

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: P965735

Luminaire Tested: **NAV-SB4A-827-U-SL2**

Issue Date: 1/21/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P965735  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB4A-827-U-SL2  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 80 CRI, 2700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II SPILL  
LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: -

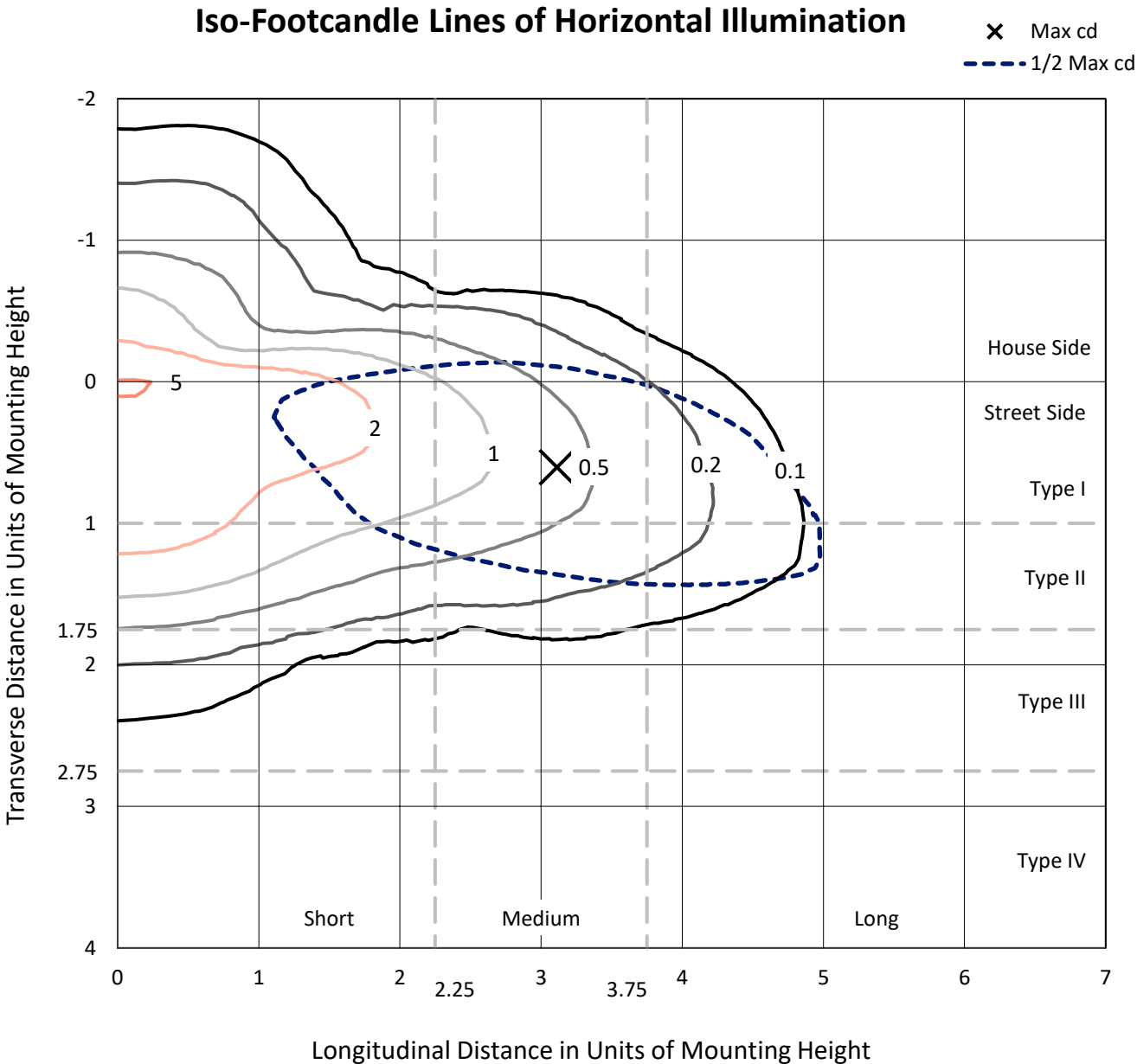
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15926.5 lumens  
Efficiency: N/A  
Efficacy: 139.7 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): 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



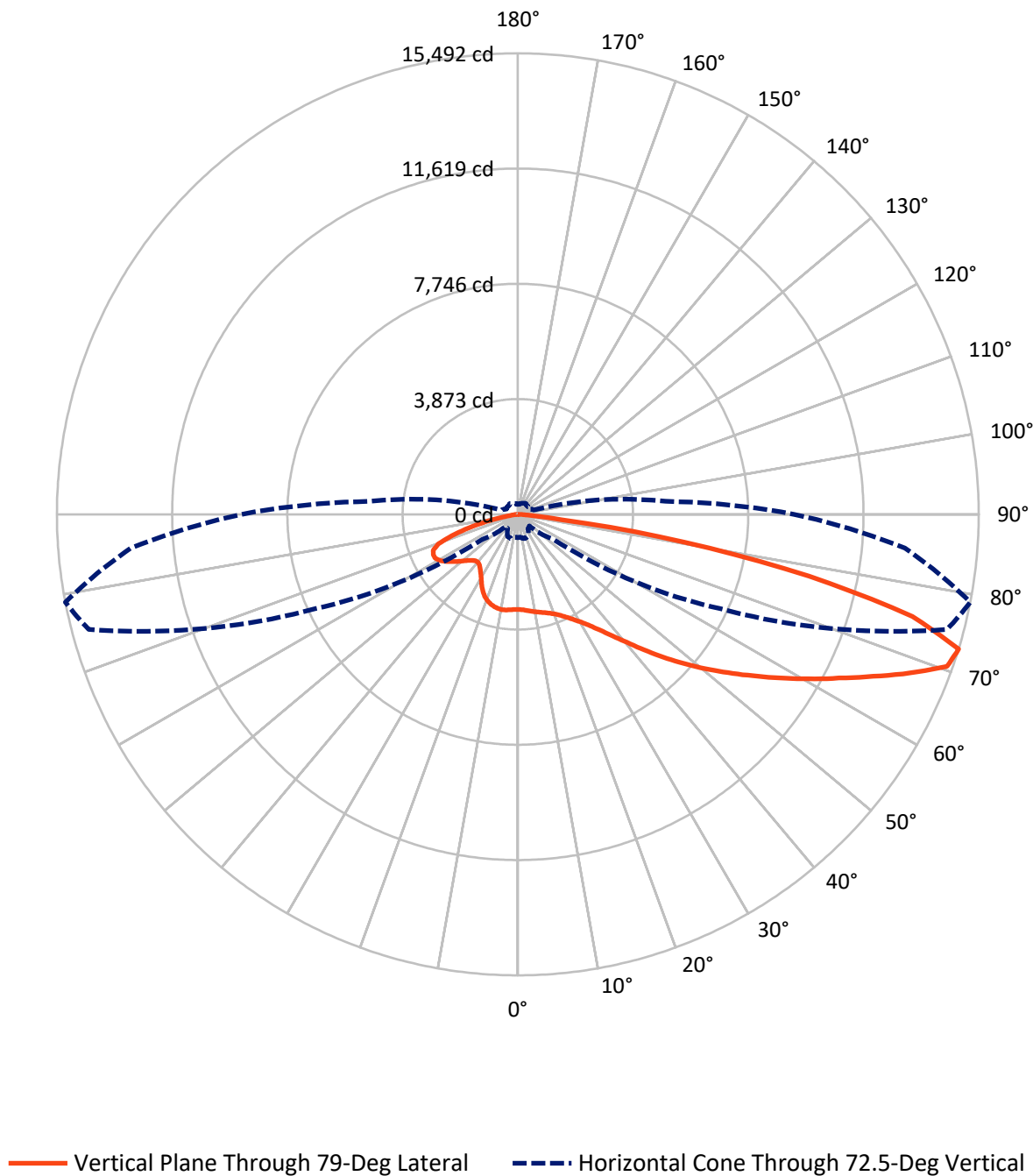
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Based on 25 foot mounting height. Maximum calculated value = 5.1 fc  
Type II - Medium - N/A

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## Luminous Intensity Polar Plot



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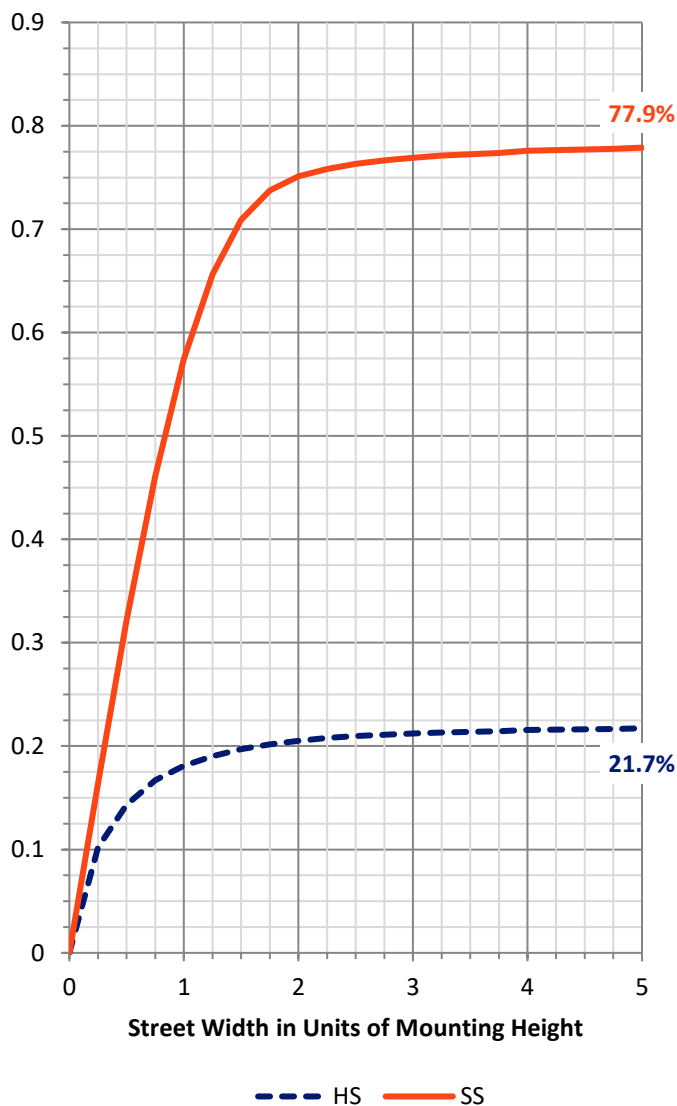
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 3504.7   | 0.0    | 3504.7  |
|                    | % Fixture | 22.0     | 0.0    | 22.0    |
| <b>Street Side</b> | Lumens    | 12421.8  | 0.0    | 12421.8 |
|                    | % Fixture | 78.0     | 0.0    | 78.0    |
| <b>Total</b>       | Lumens    | 15926.5  | 0.0    | 15926.5 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 290.2   | 1.8       |
| 10°-20°   | 758.7   | 4.8       |
| 20°-30°   | 1224.3  | 7.7       |
| 30°-40°   | 1837.5  | 11.5      |
| 40°-50°   | 2606.6  | 16.4      |
| 50°-60°   | 3291.8  | 20.7      |
| 60°-70°   | 3343.2  | 21.0      |
| 70°-80°   | 2278.6  | 14.3      |
| 80°-90°   | 295.6   | 1.9       |
| 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°    | 15926.5 | 100.0     |
| 0°-180°   | 15926.5 | 100.0     |

**Coefficient of Utilization**



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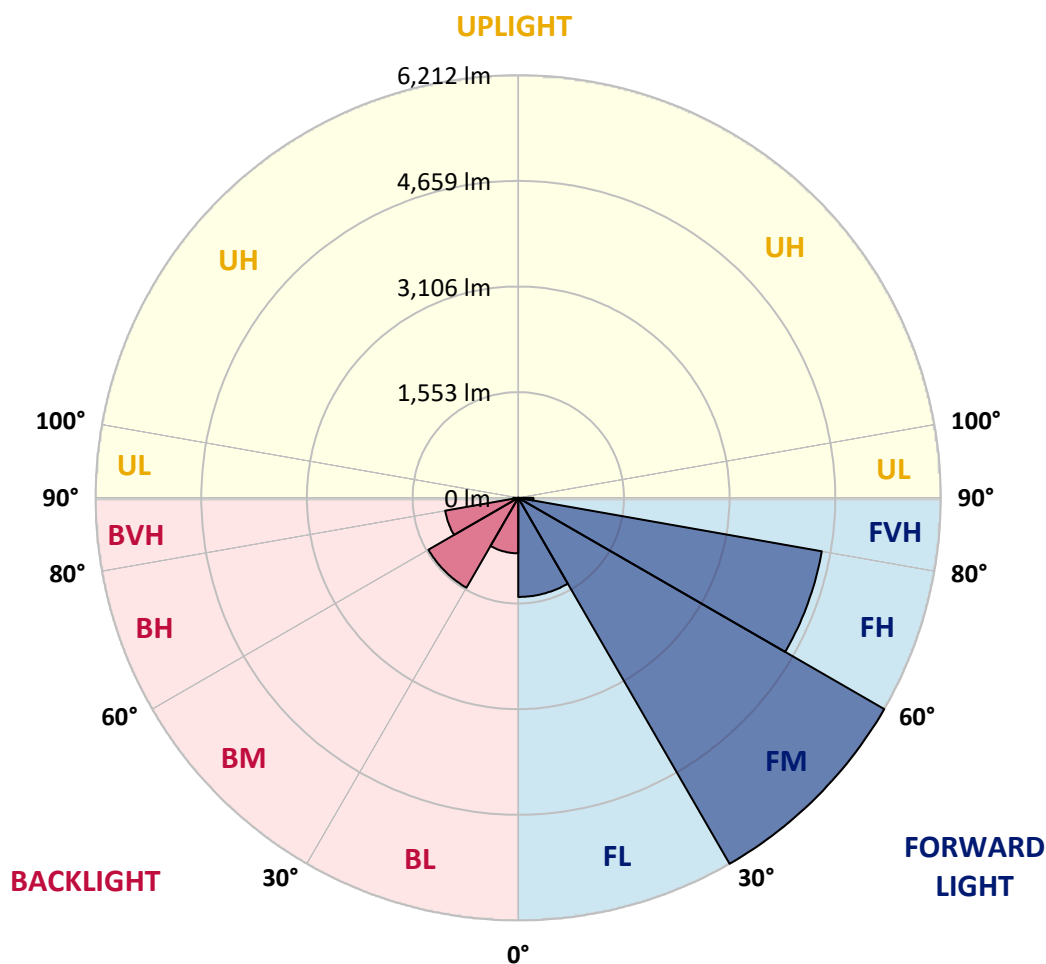
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1456.9 | 9.1       |                         |      |         |
| FM   | (30°-60°)   | 6211.6 | 39.0      |                         |      |         |
| FH   | (60°-80°)   | 4530.5 | 28.4      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 222.7  | 1.4       |                         |      | G2/225  |
| BL   | (0°-30°)    | 816.3  | 5.1       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 1524.2 | 9.6       | B2/2500                 |      |         |
| BH   | (60°-80°)   | 1091.2 | 6.9       | B3/2500                 |      | G3/2500 |
| BVH  | (80°-90°)   | 72.9   | 0.5       |                         |      | 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°     | 79°     | 85°     |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| 0°    | 3197.1 | 3197.1 | 3197.1 | 3197.1 | 3197.1 | 3197.1 | 3197.1 | 3197.1 | 3197.1  | 3197.1  | 3197.1  |
| 2.5°  | 3198.7 | 3183.6 | 3192.9 | 3189.5 | 3193.7 | 3198.7 | 3200.5 | 3203.0 | 3211.4  | 3210.6  | 3209.7  |
| 5°    | 3192.1 | 3176.9 | 3189.5 | 3185.3 | 3196.3 | 3208.0 | 3218.2 | 3227.4 | 3240.8  | 3246.8  | 3238.4  |
| 7.5°  | 3177.7 | 3167.6 | 3180.3 | 3192.9 | 3213.1 | 3230.8 | 3245.1 | 3266.2 | 3285.5  | 3288.9  | 3294.8  |
| 10°   | 3094.3 | 3086.7 | 3116.2 | 3149.1 | 3204.7 | 3252.7 | 3283.9 | 3308.3 | 3329.3  | 3332.7  | 3341.2  |
| 12.5° | 3007.6 | 2998.2 | 3031.1 | 3075.8 | 3165.9 | 3252.7 | 3318.4 | 3350.4 | 3369.0  | 3379.9  | 3392.5  |
| 15°   | 2993.2 | 2985.6 | 3004.2 | 3042.9 | 3117.8 | 3230.0 | 3342.0 | 3401.0 | 3416.9  | 3429.5  | 3434.7  |
| 17.5° | 3062.3 | 3047.9 | 3055.5 | 3069.1 | 3112.8 | 3208.9 | 3360.6 | 3458.2 | 3482.6  | 3496.2  | 3496.2  |
| 20°   | 3222.4 | 3202.1 | 3190.3 | 3163.4 | 3155.8 | 3212.2 | 3358.8 | 3527.3 | 3559.3  | 3576.2  | 3580.4  |
| 22.5° | 3435.5 | 3422.1 | 3396.7 | 3328.5 | 3254.4 | 3253.6 | 3390.8 | 3615.8 | 3675.5  | 3691.6  | 3681.5  |
| 25°   | 3693.3 | 3673.1 | 3641.0 | 3548.3 | 3406.0 | 3335.2 | 3444.7 | 3728.6 | 3828.9  | 3833.1  | 3803.7  |
| 27.5° | 3989.8 | 3959.5 | 3915.7 | 3793.5 | 3601.4 | 3463.3 | 3527.3 | 3858.4 | 4005.0  | 4003.3  | 3942.7  |
| 30°   | 4302.3 | 4272.0 | 4225.7 | 4077.4 | 3835.7 | 3636.0 | 3641.9 | 3998.2 | 4213.9  | 4204.7  | 4101.0  |
| 32.5° | 4530.7 | 4508.0 | 4498.6 | 4384.1 | 4105.2 | 3839.9 | 3773.3 | 4153.3 | 4471.7  | 4463.3  | 4318.4  |
| 35°   | 4705.9 | 4676.5 | 4687.3 | 4629.2 | 4399.3 | 4068.1 | 3934.3 | 4337.8 | 4785.1  | 4784.3  | 4604.0  |
| 37.5° | 4879.4 | 4853.4 | 4862.6 | 4823.9 | 4671.3 | 4358.0 | 4130.5 | 4563.5 | 5173.5  | 5192.0  | 4949.4  |
| 40°   | 5037.9 | 5010.0 | 5047.1 | 5010.9 | 4882.8 | 4666.3 | 4353.8 | 4818.8 | 5623.4  | 5658.7  | 5367.2  |
| 42.5° | 5133.0 | 5111.2 | 5172.7 | 5173.5 | 5066.5 | 4926.7 | 4598.9 | 5100.2 | 6144.0  | 6223.2  | 5881.1  |
| 45°   | 5165.9 | 5158.3 | 5251.0 | 5270.3 | 5229.0 | 5077.4 | 4819.7 | 5406.8 | 6705.0  | 6846.6  | 6466.6  |
| 47.5° | 5130.5 | 5116.2 | 5244.2 | 5315.9 | 5348.7 | 5148.2 | 5002.4 | 5738.8 | 7277.9  | 7485.2  | 7105.2  |
| 50°   | 4951.9 | 4924.1 | 5114.4 | 5265.3 | 5382.4 | 5194.5 | 5186.9 | 6122.0 | 7929.1  | 8155.7  | 7747.2  |
| 52.5° | 4631.0 | 4609.8 | 4826.4 | 5088.4 | 5308.3 | 5217.2 | 5394.2 | 6540.7 | 8547.5  | 8840.6  | 8405.1  |
| 55°   | 4220.6 | 4192.9 | 4431.3 | 4773.3 | 5123.8 | 5209.7 | 5601.4 | 7009.2 | 9277.0  | 9574.4  | 9085.0  |
| 57.5° | 3570.3 | 3514.7 | 3816.3 | 4220.6 | 4823.0 | 5200.4 | 5817.1 | 7475.0 | 10018.3 | 10374.7 | 9810.3  |
| 60°   | 2621.6 | 2539.1 | 2909.0 | 3388.3 | 4235.0 | 5110.2 | 6084.2 | 7997.4 | 10907.9 | 11229.0 | 10602.2 |
| 62.5° | 1526.5 | 1478.5 | 1720.3 | 2167.6 | 3192.1 | 4579.5 | 6234.2 | 8604.8 | 11782.5 | 12119.4 | 11380.6 |
| 65°   | 1185.3 | 1171.9 | 1192.9 | 1227.4 | 1776.7 | 3428.7 | 5771.6 | 9197.0 | 12894.5 | 13130.4 | 12191.9 |
| 67.5° | 1084.2 | 1074.1 | 1083.4 | 1018.5 | 901.4  | 1909.8 | 4566.1 | 9347.0 | 14085.7 | 14228.9 | 12902.1 |
| 70°   | 963.8  | 951.9  | 982.3  | 926.7  | 709.3  | 868.6  | 2950.3 | 8802.7 | 15033.5 | 15302.2 | 13442.1 |
| 72.5° | 785.2  | 771.7  | 842.4  | 817.1  | 597.3  | 557.7  | 1481.8 | 7509.6 | 14934.0 | 15491.7 | 13055.4 |
| 75°   | 603.2  | 595.6  | 679.9  | 700.9  | 487.0  | 438.9  | 711.0  | 5582.0 | 13142.1 | 13704.0 | 11251.7 |
| 77.5° | 468.4  | 462.5  | 505.4  | 582.1  | 392.6  | 340.3  | 437.3  | 3540.8 | 9903.8  | 10002.4 | 7753.9  |
| 80°   | 351.3  | 334.5  | 374.0  | 450.7  | 305.8  | 248.6  | 296.5  | 2064.9 | 6260.2  | 5674.7  | 3374.8  |
| 82.5° | 219.9  | 211.5  | 244.4  | 300.7  | 215.7  | 171.0  | 192.9  | 1140.7 | 2508.8  | 1477.6  | 651.2   |
| 85°   | 125.6  | 122.2  | 133.1  | 171.9  | 117.1  | 98.6   | 110.4  | 503.8  | 458.3   | 315.1   | 196.3   |
| 87.5° | 50.5   | 48.9   | 60.7   | 76.7   | 42.9   | 36.2   | 38.7   | 121.4  | 101.1   | 93.5    | 64.9    |
| 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°    | 3197.1  | 3197.1 | 3197.1 | 3197.1 | 3197.1 | 3197.1 | 3197.1 | 3197.1 | 3197.1 | 3197.1 | 3197.1 |
| 2.5°  | 3206.3  | 3206.3 | 3194.5 | 3176.1 | 3155.0 | 3141.5 | 3119.6 | 3113.6 | 3090.9 | 3084.2 | 3095.2 |
| 5°    | 3245.1  | 3238.4 | 3202.1 | 3149.9 | 3078.3 | 3012.6 | 2940.1 | 2894.6 | 2830.6 | 2807.9 | 2824.7 |
| 7.5°  | 3293.9  | 3275.4 | 3213.1 | 3098.5 | 2948.5 | 2801.1 | 2647.8 | 2531.5 | 2420.3 | 2380.8 | 2385.8 |
| 10°   | 3338.6  | 3312.5 | 3206.3 | 3005.8 | 2746.4 | 2491.2 | 2246.8 | 2075.8 | 1946.1 | 1893.0 | 1904.8 |
| 12.5° | 3383.2  | 3335.2 | 3161.7 | 2851.7 | 2459.1 | 2112.8 | 1852.6 | 1719.4 | 1639.4 | 1575.4 | 1596.4 |
| 15°   | 3425.3  | 3358.0 | 3092.6 | 2645.3 | 2144.0 | 1792.7 | 1600.6 | 1494.4 | 1430.5 | 1388.4 | 1395.9 |
| 17.5° | 3474.2  | 3377.4 | 2989.0 | 2383.3 | 1844.1 | 1571.1 | 1414.5 | 1350.4 | 1337.8 | 1332.7 | 1336.1 |
| 20°   | 3542.5  | 3395.1 | 2852.5 | 2090.1 | 1623.4 | 1394.2 | 1313.3 | 1307.5 | 1306.7 | 1304.1 | 1312.5 |
| 22.5° | 3615.8  | 3416.1 | 2672.3 | 1823.9 | 1435.5 | 1283.9 | 1269.6 | 1257.8 | 1250.2 | 1249.4 | 1258.6 |
| 25°   | 3702.5  | 3422.9 | 2446.5 | 1605.7 | 1275.5 | 1231.6 | 1214.8 | 1197.1 | 1192.1 | 1192.1 | 1197.1 |
| 27.5° | 3786.8  | 3400.1 | 2183.7 | 1416.1 | 1185.3 | 1183.7 | 1161.7 | 1155.8 | 1155.0 | 1157.5 | 1164.3 |
| 30°   | 3871.0  | 3357.2 | 1922.5 | 1241.0 | 1133.1 | 1133.1 | 1125.6 | 1129.8 | 1133.1 | 1141.5 | 1147.4 |
| 32.5° | 3984.8  | 3311.7 | 1704.3 | 1111.2 | 1087.6 | 1079.2 | 1086.7 | 1095.2 | 1098.6 | 1109.5 | 1118.8 |
| 35°   | 4151.6  | 3279.7 | 1530.7 | 1040.4 | 1040.4 | 1029.5 | 1033.7 | 1032.0 | 1024.4 | 1019.4 | 1031.1 |
| 37.5° | 4372.3  | 3278.0 | 1387.5 | 1007.6 | 1000.8 | 999.2  | 1000.0 | 989.0  | 959.5  | 924.1  | 925.0  |
| 40°   | 4637.7  | 3323.5 | 1277.1 | 984.8  | 979.8  | 989.8  | 984.8  | 955.3  | 874.4  | 812.9  | 811.3  |
| 42.5° | 4994.0  | 3453.2 | 1206.4 | 957.0  | 972.2  | 984.8  | 964.6  | 862.6  | 807.9  | 766.6  | 765.0  |
| 45°   | 5413.5  | 3663.8 | 1170.1 | 927.5  | 957.9  | 973.0  | 875.4  | 830.7  | 786.9  | 737.2  | 733.8  |
| 47.5° | 5888.7  | 3929.1 | 1161.7 | 899.7  | 925.9  | 935.1  | 837.4  | 817.1  | 767.4  | 713.5  | 709.3  |
| 50°   | 6405.9  | 4243.4 | 1184.5 | 866.8  | 879.6  | 847.5  | 824.7  | 806.3  | 754.8  | 701.7  | 695.9  |
| 52.5° | 6940.9  | 4589.6 | 1230.0 | 822.3  | 833.2  | 797.8  | 819.7  | 803.7  | 747.2  | 675.7  | 670.6  |
| 55°   | 7466.6  | 4938.4 | 1273.8 | 770.0  | 786.0  | 753.2  | 805.3  | 793.6  | 712.7  | 631.8  | 627.6  |
| 57.5° | 8000.7  | 5285.5 | 1316.7 | 723.6  | 740.5  | 710.2  | 782.6  | 766.6  | 673.9  | 591.4  | 589.7  |
| 60°   | 8555.9  | 5622.5 | 1337.0 | 679.1  | 690.8  | 670.6  | 748.0  | 720.3  | 630.2  | 550.1  | 547.6  |
| 62.5° | 9075.7  | 5903.0 | 1304.1 | 634.4  | 642.0  | 633.6  | 702.6  | 665.5  | 586.3  | 503.8  | 503.0  |
| 65°   | 9597.2  | 6069.8 | 1203.0 | 590.6  | 592.2  | 588.0  | 638.6  | 606.6  | 534.9  | 463.3  | 458.3  |
| 67.5° | 10069.8 | 6163.3 | 1042.1 | 543.4  | 539.2  | 537.5  | 578.7  | 542.5  | 485.2  | 422.9  | 417.9  |
| 70°   | 10170.0 | 5925.7 | 796.1  | 487.8  | 487.8  | 483.6  | 513.0  | 476.0  | 430.5  | 380.0  | 378.2  |
| 72.5° | 9288.9  | 4984.8 | 565.3  | 424.6  | 431.3  | 422.9  | 447.3  | 416.2  | 374.8  | 341.2  | 331.1  |
| 75°   | 7490.2  | 3655.4 | 411.1  | 359.8  | 371.6  | 357.2  | 380.0  | 358.0  | 322.7  | 321.8  | 289.8  |
| 77.5° | 5146.5  | 2260.3 | 298.3  | 296.5  | 304.9  | 286.4  | 312.5  | 300.7  | 268.8  | 254.4  | 238.4  |
| 80°   | 2196.3  | 901.4  | 217.3  | 229.2  | 229.2  | 212.3  | 242.6  | 246.0  | 218.2  | 211.5  | 211.5  |
| 82.5° | 437.3   | 256.1  | 152.5  | 157.5  | 148.3  | 143.2  | 171.9  | 190.3  | 262.8  | 292.3  | 293.2  |
| 85°   | 131.4   | 94.4   | 91.8   | 85.9   | 75.8   | 76.7   | 101.1  | 191.3  | 235.9  | 134.8  | 116.2  |
| 87.5° | 36.2    | 23.6   | 24.4   | 19.4   | 16.0   | 21.0   | 34.5   | 144.9  | 79.2   | 33.7   | 28.6   |
| 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)