

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: P963087

Luminaire Tested: **NAV-SB2D-760-U-T3R**

Issue Date: 1/21/2025

### Test Information

Test Method: LM-79-08  
Report Number: P963087  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB2D-760-U-T3R  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(2) 70 CRI, 5700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: -

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 22655.6 lumens  
Efficiency: N/A  
Efficacy: 153.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B3 - U0 - G3

Input Watts (W): 147.6  
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



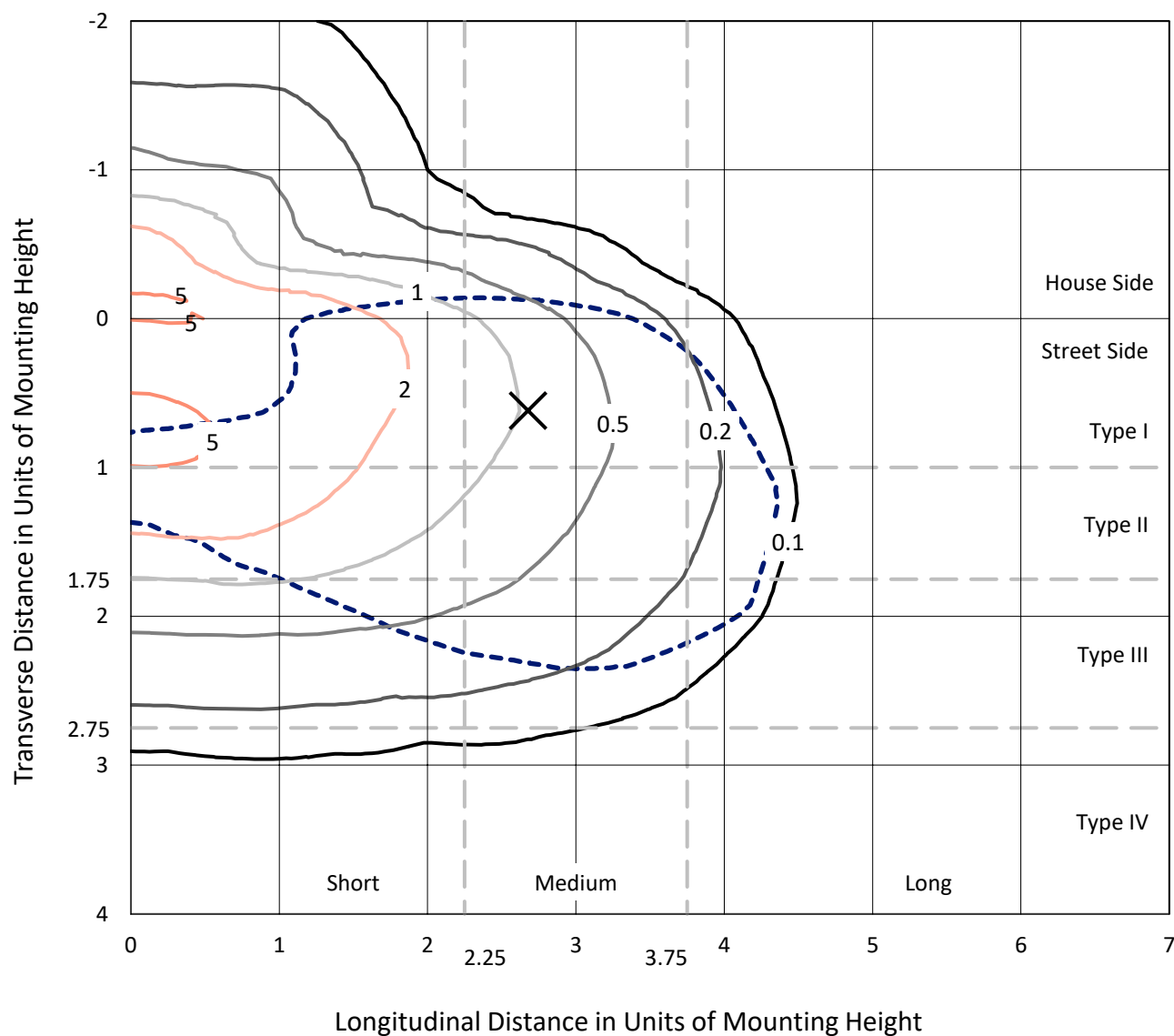
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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

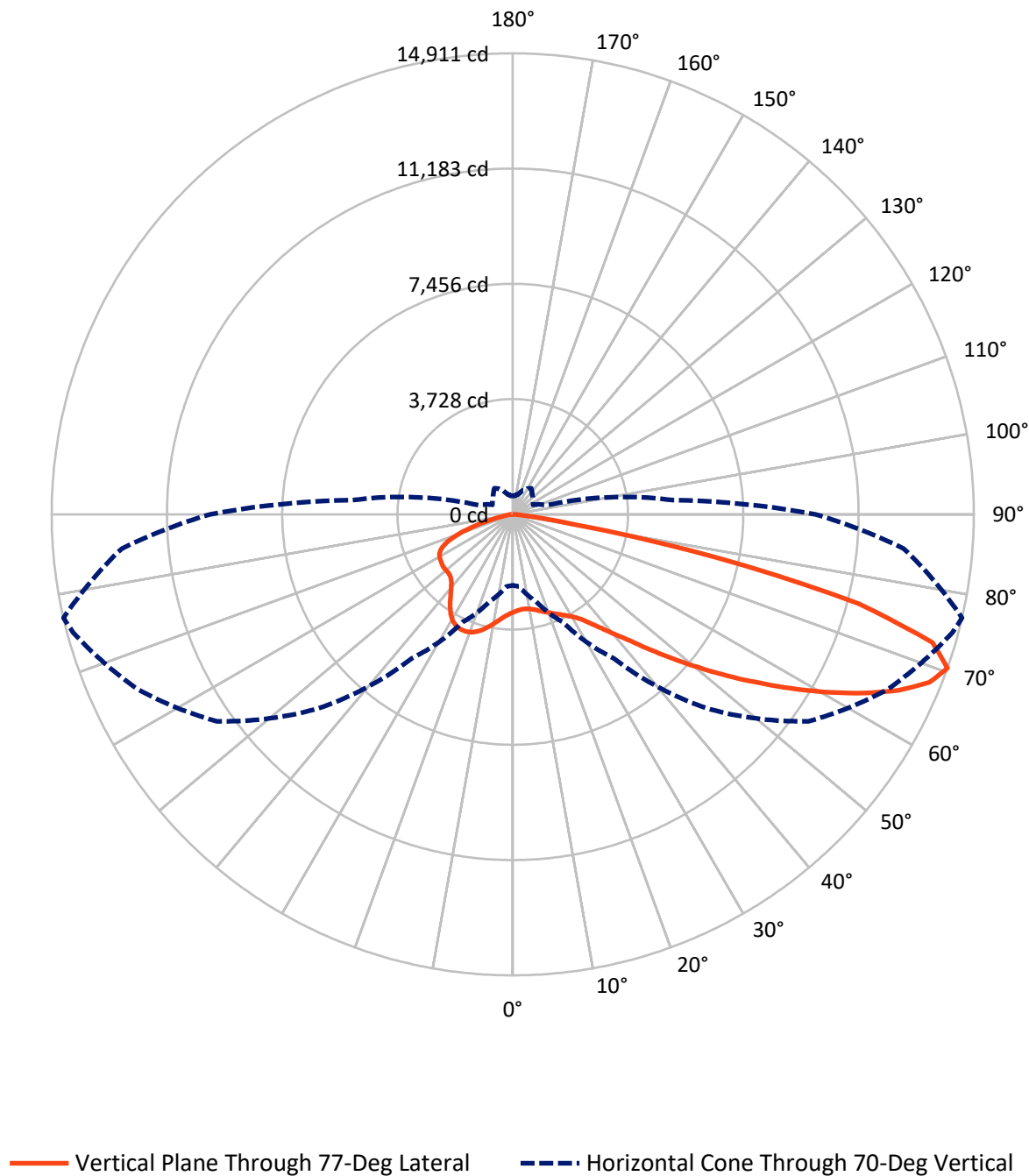


Based on 25 foot mounting height. Maximum calculated value = 6 fc

Type III - Medium - N/A

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## Luminous Intensity Polar Plot



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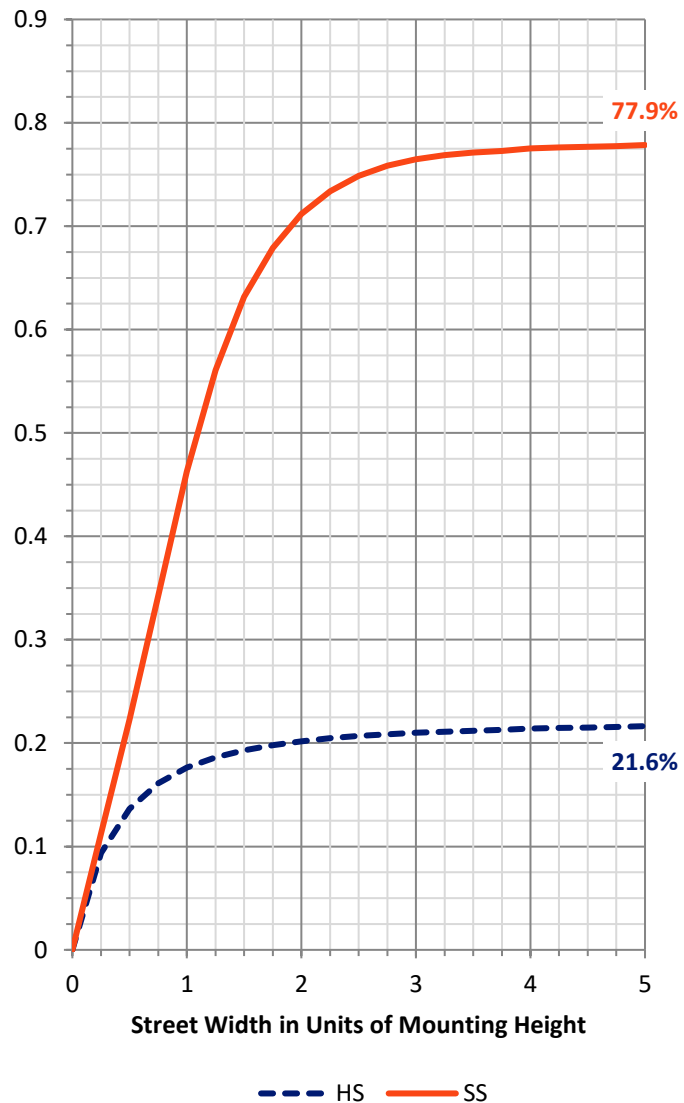
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 4961.2   | 0.0    | 4961.2  |
|                    | % Fixture | 21.9     | 0.0    | 21.9    |
| <b>Street Side</b> | Lumens    | 17694.4  | 0.0    | 17694.4 |
|                    | % Fixture | 78.1     | 0.0    | 78.1    |
| <b>Total</b>       | Lumens    | 22655.6  | 0.0    | 22655.6 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 301.4   | 1.3       |
| 10°-20°   | 870.0   | 3.8       |
| 20°-30°   | 1487.8  | 6.6       |
| 30°-40°   | 2392.5  | 10.6      |
| 40°-50°   | 3735.4  | 16.5      |
| 50°-60°   | 4989.6  | 22.0      |
| 60°-70°   | 5318.1  | 23.5      |
| 70°-80°   | 3273.8  | 14.5      |
| 80°-90°   | 286.9   | 1.3       |
| 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°    | 22655.6 | 100.0     |
| 0°-180°   | 22655.6 | 100.0     |

**Coefficient of Utilization**



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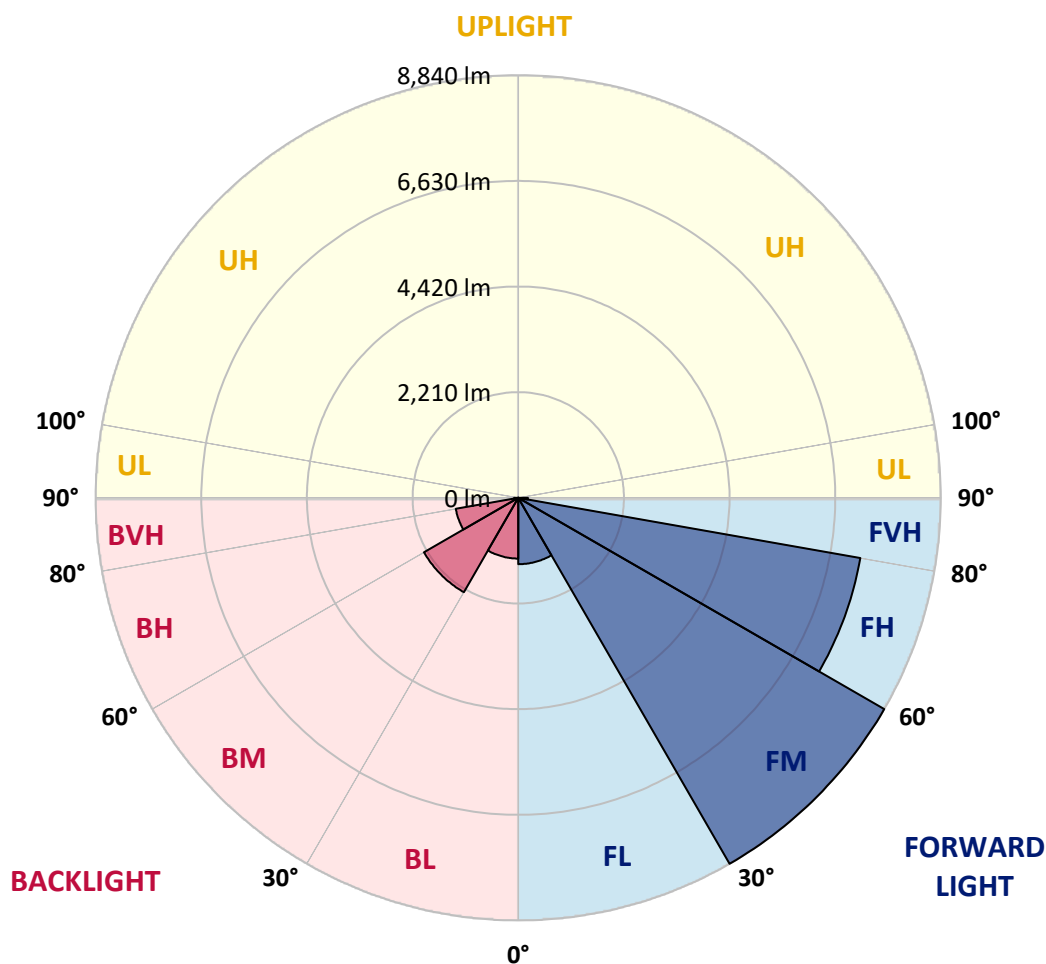
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1388.0 | 6.1       |                         |      |         |
| FM   | (30°-60°)   | 8839.7 | 39.0      |                         |      |         |
| FH   | (60°-80°)   | 7266.0 | 32.1      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 200.6  | 0.9       |                         |      | G2/225  |
| BL   | (0°-30°)    | 1271.2 | 5.6       | B3/2500                 |      |         |
| BM   | (30°-60°)   | 2277.8 | 10.1      | B2/2500                 |      |         |
| BH   | (60°-80°)   | 1325.9 | 5.9       | B3/2500                 |      | G3/2500 |
| BVH  | (80°-90°)   | 86.3   | 0.4       |                         |      | 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 III Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°     | 45°     | 55°     | 65°     | 75°     | 77°     | 85°     |
|-------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 3160.7 | 3160.7 | 3160.7 | 3160.7 | 3160.7  | 3160.7  | 3160.7  | 3160.7  | 3160.7  | 3160.7  | 3160.7  |
| 2.5°  | 2913.6 | 2912.3 | 2927.4 | 2932.1 | 2959.9  | 2979.7  | 3016.8  | 3056.2  | 3107.3  | 3113.1  | 3144.4  |
| 5°    | 2745.3 | 2745.3 | 2762.7 | 2781.2 | 2817.2  | 2856.7  | 2913.6  | 2981.9  | 3070.2  | 3084.1  | 3161.8  |
| 7.5°  | 2602.6 | 2611.8 | 2626.9 | 2662.8 | 2704.7  | 2761.6  | 2848.6  | 2946.0  | 3062.1  | 3084.1  | 3209.4  |
| 10°   | 2487.7 | 2498.1 | 2516.7 | 2545.7 | 2608.3  | 2687.2  | 2800.9  | 2926.3  | 3081.8  | 3116.6  | 3279.0  |
| 12.5° | 2451.7 | 2462.2 | 2472.6 | 2494.6 | 2552.7  | 2645.5  | 2781.2  | 2935.6  | 3129.3  | 3164.2  | 3374.2  |
| 15°   | 2535.2 | 2548.0 | 2539.8 | 2534.1 | 2564.2  | 2649.0  | 2790.6  | 2969.2  | 3188.5  | 3238.4  | 3491.4  |
| 17.5° | 2727.8 | 2732.5 | 2713.9 | 2659.4 | 2654.7  | 2700.1  | 2834.6  | 3015.7  | 3262.8  | 3317.3  | 3609.7  |
| 20°   | 3038.8 | 3030.7 | 2992.4 | 2884.6 | 2823.1  | 2813.7  | 2910.1  | 3085.2  | 3339.3  | 3397.4  | 3737.4  |
| 22.5° | 3461.2 | 3451.9 | 3375.3 | 3204.8 | 3067.8  | 2977.3  | 3019.1  | 3175.8  | 3425.2  | 3490.2  | 3861.5  |
| 25°   | 3988.0 | 3975.2 | 3862.6 | 3630.6 | 3418.3  | 3194.3  | 3167.7  | 3295.3  | 3530.8  | 3591.1  | 3991.5  |
| 27.5° | 4602.9 | 4592.5 | 4470.6 | 4164.4 | 3858.0  | 3491.4  | 3352.2  | 3435.7  | 3641.0  | 3709.5  | 4137.6  |
| 30°   | 5264.3 | 5294.4 | 5078.7 | 4749.1 | 4361.6  | 3878.9  | 3600.4  | 3608.5  | 3783.8  | 3845.3  | 4315.1  |
| 32.5° | 6041.7 | 6093.9 | 5834.0 | 5416.3 | 4887.2  | 4300.1  | 3913.7  | 3849.9  | 3991.5  | 4042.5  | 4539.1  |
| 35°   | 6812.2 | 6871.3 | 6655.5 | 6193.7 | 5584.5  | 4796.7  | 4240.9  | 4127.2  | 4267.6  | 4323.2  | 4836.2  |
| 37.5° | 7478.1 | 7557.0 | 7445.6 | 7044.2 | 6330.6  | 5395.4  | 4667.8  | 4453.2  | 4607.6  | 4677.2  | 5235.3  |
| 40°   | 8003.7 | 8124.5 | 8116.3 | 7865.6 | 7210.2  | 6121.7  | 5209.8  | 4855.8  | 5029.9  | 5105.3  | 5719.1  |
| 42.5° | 8430.7 | 8535.2 | 8625.7 | 8612.9 | 8127.9  | 6946.7  | 5846.8  | 5379.2  | 5511.4  | 5598.4  | 6263.3  |
| 45°   | 8725.4 | 8836.8 | 9031.8 | 9241.8 | 9010.9  | 7829.7  | 6576.6  | 5999.9  | 6120.6  | 6251.7  | 6911.9  |
| 47.5° | 8988.8 | 9115.3 | 9368.3 | 9701.3 | 9760.5  | 8716.2  | 7376.0  | 6722.8  | 6833.1  | 6968.8  | 7562.9  |
| 50°   | 9012.1 | 9121.2 | 9513.3 | 9985.6 | 10293.0 | 9567.9  | 8234.6  | 7533.9  | 7637.1  | 7782.1  | 8260.2  |
| 52.5° | 8451.6 | 8623.3 | 9307.9 | 9977.5 | 10537.8 | 10280.2 | 9087.4  | 8377.3  | 8493.4  | 8667.4  | 8981.9  |
| 55°   | 6560.3 | 6812.2 | 8705.7 | 9666.5 | 10450.8 | 10740.9 | 9898.5  | 9274.3  | 9422.8  | 9605.0  | 9708.3  |
| 57.5° | 5650.6 | 5760.9 | 6910.8 | 9100.3 | 10054.0 | 10860.4 | 10583.1 | 10180.5 | 10419.5 | 10619.1 | 10476.3 |
| 60°   | 5078.7 | 5170.3 | 5850.2 | 8219.6 | 9531.9  | 10671.3 | 11112.2 | 11025.2 | 11438.3 | 11676.1 | 11261.9 |
| 62.5° | 4466.0 | 4553.0 | 5171.4 | 6863.2 | 8863.6  | 10356.8 | 11446.4 | 11804.9 | 12482.6 | 12742.4 | 12002.1 |
| 65°   | 3858.0 | 3932.3 | 4525.2 | 5766.6 | 8014.2  | 10042.4 | 11619.3 | 12479.1 | 13449.0 | 13718.2 | 12617.1 |
| 67.5° | 3180.4 | 3241.9 | 3802.3 | 4865.2 | 6981.5  | 9611.9  | 11705.1 | 13009.3 | 14290.2 | 14521.2 | 12921.2 |
| 70°   | 2295.1 | 2342.6 | 2921.7 | 3847.5 | 5685.5  | 8871.7  | 11670.3 | 13385.3 | 14726.6 | 14911.0 | 12691.3 |
| 72.5° | 1084.9 | 1127.8 | 1807.8 | 2498.1 | 4015.8  | 7430.5  | 10966.0 | 13087.0 | 14283.3 | 14191.6 | 11285.0 |
| 75°   | 579.0  | 616.1  | 1038.4 | 1370.3 | 2121.0  | 5093.7  | 8973.8  | 11273.5 | 11994.0 | 11548.5 | 8340.2  |
| 77.5° | 392.2  | 421.2  | 642.8  | 822.7  | 968.8   | 2418.1  | 5767.9  | 7805.4  | 7509.5  | 6773.8  | 4177.1  |
| 80°   | 311.0  | 341.1  | 526.7  | 557.0  | 468.7   | 873.7   | 2383.2  | 3613.2  | 2595.6  | 2075.7  | 1188.2  |
| 82.5° | 239.0  | 272.6  | 443.2  | 403.7  | 255.2   | 358.5   | 693.8   | 1142.9  | 664.8   | 505.9   | 287.7   |
| 85°   | 146.2  | 182.1  | 348.1  | 257.6  | 143.9   | 163.6   | 235.5   | 318.0   | 203.1   | 169.4   | 103.2   |
| 87.5° | 74.2   | 104.4  | 176.4  | 94.0   | 65.0    | 38.3    | 62.6    | 62.6    | 53.4    | 46.4    | 26.6    |
| 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°    | 3160.7  | 3160.7 | 3160.7 | 3160.7 | 3160.7 | 3160.7 | 3160.7 | 3160.7 | 3160.7 | 3160.7 | 3160.7 |
| 2.5°  | 3172.3  | 3195.4 | 3234.9 | 3272.0 | 3301.0 | 3328.9 | 3356.8 | 3371.8 | 3376.5 | 3395.0 | 3405.5 |
| 5°    | 3209.4  | 3252.3 | 3328.9 | 3400.8 | 3446.0 | 3473.9 | 3493.7 | 3505.3 | 3507.6 | 3513.4 | 3522.7 |
| 7.5°  | 3277.8  | 3346.3 | 3453.0 | 3525.0 | 3558.6 | 3556.3 | 3548.2 | 3519.2 | 3507.6 | 3497.2 | 3499.5 |
| 10°   | 3374.2  | 3464.7 | 3595.8 | 3645.6 | 3624.8 | 3569.0 | 3497.2 | 3412.4 | 3373.0 | 3334.7 | 3323.2 |
| 12.5° | 3493.7  | 3608.5 | 3737.4 | 3735.0 | 3631.8 | 3489.0 | 3321.9 | 3192.0 | 3109.6 | 3050.4 | 3036.5 |
| 15°   | 3638.7  | 3771.0 | 3869.6 | 3790.7 | 3564.4 | 3308.0 | 3063.2 | 2893.8 | 2819.6 | 2754.6 | 2747.6 |
| 17.5° | 3788.4  | 3930.0 | 3975.2 | 3773.3 | 3395.0 | 3039.9 | 2762.7 | 2629.2 | 2556.1 | 2521.3 | 2531.8 |
| 20°   | 3934.6  | 4075.0 | 4037.9 | 3673.5 | 3137.4 | 2736.0 | 2488.8 | 2415.7 | 2400.7 | 2408.8 | 2405.3 |
| 22.5° | 4088.9  | 4214.2 | 4050.6 | 3480.9 | 2809.1 | 2425.0 | 2289.2 | 2291.6 | 2325.2 | 2349.6 | 2355.4 |
| 25°   | 4246.7  | 4331.4 | 4017.0 | 3202.4 | 2456.3 | 2196.5 | 2162.8 | 2200.0 | 2266.1 | 2313.6 | 2326.4 |
| 27.5° | 4398.7  | 4435.8 | 3943.9 | 2857.8 | 2153.5 | 2032.9 | 2038.6 | 2115.2 | 2215.0 | 2281.1 | 2297.4 |
| 30°   | 4570.5  | 4528.7 | 3803.5 | 2470.2 | 1943.5 | 1892.5 | 1941.1 | 2030.5 | 2130.4 | 2189.5 | 2203.4 |
| 32.5° | 4764.2  | 4608.7 | 3580.7 | 2111.7 | 1795.0 | 1779.9 | 1860.0 | 1918.0 | 1962.1 | 1979.5 | 1988.7 |
| 35°   | 5005.6  | 4721.3 | 3295.3 | 1860.0 | 1661.5 | 1697.5 | 1774.1 | 1745.1 | 1727.6 | 1718.4 | 1727.6 |
| 37.5° | 5318.8  | 4873.3 | 2961.1 | 1696.4 | 1553.6 | 1638.4 | 1669.6 | 1579.2 | 1510.7 | 1477.0 | 1485.2 |
| 40°   | 5695.9  | 5096.0 | 2639.7 | 1569.9 | 1485.2 | 1587.3 | 1532.8 | 1423.7 | 1336.7 | 1289.1 | 1292.5 |
| 42.5° | 6114.7  | 5329.3 | 2369.3 | 1474.8 | 1446.9 | 1545.5 | 1431.8 | 1301.9 | 1161.4 | 1146.4 | 1161.4 |
| 45°   | 6554.6  | 5569.4 | 2184.9 | 1401.7 | 1428.3 | 1509.5 | 1373.8 | 1163.8 | 1063.9 | 1125.4 | 1157.9 |
| 47.5° | 6994.3  | 5789.9 | 2073.5 | 1347.2 | 1419.0 | 1468.9 | 1322.8 | 1087.2 | 1016.4 | 1105.8 | 1147.5 |
| 50°   | 7483.9  | 5987.1 | 2023.6 | 1307.7 | 1408.6 | 1452.7 | 1246.2 | 1067.4 | 966.6  | 1025.7 | 1069.8 |
| 52.5° | 7970.1  | 6140.3 | 1986.4 | 1268.2 | 1393.5 | 1439.9 | 1209.0 | 1044.3 | 906.2  | 909.7  | 934.1  |
| 55°   | 8455.1  | 6240.1 | 1945.9 | 1216.0 | 1359.9 | 1412.0 | 1205.5 | 1018.7 | 860.9  | 844.7  | 856.3  |
| 57.5° | 8972.6  | 6297.0 | 1895.9 | 1157.9 | 1301.9 | 1341.3 | 1202.1 | 999.1  | 847.1  | 820.3  | 823.8  |
| 60°   | 9499.4  | 6380.5 | 1831.0 | 1087.2 | 1224.2 | 1256.6 | 1193.9 | 992.1  | 838.9  | 793.7  | 797.1  |
| 62.5° | 9971.6  | 6409.5 | 1753.3 | 1019.9 | 1124.3 | 1173.1 | 1176.5 | 986.3  | 816.8  | 739.1  | 739.1  |
| 65°   | 10281.5 | 6284.2 | 1617.4 | 943.3  | 1016.4 | 1087.2 | 1142.9 | 966.6  | 777.4  | 699.7  | 699.7  |
| 67.5° | 10268.7 | 5926.9 | 1405.2 | 844.7  | 912.0  | 992.1  | 1094.2 | 932.9  | 729.8  | 651.0  | 654.4  |
| 70°   | 9790.6  | 5221.3 | 1135.9 | 729.8  | 797.1  | 889.9  | 1031.5 | 883.0  | 673.0  | 597.6  | 604.5  |
| 72.5° | 8397.1  | 4086.6 | 825.0  | 595.2  | 663.7  | 784.3  | 950.3  | 822.7  | 615.0  | 550.0  | 546.5  |
| 75°   | 5998.7  | 2586.3 | 559.2  | 457.2  | 516.3  | 664.8  | 849.3  | 751.8  | 561.6  | 552.3  | 521.0  |
| 77.5° | 3064.3  | 1235.7 | 370.1  | 334.2  | 359.7  | 524.5  | 713.6  | 671.8  | 569.7  | 456.0  | 406.1  |
| 80°   | 996.7   | 456.0  | 233.2  | 227.4  | 239.0  | 349.2  | 552.3  | 551.1  | 431.6  | 309.8  | 273.9  |
| 82.5° | 318.0   | 196.1  | 152.0  | 146.2  | 140.4  | 219.2  | 385.2  | 436.2  | 291.2  | 196.1  | 195.0  |
| 85°   | 126.5   | 117.2  | 89.4   | 82.4   | 59.1   | 103.2  | 201.9  | 290.1  | 217.0  | 141.6  | 145.0  |
| 87.5° | 46.4    | 46.4   | 24.4   | 17.4   | 12.8   | 34.8   | 54.5   | 87.0   | 124.1  | 73.1   | 72.0   |
| 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)