |
| 10°   | 2509.4  | 2536.2  | 2558.8  | 2631.0  | 2724.6  | 2851.4  | 2997.1  | 3149.4  | 3316.5  | 3341.8  | 3487.5  |
| 12.5° | 2381.1  | 2406.5  | 2431.9  | 2494.7  | 2611.0  | 2766.0  | 2963.7  | 3168.2  | 3380.7  | 3416.6  | 3609.1  |
| 15°   | 2335.7  | 2358.4  | 2378.4  | 2434.6  | 2542.8  | 2719.2  | 2957.0  | 3206.9  | 3462.1  | 3510.2  | 3756.1  |
| 17.5° | 2342.3  | 2354.4  | 2367.8  | 2410.5  | 2516.1  | 2697.8  | 2969.0  | 3273.7  | 3558.3  | 3601.0  | 3903.1  |
| 20°   | 2381.1  | 2387.8  | 2389.2  | 2418.5  | 2512.1  | 2695.1  | 2993.1  | 3337.8  | 3649.2  | 3706.6  | 4048.7  |
| 22.5° | 2430.6  | 2433.2  | 2430.6  | 2450.6  | 2537.5  | 2715.2  | 3025.2  | 3415.3  | 3750.8  | 3804.2  | 4195.7  |
| 25°   | 2661.7  | 2611.0  | 2546.8  | 2508.1  | 2580.2  | 2754.0  | 3073.3  | 3519.5  | 3861.7  | 3913.8  | 4338.6  |
| 27.5° | 3379.2  | 3233.7  | 3003.8  | 2745.9  | 2668.4  | 2810.0  | 3140.1  | 3625.1  | 3973.9  | 4020.7  | 4492.4  |
| 30°   | 4544.4  | 4353.4  | 3963.2  | 3382.0  | 2951.7  | 2927.6  | 3226.9  | 3730.7  | 4092.8  | 4143.6  | 4656.7  |
| 32.5° | 5712.3  | 5665.5  | 5215.2  | 4410.8  | 3589.0  | 3189.5  | 3371.2  | 3873.7  | 4250.5  | 4290.5  | 4878.5  |
| 35°   | 6893.5  | 6798.6  | 6429.8  | 5634.8  | 4571.2  | 3722.7  | 3611.8  | 4060.7  | 4457.6  | 4503.0  | 5201.9  |
| 37.5° | 7798.1  | 7740.7  | 7512.1  | 6857.5  | 5736.3  | 4545.8  | 4023.3  | 4350.7  | 4758.3  | 4809.0  | 5616.1  |
| 40°   | 8597.2  | 8570.4  | 8492.9  | 8061.3  | 7039.2  | 5622.7  | 4663.3  | 4799.7  | 5175.1  | 5235.3  | 6123.9  |
| 42.5° | 9225.2  | 9287.9  | 9332.1  | 9211.8  | 8382.0  | 6852.1  | 5523.9  | 5430.3  | 5756.4  | 5817.9  | 6770.5  |
| 45°   | 9867.9  | 9889.3  | 10067.0 | 10240.7 | 9715.6  | 8137.5  | 6494.0  | 6169.3  | 6479.2  | 6555.4  | 7545.5  |
| 47.5° | 10280.8 | 10366.3 | 10679.0 | 10984.9 | 10836.6 | 9412.3  | 7536.2  | 7041.9  | 7317.1  | 7460.1  | 8414.1  |
| 50°   | 10311.5 | 10473.2 | 10903.4 | 11436.6 | 11653.0 | 10625.6 | 8669.3  | 8036.0  | 8328.5  | 8486.3  | 9341.4  |
| 52.5° | 9799.7  | 10050.9 | 10717.7 | 11498.0 | 12094.0 | 11653.0 | 9841.1  | 9030.0  | 9405.6  | 9611.3  | 10303.5 |
| 55°   | 7513.5  | 7842.2  | 10018.9 | 11164.0 | 12111.4 | 12432.1 | 10982.3 | 10065.7 | 10605.5 | 10837.9 | 11343.1 |
| 57.5° | 6546.1  | 6711.8  | 7876.9  | 10584.2 | 11789.3 | 12746.1 | 12013.8 | 11051.8 | 11910.9 | 12199.6 | 12325.2 |
| 60°   | 5446.3  | 5664.2  | 6606.2  | 9635.4  | 11352.4 | 12776.8 | 12925.1 | 12323.9 | 13326.0 | 13650.7 | 13225.8 |
| 62.5° | 3701.3  | 3937.8  | 4874.5  | 8005.2  | 10755.1 | 12762.2 | 13672.1 | 13633.3 | 14898.7 | 15247.5 | 13988.8 |
| 65°   | 2292.9  | 2441.2  | 3058.6  | 6536.7  | 9920.1  | 12778.2 | 14453.7 | 15223.4 | 16558.3 | 16912.4 | 14579.4 |
| 67.5° | 1811.9  | 1880.1  | 2202.1  | 5018.8  | 8481.0  | 12417.4 | 15234.1 | 16718.7 | 18120.4 | 18400.9 | 14759.8 |
| 70°   | 1217.3  | 1258.7  | 1602.1  | 3364.6  | 6309.6  | 10752.5 | 15219.4 | 17469.6 | 18924.7 | 19065.0 | 14102.4 |
| 72.5° | 641.3   | 673.4   | 936.6   | 1558.0  | 3810.8  | 7643.1  | 12828.9 | 16571.7 | 18124.4 | 17913.2 | 12053.9 |
| 75°   | 320.7   | 374.1   | 630.7   | 791.0   | 1627.5  | 4262.5  | 7966.5  | 13065.5 | 14265.3 | 13447.6 | 7733.9  |
| 77.5° | 243.2   | 294.0   | 521.1   | 521.1   | 566.5   | 1435.1  | 3373.9  | 7126.0  | 6572.8  | 5473.1  | 2270.2  |
| 80°   | 155.0   | 200.4   | 455.6   | 394.2   | 236.5   | 364.8   | 879.2   | 1996.3  | 1396.4  | 1062.3  | 412.9   |
| 82.5° | 90.8    | 131.0   | 379.5   | 260.6   | 132.3   | 135.0   | 248.6   | 425.0   | 362.1   | 282.0   | 126.9   |
| 85°   | 36.1    | 85.5    | 260.6   | 102.9   | 52.1    | 33.4    | 74.8    | 90.8    | 74.8    | 56.2    | 32.1    |
| 87.5° | 0.0     | 20.1    | 45.4    | 0.0     | 4.0     | 2.7     | 5.3     | 6.7     | 6.7     | 5.3     | 10.7    |
| 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°    | 3300.4 | 3300.4 | 3300.4 | 3300.4 | 3300.4 | 3300.4 | 3300.4 | 3300.4 | 3300.4 | 3300.4 | 3300.4 |
| 2.5°  | 3315.2 | 3317.8 | 3325.8 | 3327.2 | 3308.5 | 3284.4 | 3275.1 | 3271.1 | 3255.0 | 3253.7 | 3256.3 |
| 5°    | 3355.2 | 3367.2 | 3355.2 | 3320.5 | 3237.7 | 3121.4 | 3033.2 | 2961.0 | 2895.5 | 2875.5 | 2863.5 |
| 7.5°  | 3435.4 | 3447.4 | 3411.3 | 3275.1 | 3066.6 | 2835.5 | 2627.0 | 2480.0 | 2347.8 | 2298.3 | 2278.3 |
| 10°   | 3550.3 | 3566.4 | 3452.7 | 3177.5 | 2808.7 | 2437.2 | 2084.4 | 1836.0 | 1642.2 | 1563.3 | 1529.9 |
| 12.5° | 3694.6 | 3701.3 | 3475.5 | 3029.2 | 2473.3 | 1942.9 | 1443.1 | 1177.2 | 1004.8 | 940.6  | 920.7  |
| 15°   | 3853.6 | 3844.3 | 3478.1 | 2827.5 | 2016.4 | 1373.6 | 942.1  | 773.7  | 704.2  | 682.8  | 682.8  |
| 17.5° | 4020.7 | 3981.9 | 3424.7 | 2536.2 | 1515.3 | 939.3  | 698.8  | 658.8  | 646.8  | 641.3  | 640.0  |
| 20°   | 4185.0 | 4098.2 | 3327.2 | 2155.3 | 1087.6 | 701.5  | 634.7  | 622.7  | 616.0  | 613.4  | 610.7  |
| 22.5° | 4334.6 | 4186.3 | 3160.2 | 1713.0 | 789.7  | 620.0  | 599.9  | 589.3  | 577.3  | 571.8  | 570.5  |
| 25°   | 4480.3 | 4237.1 | 2924.9 | 1300.1 | 632.0  | 579.9  | 563.9  | 543.9  | 527.8  | 521.1  | 518.4  |
| 27.5° | 4621.9 | 4269.2 | 2631.0 | 962.1  | 563.9  | 542.5  | 513.1  | 485.0  | 473.0  | 470.4  | 467.7  |
| 30°   | 4772.9 | 4279.9 | 2296.9 | 717.5  | 522.4  | 495.7  | 452.9  | 420.9  | 414.2  | 415.5  | 415.5  |
| 32.5° | 4957.3 | 4295.9 | 1960.2 | 587.9  | 487.7  | 439.6  | 388.9  | 355.5  | 350.0  | 355.5  | 354.1  |
| 35°   | 5177.8 | 4328.0 | 1635.5 | 541.2  | 456.9  | 382.1  | 327.4  | 299.3  | 294.0  | 298.0  | 296.6  |
| 37.5° | 5477.1 | 4380.1 | 1332.2 | 531.8  | 431.6  | 334.0  | 275.2  | 252.6  | 252.6  | 253.9  | 252.6  |
| 40°   | 5875.3 | 4519.0 | 1061.0 | 525.1  | 418.2  | 298.0  | 232.5  | 223.1  | 227.1  | 229.8  | 229.8  |
| 42.5° | 6360.3 | 4814.3 | 877.9  | 517.1  | 403.5  | 282.0  | 211.2  | 207.2  | 213.8  | 216.5  | 216.5  |
| 45°   | 6904.2 | 5188.4 | 813.7  | 503.8  | 390.2  | 292.6  | 201.7  | 196.4  | 204.5  | 205.8  | 207.2  |
| 47.5° | 7466.7 | 5554.6 | 805.8  | 489.0  | 376.8  | 308.6  | 199.1  | 187.1  | 196.4  | 197.7  | 199.1  |
| 50°   | 8036.0 | 5793.8 | 813.7  | 466.4  | 355.5  | 308.6  | 200.4  | 177.7  | 185.7  | 189.7  | 191.1  |
| 52.5° | 8609.2 | 5903.4 | 808.4  | 416.9  | 318.1  | 290.0  | 200.4  | 169.7  | 177.7  | 180.4  | 180.4  |
| 55°   | 9165.0 | 5882.0 | 726.9  | 343.4  | 269.9  | 256.6  | 195.1  | 163.0  | 168.4  | 169.7  | 169.7  |
| 57.5° | 9604.7 | 5584.0 | 575.9  | 267.2  | 219.1  | 213.8  | 177.7  | 155.0  | 159.0  | 157.6  | 157.6  |
| 60°   | 9834.5 | 4929.2 | 411.5  | 205.8  | 172.4  | 168.4  | 156.3  | 144.3  | 147.0  | 140.3  | 139.0  |
| 62.5° | 9837.1 | 4063.4 | 275.2  | 163.0  | 137.7  | 133.7  | 133.7  | 129.7  | 126.9  | 113.6  | 109.6  |
| 65°   | 9627.4 | 3102.7 | 183.1  | 129.7  | 110.9  | 104.2  | 112.2  | 110.9  | 101.6  | 82.8   | 80.2   |
| 67.5° | 9151.7 | 2033.7 | 139.0  | 101.6  | 85.5   | 81.5   | 89.5   | 93.6   | 86.8   | 69.5   | 68.2   |
| 70°   | 8173.6 | 1183.9 | 114.9  | 78.8   | 64.2   | 60.2   | 72.2   | 80.2   | 72.2   | 56.2   | 53.4   |
| 72.5° | 6789.3 | 638.7  | 93.6   | 58.8   | 44.1   | 40.1   | 57.5   | 65.5   | 57.5   | 41.4   | 40.1   |
| 75°   | 4405.4 | 342.0  | 72.2   | 38.7   | 22.8   | 25.4   | 42.7   | 48.1   | 40.1   | 26.8   | 24.1   |
| 77.5° | 1479.2 | 151.0  | 45.4   | 18.8   | 10.7   | 10.7   | 25.4   | 29.4   | 18.8   | 9.3    | 8.0    |
| 80°   | 330.0  | 62.8   | 18.8   | 8.0    | 4.0    | 4.0    | 5.3    | 5.3    | 2.7    | 0.0    | 0.0    |
| 82.5° | 108.2  | 25.4   | 8.0    | 2.7    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 41.4   | 9.3    | 2.7    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 16.0   | 1.3    | 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)