

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: P966842

Luminaire Tested: **NAV-SB4C-830-U-T4W-HSS**

Issue Date: 1/21/2025

### Test Information

Test Method: LM-79-08  
Report Number: P966842  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB4C-830-U-T4W-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV WIDE  
OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: -

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 21293.3 lumens  
Efficiency: N/A  
Efficacy: 106.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G4

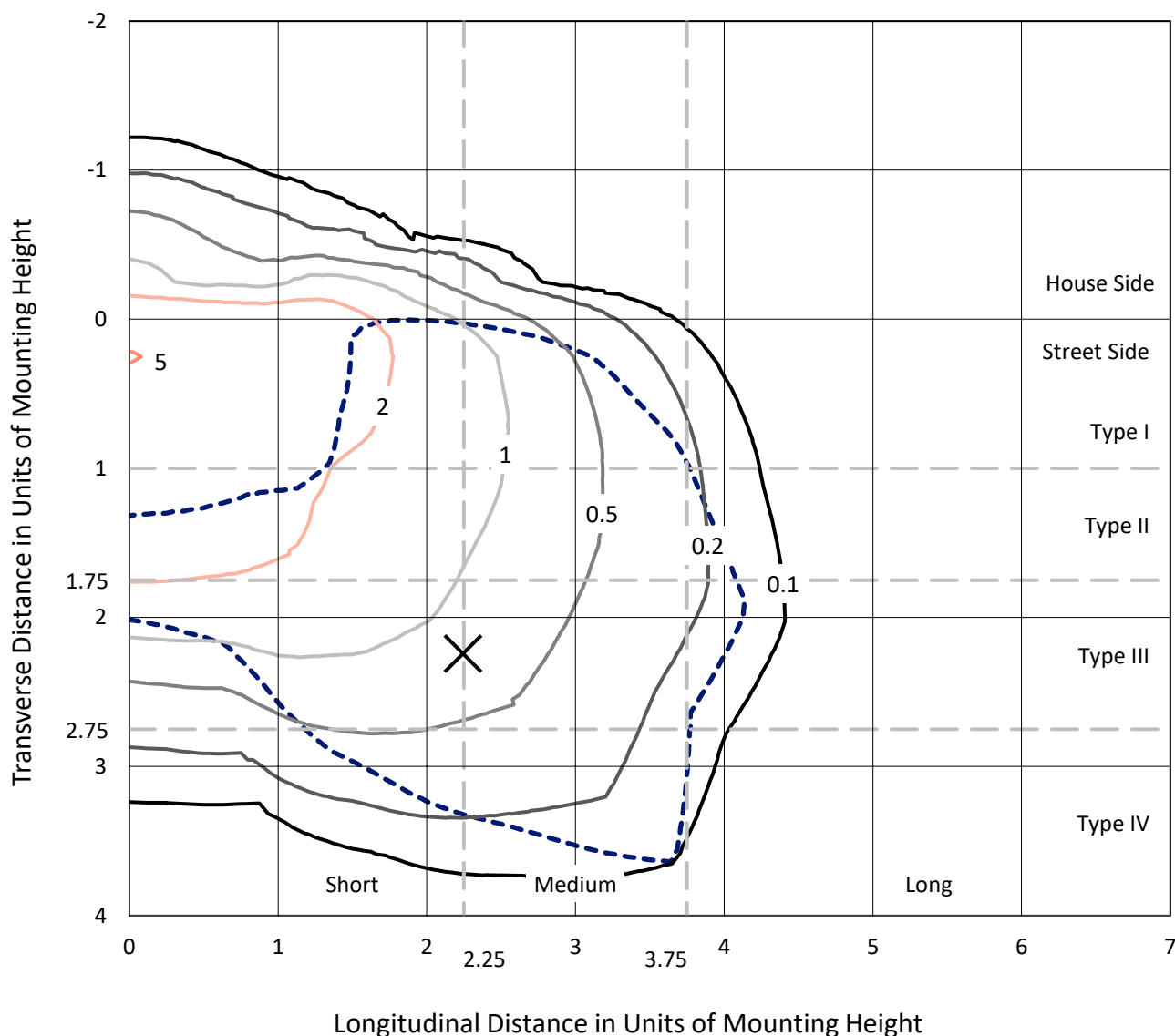
Input Watts (W): 200.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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## Iso-Footcandle Lines of Horizontal Illumination

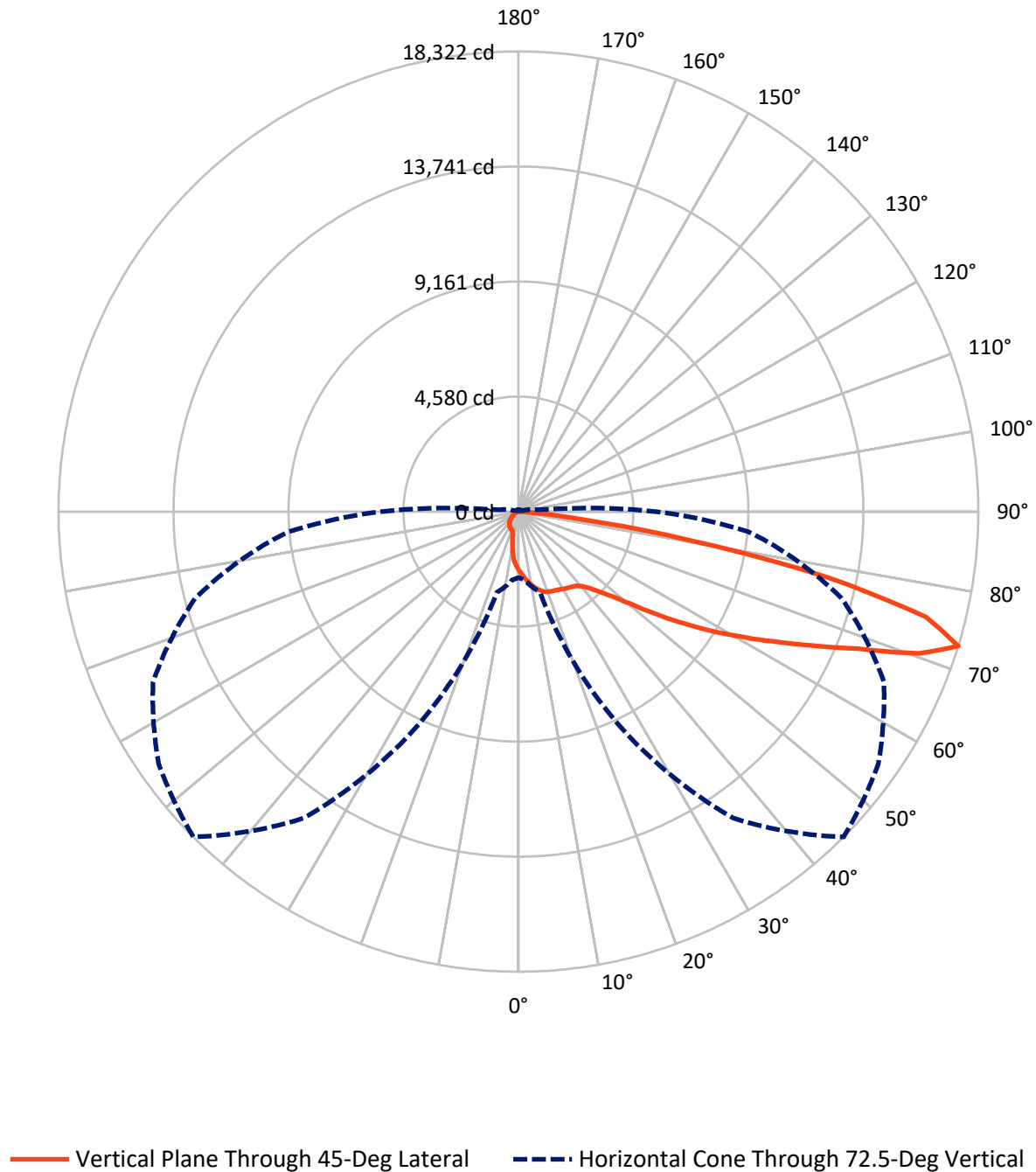
× Max cd  
 - - - 1/2 Max cd



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

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## Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 2237.3   | 0.0    | 2237.3  |
|                    | % Fixture | 10.5     | 0.0    | 10.5    |
| <b>Street Side</b> | Lumens    | 19056.0  | 0.0    | 19056.0 |
|                    | % Fixture | 89.5     | 0.0    | 89.5    |
| <b>Total</b>       | Lumens    | 21293.3  | 0.0    | 21293.3 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 219.8   | 1.0       |
| 10°-20°   | 642.4   | 3.0       |
| 20°-30°   | 1054.9  | 5.0       |
| 30°-40°   | 1496.0  | 7.0       |
| 40°-50°   | 2472.8  | 11.6      |
| 50°-60°   | 4442.0  | 20.9      |
| 60°-70°   | 6168.0  | 29.0      |
| 70°-80°   | 4474.1  | 21.0      |
| 80°-90°   | 323.5   | 1.5       |
| 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°    | 21293.3 | 100.0     |
| 0°-180°   | 21293.3 | 100.0     |

**Coefficient of Utilization**



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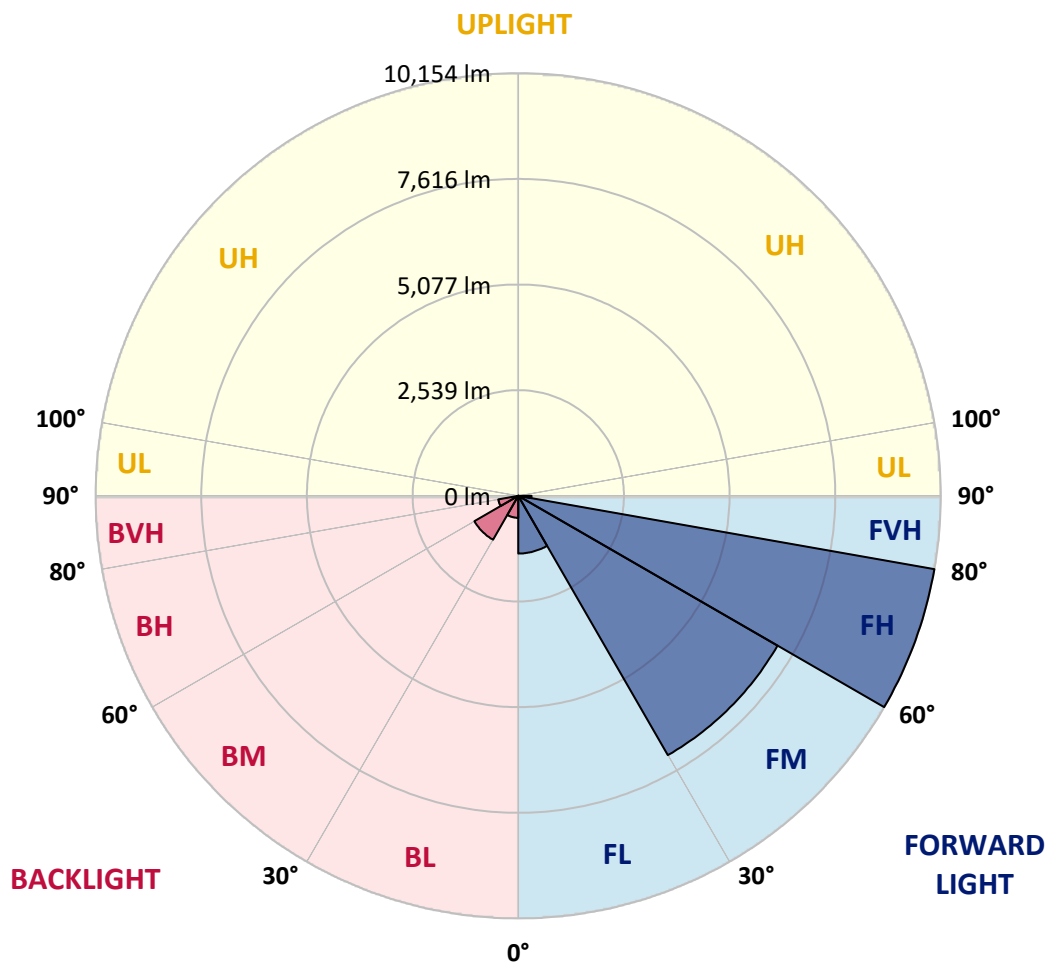
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |          |
|------|-------------|---------|-----------|-------------------------|------|----------|
|      |             |         |           | B                       | U    | G        |
| FL   | (0°-30°)    | 1387.1  | 6.5       |                         |      |          |
| FM   | (30°-60°)   | 7194.0  | 33.8      |                         |      |          |
| FH   | (60°-80°)   | 10154.2 | 47.7      |                         |      | G4/12000 |
| FVH  | (80°-90°)   | 320.7   | 1.5       |                         |      | G3/500   |
| BL   | (0°-30°)    | 529.9   | 2.5       | B2/1000                 |      |          |
| BM   | (30°-60°)   | 1216.8  | 5.7       | B2/2500                 |      |          |
| BH   | (60°-80°)   | 487.9   | 2.3       | B1/500                  |      | G1/500   |
| BVH  | (80°-90°)   | 2.7     | 0.0       |                         |      | G0/10    |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |          |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |          |

**BUG Rating: B2-U0-G4**

Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 46°     | 55°     | 65°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 2332.7  | 2332.7  | 2332.7  | 2332.7  | 2332.7  | 2332.7  | 2332.7  | 2332.7  | 2332.7  | 2332.7  | 2332.7  |
| 2.5°  | 2547.8  | 2552.1  | 2549.3  | 2531.9  | 2502.7  | 2486.8  | 2478.0  | 2449.0  | 2430.1  | 2396.7  | 2361.8  |
| 5°    | 2781.8  | 2799.3  | 2789.1  | 2754.2  | 2699.0  | 2659.8  | 2648.1  | 2588.5  | 2534.7  | 2472.3  | 2399.6  |
| 7.5°  | 3030.4  | 3039.1  | 3020.2  | 2975.2  | 2901.1  | 2834.1  | 2824.0  | 2741.2  | 2655.4  | 2559.4  | 2460.6  |
| 10°   | 3245.5  | 3255.6  | 3226.6  | 3161.2  | 3076.8  | 2994.0  | 2979.5  | 2887.9  | 2786.2  | 2668.5  | 2542.0  |
| 12.5° | 3425.7  | 3435.9  | 3398.1  | 3319.6  | 3226.6  | 3140.8  | 3126.2  | 3030.4  | 2918.5  | 2787.7  | 2630.7  |
| 15°   | 3562.3  | 3581.2  | 3530.3  | 3446.0  | 3345.8  | 3260.0  | 3252.7  | 3158.2  | 3049.3  | 2903.9  | 2736.7  |
| 17.5° | 3642.2  | 3661.2  | 3613.2  | 3511.4  | 3425.7  | 3353.0  | 3344.3  | 3265.9  | 3164.1  | 3024.6  | 2840.0  |
| 20°   | 3655.4  | 3672.8  | 3621.9  | 3533.3  | 3462.0  | 3403.9  | 3399.5  | 3342.8  | 3268.7  | 3135.1  | 2951.9  |
| 22.5° | 3616.1  | 3637.9  | 3591.4  | 3520.2  | 3470.8  | 3440.2  | 3434.5  | 3402.5  | 3360.3  | 3246.9  | 3056.5  |
| 25°   | 3575.4  | 3592.8  | 3558.0  | 3495.5  | 3469.3  | 3466.3  | 3470.8  | 3464.9  | 3456.2  | 3360.3  | 3178.6  |
| 27.5° | 3572.5  | 3591.4  | 3552.1  | 3492.6  | 3478.0  | 3508.6  | 3512.9  | 3540.6  | 3547.8  | 3463.5  | 3296.3  |
| 30°   | 3597.2  | 3610.3  | 3572.5  | 3510.0  | 3502.7  | 3572.5  | 3574.0  | 3623.4  | 3635.0  | 3550.7  | 3412.6  |
| 32.5° | 3650.9  | 3665.5  | 3627.7  | 3536.1  | 3526.0  | 3623.4  | 3627.7  | 3693.2  | 3712.0  | 3643.7  | 3534.7  |
| 35°   | 3777.4  | 3794.9  | 3751.3  | 3608.8  | 3572.5  | 3671.3  | 3684.4  | 3761.4  | 3799.3  | 3742.6  | 3661.2  |
| 37.5° | 4092.8  | 4042.0  | 3982.3  | 3755.6  | 3678.6  | 3746.9  | 3768.7  | 3858.8  | 3925.6  | 3860.3  | 3812.3  |
| 40°   | 4876.2  | 4716.3  | 4530.3  | 4005.6  | 3864.7  | 3908.2  | 3925.6  | 4015.7  | 4107.4  | 4043.4  | 4020.2  |
| 42.5° | 6052.0  | 5863.1  | 5563.7  | 4581.1  | 4145.1  | 4166.9  | 4180.1  | 4258.5  | 4387.8  | 4337.0  | 4342.8  |
| 45°   | 7100.0  | 7031.6  | 6726.4  | 5563.7  | 4669.8  | 4562.3  | 4578.3  | 4619.0  | 4809.4  | 4790.4  | 4828.3  |
| 47.5° | 7905.1  | 7865.8  | 7630.4  | 6691.5  | 5556.4  | 5046.3  | 5091.3  | 5110.2  | 5384.9  | 5451.8  | 5553.4  |
| 50°   | 8524.3  | 8509.8  | 8299.0  | 7694.4  | 6714.8  | 5759.9  | 5775.9  | 5735.2  | 6146.5  | 6312.2  | 6505.5  |
| 52.5° | 9108.6  | 9158.0  | 9002.5  | 8626.0  | 7951.6  | 6694.5  | 6691.5  | 6499.6  | 7054.9  | 7304.9  | 7634.8  |
| 55°   | 9636.1  | 9653.6  | 9669.5  | 9576.6  | 9195.8  | 7758.3  | 7730.8  | 7416.8  | 8108.6  | 8367.3  | 8724.9  |
| 57.5° | 10131.7 | 10139.0 | 10281.5 | 10471.8 | 10490.8 | 8900.7  | 8849.8  | 8473.4  | 9259.7  | 9444.2  | 9663.8  |
| 60°   | 10464.6 | 10498.0 | 10798.9 | 11327.9 | 11559.0 | 10079.4 | 10051.9 | 9668.1  | 10431.1 | 10516.9 | 10476.2 |
| 62.5° | 9984.9  | 10188.4 | 10947.1 | 11996.5 | 12567.7 | 11386.0 | 11373.0 | 11012.5 | 11663.7 | 11593.9 | 11245.1 |
| 65°   | 8082.4  | 8426.9  | 9761.2  | 12448.5 | 13557.5 | 12845.3 | 12864.2 | 12480.5 | 12929.6 | 12702.8 | 11870.0 |
| 67.5° | 5653.8  | 6017.2  | 7595.6  | 12484.8 | 14663.5 | 14558.9 | 14667.9 | 14066.2 | 14273.9 | 13765.3 | 12018.3 |
| 70°   | 3909.7  | 4097.1  | 5124.7  | 11702.9 | 15525.4 | 16919.2 | 16916.3 | 16013.8 | 15611.2 | 14249.2 | 11262.5 |
| 72.5° | 2629.2  | 2726.6  | 3328.3  | 9284.4  | 14891.7 | 18321.8 | 18237.4 | 17502.1 | 16061.6 | 13326.3 | 9201.5  |
| 75°   | 1108.9  | 1180.2  | 1540.6  | 5217.8  | 11781.3 | 16762.2 | 16534.1 | 15467.2 | 14271.1 | 10493.6 | 5741.0  |
| 77.5° | 351.7   | 382.2   | 607.5   | 1867.7  | 6489.5  | 12599.6 | 12358.4 | 9659.4  | 9564.9  | 5264.3  | 2098.7  |
| 80°   | 167.2   | 194.7   | 341.5   | 750.0   | 2553.7  | 6852.8  | 6819.4  | 4382.1  | 4114.7  | 1421.5  | 421.5   |
| 82.5° | 72.7    | 85.8    | 188.9   | 401.2   | 1142.4  | 2444.6  | 2494.0  | 1491.2  | 1234.0  | 539.3   | 129.4   |
| 85°   | 23.3    | 30.5    | 87.2    | 184.6   | 482.6   | 607.5   | 600.2   | 354.6   | 497.0   | 293.6   | 45.1    |
| 87.5° | 0.0     | 0.0     | 29.1    | 42.1    | 49.4    | 34.8    | 39.3    | 30.5    | 138.1   | 81.4    | 16.0    |
| 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°    | 2332.7 | 2332.7 | 2332.7 | 2332.7 | 2332.7 | 2332.7 | 2332.7 | 2332.7 | 2332.7 | 2332.7 | 2332.7 |
| 2.5°  | 2344.4 | 2321.1 | 2280.4 | 2242.6 | 2209.2 | 2175.8 | 2155.4 | 2126.4 | 2123.4 | 2123.4 | 2130.7 |
| 5°    | 2360.4 | 2322.5 | 2249.9 | 2172.9 | 2084.2 | 1999.9 | 1915.6 | 1834.2 | 1808.1 | 1789.1 | 1797.8 |
| 7.5°  | 2406.9 | 2347.2 | 2232.4 | 2085.7 | 1917.1 | 1732.5 | 1603.1 | 1463.6 | 1409.8 | 1380.8 | 1385.1 |
| 10°   | 2473.7 | 2392.4 | 2217.9 | 1960.6 | 1687.5 | 1436.0 | 1251.4 | 1100.2 | 1042.1 | 1017.4 | 1017.4 |
| 12.5° | 2547.8 | 2447.6 | 2191.8 | 1805.1 | 1436.0 | 1135.1 | 954.9  | 885.1  | 876.4  | 876.4  | 876.4  |
| 15°   | 2636.5 | 2514.4 | 2146.7 | 1622.1 | 1172.9 | 898.2  | 834.2  | 837.1  | 845.9  | 851.7  | 851.7  |
| 17.5° | 2728.0 | 2585.7 | 2075.5 | 1417.1 | 940.3  | 808.1  | 809.5  | 814.0  | 821.2  | 827.0  | 827.0  |
| 20°   | 2826.8 | 2656.8 | 1981.0 | 1199.0 | 806.7  | 782.0  | 786.3  | 790.7  | 796.4  | 799.4  | 800.8  |
| 22.5° | 2933.0 | 2723.7 | 1869.1 | 985.4  | 761.6  | 760.1  | 761.6  | 766.0  | 773.3  | 773.3  | 776.1  |
| 25°   | 3046.4 | 2797.8 | 1741.2 | 829.9  | 738.3  | 738.3  | 741.3  | 744.2  | 750.0  | 750.0  | 751.4  |
| 27.5° | 3162.6 | 2866.1 | 1606.1 | 748.6  | 718.0  | 716.6  | 716.6  | 720.9  | 723.8  | 725.3  | 726.7  |
| 30°   | 3290.6 | 2946.1 | 1470.9 | 731.0  | 702.0  | 694.7  | 690.3  | 693.3  | 696.2  | 697.6  | 700.6  |
| 32.5° | 3421.3 | 3023.1 | 1350.2 | 738.3  | 686.0  | 672.9  | 658.4  | 655.5  | 655.5  | 661.3  | 665.6  |
| 35°   | 3566.7 | 3107.4 | 1257.2 | 763.0  | 677.3  | 640.9  | 617.7  | 604.6  | 606.1  | 614.8  | 619.2  |
| 37.5° | 3741.0 | 3209.2 | 1188.9 | 784.8  | 671.5  | 604.6  | 566.8  | 550.8  | 540.7  | 550.8  | 548.0  |
| 40°   | 3969.3 | 3358.8 | 1139.5 | 802.3  | 664.2  | 562.5  | 511.6  | 485.4  | 466.6  | 472.3  | 469.4  |
| 42.5° | 4305.0 | 3594.3 | 1120.6 | 803.7  | 648.2  | 513.0  | 454.9  | 420.0  | 392.5  | 393.9  | 388.1  |
| 45°   | 4775.9 | 3966.3 | 1218.0 | 784.8  | 613.4  | 459.3  | 395.3  | 348.8  | 331.4  | 327.0  | 321.2  |
| 47.5° | 5421.2 | 4508.5 | 1443.2 | 745.6  | 562.5  | 406.9  | 337.2  | 298.0  | 284.8  | 277.6  | 273.3  |
| 50°   | 6286.0 | 5204.6 | 1693.2 | 702.0  | 511.6  | 357.5  | 289.3  | 264.6  | 255.8  | 248.6  | 247.1  |
| 52.5° | 7288.9 | 5911.1 | 1898.2 | 658.4  | 460.7  | 314.0  | 258.7  | 244.2  | 236.9  | 231.1  | 229.6  |
| 55°   | 8208.9 | 6397.9 | 1886.5 | 611.9  | 411.3  | 279.0  | 236.9  | 228.2  | 219.5  | 213.6  | 210.7  |
| 57.5° | 8781.6 | 6466.2 | 1555.1 | 561.0  | 354.6  | 251.4  | 216.6  | 210.7  | 200.6  | 193.3  | 191.9  |
| 60°   | 9044.6 | 6076.7 | 1090.1 | 494.2  | 298.0  | 225.3  | 194.7  | 191.9  | 178.8  | 168.6  | 165.6  |
| 62.5° | 9092.6 | 5353.0 | 726.7  | 411.3  | 248.6  | 200.6  | 172.9  | 168.6  | 151.2  | 133.8  | 124.9  |
| 65°   | 8897.8 | 4318.1 | 502.9  | 321.2  | 212.2  | 174.5  | 148.2  | 139.5  | 120.6  | 103.2  | 97.4   |
| 67.5° | 8281.6 | 3031.8 | 350.2  | 231.1  | 180.2  | 138.1  | 117.8  | 114.8  | 100.2  | 85.8   | 81.4   |
| 70°   | 7152.2 | 1728.2 | 234.0  | 172.9  | 142.5  | 94.5   | 93.0   | 95.9   | 81.4   | 69.8   | 64.0   |
| 72.5° | 5483.7 | 790.7  | 145.3  | 126.5  | 97.4   | 64.0   | 74.1   | 75.5   | 62.5   | 52.3   | 46.5   |
| 75°   | 3228.0 | 338.7  | 91.5   | 81.4   | 49.4   | 42.1   | 53.8   | 55.2   | 42.1   | 33.4   | 29.1   |
| 77.5° | 1098.8 | 127.9  | 58.1   | 48.0   | 24.7   | 23.3   | 34.8   | 34.8   | 23.3   | 13.1   | 10.1   |
| 80°   | 250.0  | 48.0   | 29.1   | 18.9   | 11.6   | 10.1   | 11.6   | 10.1   | 5.8    | 1.4    | 0.0    |
| 82.5° | 71.2   | 18.9   | 11.6   | 7.3    | 4.4    | 4.4    | 1.4    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 20.4   | 8.7    | 2.9    | 2.9    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 8.7    | 1.4    | 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)