

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: P964181

Luminaire Tested: **NAV-SB3B-830-U-AFL-HSS**

Issue Date: 1/21/2025

#### Test Information

Test Method: LM-79-08  
Report Number: P964181  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-15)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB3B-830-U-AFL-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(3) 80 CRI, 3000K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND AUTOMOTIVE  
FRONTLINE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: -

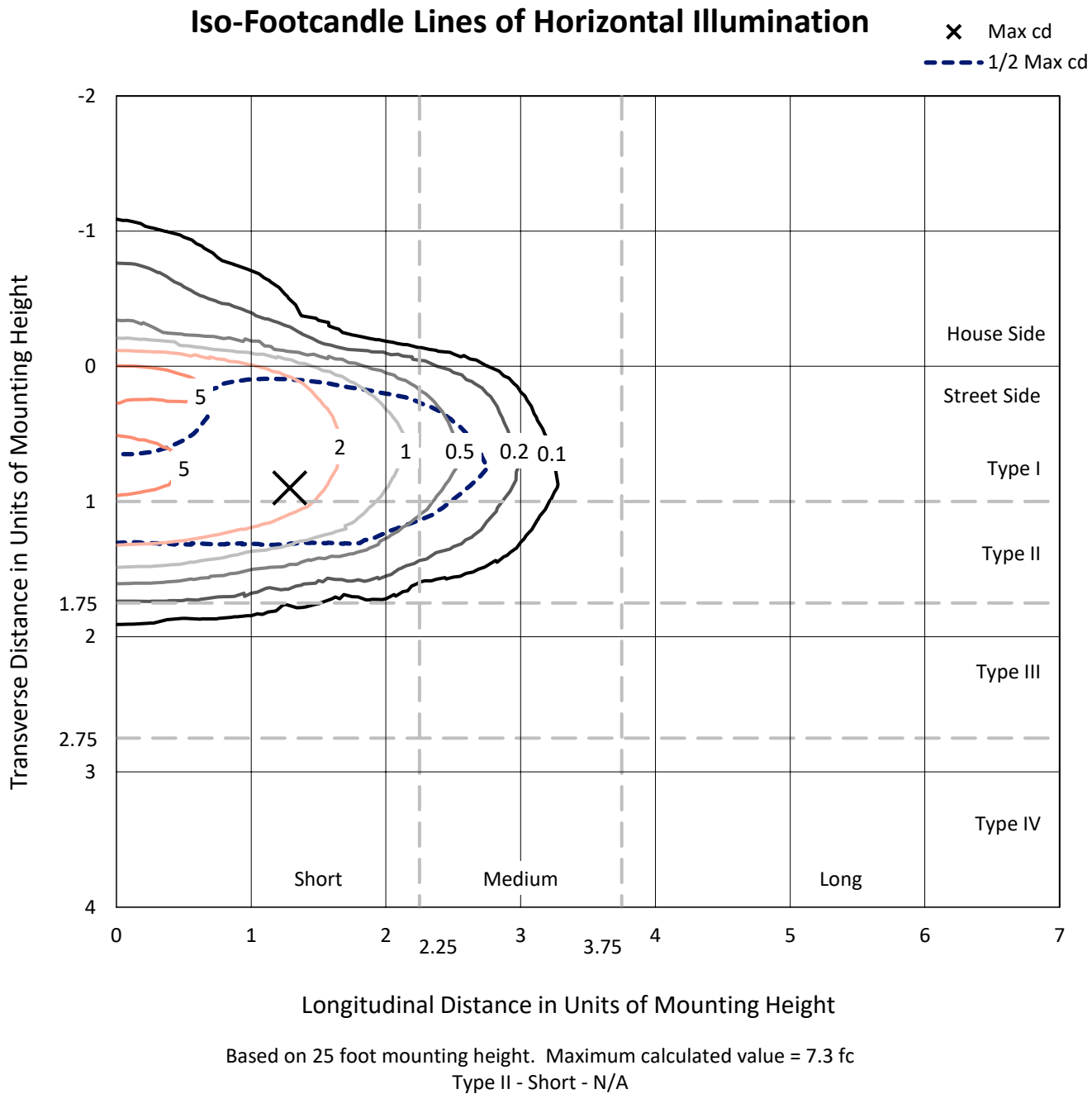
#### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 13267.6 lumens  
Efficiency: N/A  
Efficacy: 121.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G2

Input Watts (W): 109.2  
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

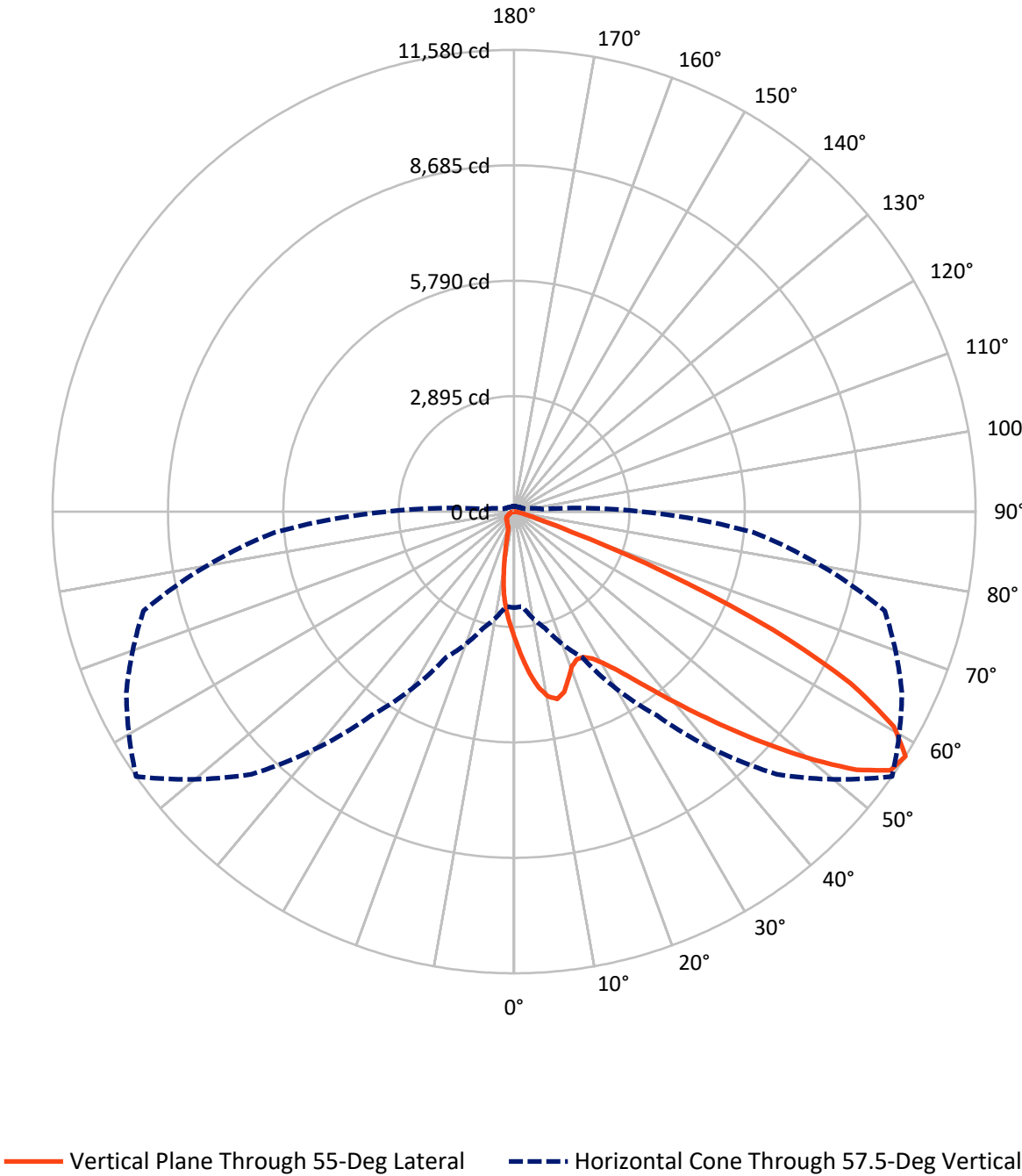


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Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 1036.1   | 0.0    | 1036.1  |
|                    | % Fixture | 7.8      | 0.0    | 7.8     |
| <b>Street Side</b> | Lumens    | 12231.5  | 0.0    | 12231.5 |
|                    | % Fixture | 92.2     | 0.0    | 92.2    |
| <b>Total</b>       | Lumens    | 13267.6  | 0.0    | 13267.6 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 297.5   | 2.2       |
| 10°-20°   | 718.6   | 5.4       |
| 20°-30°   | 1149.7  | 8.7       |
| 30°-40°   | 1945.9  | 14.7      |
| 40°-50°   | 3194.8  | 24.1      |
| 50°-60°   | 3511.3  | 26.5      |
| 60°-70°   | 2014.1  | 15.2      |
| 70°-80°   | 411.5   | 3.1       |
| 80°-90°   | 24.3    | 0.2       |
| 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°    | 13267.6 | 100.0     |
| 0°-180°   | 13267.6 | 100.0     |

**Coefficient of Utilization**



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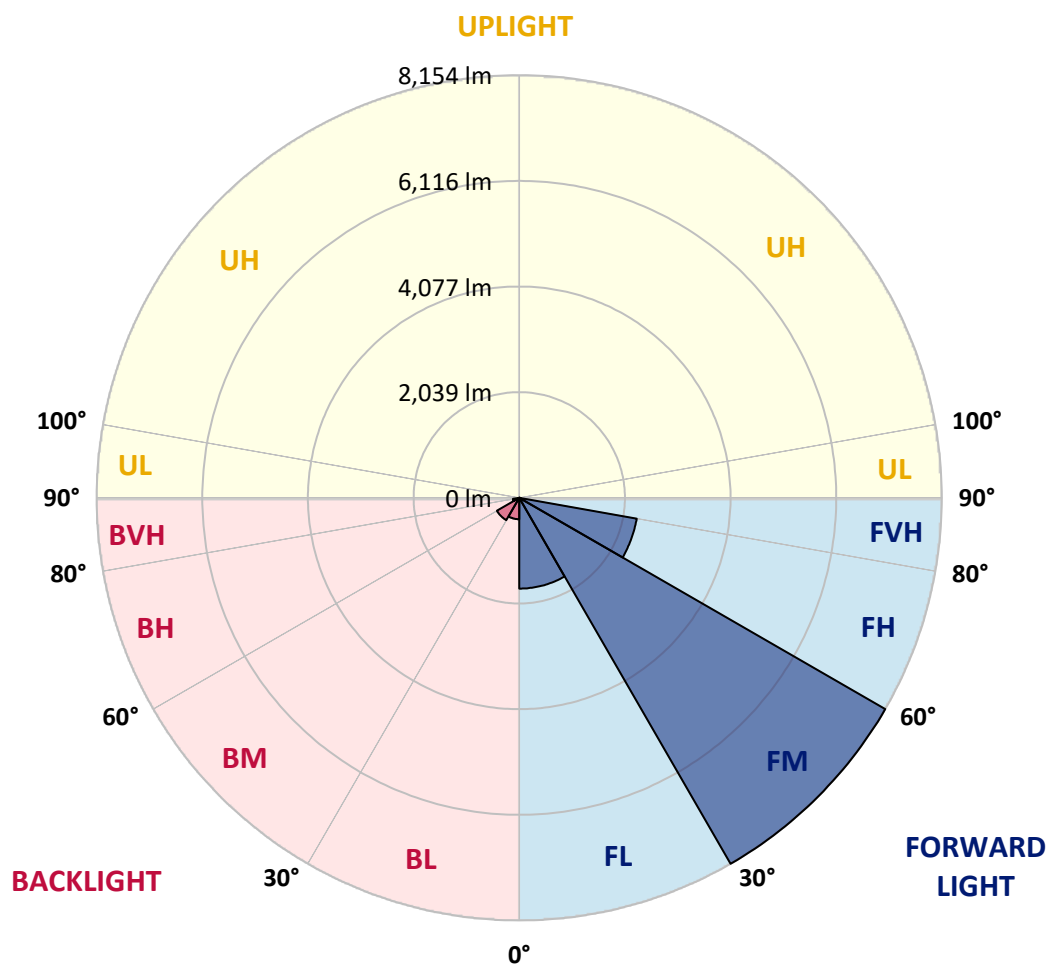
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1752.1 | 13.2      |                         |      |         |
| FM   | (30°-60°)   | 8154.4 | 61.5      |                         |      |         |
| FH   | (60°-80°)   | 2302.4 | 17.4      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 22.6   | 0.2       |                         |      | G1/100  |
| BL   | (0°-30°)    | 413.7  | 3.1       | B1/500                  |      |         |
| BM   | (30°-60°)   | 497.6  | 3.8       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 123.2  | 0.9       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 1.6    | 0.0       |                         |      | G0/10   |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G2**

Type II Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°     | 55°     | 65°     | 75°    | 85°    | 90°    |
|-------|--------|--------|--------|--------|--------|---------|---------|---------|--------|--------|--------|
| 0°    | 3197.2 | 3197.2 | 3197.2 | 3197.2 | 3197.2 | 3197.2  | 3197.2  | 3197.2  | 3197.2 | 3197.2 | 3197.2 |
| 2.5°  | 3967.0 | 3917.1 | 3909.8 | 3899.9 | 3805.0 | 3733.9  | 3630.8  | 3517.9  | 3391.0 | 3261.8 | 3204.6 |
| 5°    | 4583.1 | 4543.7 | 4536.4 | 4490.6 | 4382.6 | 4261.5  | 4078.3  | 3846.7  | 3610.4 | 3332.2 | 3212.7 |
| 7.5°  | 4702.5 | 4695.1 | 4728.6 | 4727.0 | 4712.3 | 4616.6  | 4461.9  | 4186.3  | 3831.2 | 3418.9 | 3234.0 |
| 10°   | 4169.9 | 4188.7 | 4288.5 | 4376.0 | 4612.5 | 4750.0  | 4716.4  | 4489.0  | 4058.6 | 3517.9 | 3257.7 |
| 12.5° | 3684.8 | 3662.6 | 3733.9 | 3832.9 | 4107.7 | 4516.8  | 4821.9  | 4741.8  | 4318.8 | 3629.9 | 3292.9 |
| 15°   | 3380.4 | 3371.4 | 3411.5 | 3457.3 | 3666.7 | 4079.1  | 4699.2  | 4947.1  | 4569.1 | 3762.5 | 3346.0 |
| 17.5° | 3283.1 | 3275.7 | 3288.0 | 3299.5 | 3435.2 | 3754.3  | 4407.2  | 5073.1  | 4808.8 | 3913.9 | 3404.9 |
| 20°   | 3362.4 | 3352.6 | 3350.9 | 3342.0 | 3398.4 | 3616.0  | 4142.9  | 5082.1  | 5024.0 | 4051.3 | 3455.7 |
| 22.5° | 3594.0 | 3582.5 | 3542.4 | 3506.4 | 3511.3 | 3634.9  | 4025.1  | 4992.1  | 5186.0 | 4179.7 | 3487.6 |
| 25°   | 4013.6 | 3994.8 | 3911.4 | 3790.2 | 3713.4 | 3765.7  | 4043.1  | 4873.5  | 5340.6 | 4280.3 | 3472.1 |
| 27.5° | 4538.9 | 4514.3 | 4407.2 | 4227.2 | 4051.3 | 3987.5  | 4173.2  | 4791.7  | 5469.1 | 4357.3 | 3438.5 |
| 30°   | 5053.5 | 5021.6 | 4916.0 | 4776.1 | 4519.2 | 4318.0  | 4408.0  | 4827.6  | 5622.0 | 4437.4 | 3394.3 |
| 32.5° | 5608.9 | 5578.7 | 5438.8 | 5265.3 | 5052.6 | 4781.8  | 4729.5  | 5003.5  | 5809.4 | 4549.5 | 3363.2 |
| 35°   | 6311.7 | 6264.3 | 6065.4 | 5829.0 | 5603.3 | 5329.2  | 5164.7  | 5307.0  | 6058.9 | 4720.4 | 3380.4 |
| 37.5° | 7111.9 | 7048.0 | 6833.7 | 6507.2 | 6212.7 | 5905.9  | 5694.8  | 5724.3  | 6424.6 | 4949.5 | 3433.6 |
| 40°   | 7866.1 | 7808.0 | 7610.0 | 7302.4 | 6932.7 | 6560.4  | 6335.4  | 6270.0  | 6929.4 | 5228.5 | 3526.8 |
| 42.5° | 8318.5 | 8266.1 | 8182.7 | 8052.6 | 7740.9 | 7361.3  | 7077.4  | 6935.9  | 7526.6 | 5562.3 | 3640.6 |
| 45°   | 8343.9 | 8298.1 | 8410.1 | 8561.5 | 8500.1 | 8247.4  | 7901.3  | 7642.0  | 8126.3 | 5875.6 | 3758.4 |
| 47.5° | 7938.1 | 7907.1 | 8247.4 | 8775.8 | 9039.3 | 9145.7  | 8826.6  | 8289.1  | 8621.2 | 6100.6 | 3806.6 |
| 50°   | 6832.0 | 6820.6 | 7520.8 | 8491.1 | 9244.6 | 9932.7  | 9802.6  | 8891.2  | 9004.9 | 6216.8 | 3760.8 |
| 52.5° | 5923.9 | 5882.2 | 6290.4 | 7579.8 | 8946.0 | 10346.7 | 10756.5 | 9481.9  | 9273.3 | 6238.9 | 3653.7 |
| 55°   | 4493.1 | 4456.2 | 4968.4 | 6054.8 | 7983.1 | 10199.4 | 11454.4 | 10091.3 | 9465.5 | 6182.4 | 3461.4 |
| 57.5° | 2410.2 | 2387.2 | 3034.4 | 4030.0 | 6240.5 | 9315.8  | 11580.3 | 10736.1 | 9627.5 | 6032.7 | 3192.3 |
| 60°   | 938.4  | 934.3  | 1176.4 | 1955.3 | 3792.7 | 7579.0  | 10944.6 | 11123.0 | 9728.9 | 5848.6 | 2967.3 |
| 62.5° | 567.7  | 580.0  | 619.3  | 877.8  | 1675.5 | 4708.2  | 9479.4  | 10682.9 | 9796.8 | 5680.1 | 2781.5 |
| 65°   | 469.6  | 470.4  | 475.3  | 602.9  | 802.6  | 1970.0  | 7136.4  | 9234.8  | 9629.2 | 5379.9 | 2518.1 |
| 67.5° | 402.5  | 409.9  | 428.7  | 478.6  | 566.1  | 864.0   | 4108.5  | 7153.6  | 8609.0 | 4681.2 | 2107.4 |
| 70°   | 317.4  | 327.3  | 351.0  | 393.5  | 436.9  | 540.8   | 1518.4  | 4759.8  | 6576.8 | 3528.5 | 1593.7 |
| 72.5° | 267.5  | 266.7  | 279.0  | 319.9  | 346.9  | 380.4   | 584.1   | 2667.0  | 3822.2 | 1684.5 | 788.6  |
| 75°   | 206.9  | 215.1  | 230.7  | 267.5  | 283.9  | 275.7   | 316.6   | 974.4   | 1369.5 | 510.4  | 268.3  |
| 77.5° | 162.0  | 168.5  | 182.4  | 218.4  | 234.8  | 195.6   | 182.4   | 348.5   | 440.1  | 183.3  | 121.1  |
| 80°   | 72.8   | 78.5   | 124.3  | 161.1  | 191.5  | 135.0   | 99.0    | 178.4   | 195.6  | 83.4   | 61.4   |
| 82.5° | 13.1   | 22.1   | 72.8   | 85.1   | 98.2   | 87.5    | 51.6    | 92.5    | 95.7   | 33.5   | 21.3   |
| 85°   | 0.8    | 1.6    | 25.3   | 31.1   | 39.3   | 28.6    | 15.6    | 36.8    | 31.9   | 11.5   | 8.2    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.8    | 0.8    | 4.1     | 4.9     | 6.6     | 4.9    | 4.1    | 3.3    |
| 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):**

|       | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 3197.2 | 3197.2 | 3197.2 | 3197.2 | 3197.2 | 3197.2 | 3197.2 | 3197.2 | 3197.2 | 3197.2 |
| 2.5°  | 3145.6 | 3029.5 | 2916.5 | 2824.1 | 2770.1 | 2678.5 | 2618.0 | 2608.1 | 2582.8 | 2604.8 |
| 5°    | 3085.0 | 2877.3 | 2667.0 | 2478.9 | 2324.3 | 2124.6 | 1975.7 | 1912.8 | 1857.9 | 1876.8 |
| 7.5°  | 3056.4 | 2728.3 | 2401.2 | 2079.6 | 1749.2 | 1430.1 | 1192.8 | 1093.8 | 1018.5 | 1029.2 |
| 10°   | 3018.0 | 2573.8 | 2060.8 | 1570.0 | 1127.4 | 812.4  | 648.7  | 588.2  | 554.6  | 555.4  |
| 12.5° | 2988.6 | 2388.9 | 1665.6 | 1064.4 | 686.4  | 518.6  | 467.9  | 453.3  | 443.4  | 444.2  |
| 15°   | 2973.8 | 2171.3 | 1275.4 | 709.3  | 490.9  | 439.3  | 427.0  | 420.6  | 414.0  | 413.2  |
| 17.5° | 2949.2 | 1929.0 | 933.5  | 517.8  | 429.5  | 411.5  | 400.9  | 393.5  | 385.3  | 383.7  |
| 20°   | 2912.4 | 1654.2 | 682.3  | 437.7  | 402.5  | 388.6  | 373.9  | 364.1  | 354.2  | 352.6  |
| 22.5° | 2844.6 | 1363.8 | 524.4  | 405.0  | 382.8  | 367.4  | 349.3  | 337.8  | 328.1  | 326.5  |
| 25°   | 2718.6 | 1091.3 | 441.8  | 384.5  | 365.7  | 346.9  | 327.3  | 311.7  | 302.7  | 301.0  |
| 27.5° | 2559.0 | 857.4  | 400.9  | 365.7  | 343.6  | 326.5  | 304.3  | 289.6  | 281.5  | 279.8  |
| 30°   | 2370.8 | 660.2  | 377.1  | 344.4  | 317.4  | 302.7  | 283.1  | 270.8  | 265.9  | 265.9  |
| 32.5° | 2168.0 | 527.7  | 367.4  | 323.2  | 294.5  | 278.2  | 262.6  | 257.7  | 256.0  | 255.2  |
| 35°   | 1977.3 | 458.2  | 362.4  | 306.0  | 274.1  | 258.5  | 251.9  | 252.8  | 256.0  | 256.0  |
| 37.5° | 1808.0 | 436.0  | 360.0  | 293.7  | 256.0  | 242.2  | 246.2  | 253.6  | 250.3  | 250.3  |
| 40°   | 1655.1 | 438.5  | 358.3  | 284.7  | 241.4  | 233.2  | 241.4  | 235.6  | 227.4  | 226.6  |
| 42.5° | 1538.0 | 459.0  | 355.1  | 277.4  | 232.4  | 226.6  | 223.3  | 214.3  | 213.5  | 215.1  |
| 45°   | 1452.9 | 476.9  | 354.2  | 274.1  | 222.5  | 211.9  | 207.8  | 198.8  | 215.1  | 219.2  |
| 47.5° | 1352.3 | 476.9  | 354.2  | 262.6  | 206.1  | 202.0  | 195.6  | 185.7  | 202.0  | 206.1  |
| 50°   | 1222.2 | 446.7  | 340.3  | 249.5  | 193.1  | 190.6  | 179.2  | 166.9  | 163.6  | 166.0  |
| 52.5° | 1057.8 | 391.9  | 305.1  | 231.5  | 180.0  | 175.1  | 161.1  | 152.2  | 149.8  | 149.8  |
| 55°   | 870.4  | 328.1  | 257.7  | 205.3  | 166.0  | 157.0  | 147.3  | 143.2  | 140.7  | 139.1  |
| 57.5° | 707.7  | 269.2  | 206.9  | 182.4  | 153.0  | 141.6  | 138.3  | 133.4  | 129.3  | 126.8  |
| 60°   | 580.9  | 211.9  | 171.0  | 162.0  | 139.9  | 129.3  | 128.4  | 121.9  | 111.2  | 109.7  |
| 62.5° | 448.3  | 155.4  | 144.0  | 140.7  | 126.8  | 117.8  | 116.1  | 103.1  | 86.7   | 83.4   |
| 65°   | 316.6  | 121.1  | 116.1  | 123.5  | 112.9  | 104.8  | 100.7  | 81.0   | 63.9   | 61.4   |
| 67.5° | 222.5  | 101.5  | 91.6   | 108.0  | 98.2   | 87.5   | 85.1   | 68.7   | 53.2   | 51.6   |
| 70°   | 158.7  | 82.6   | 75.2   | 92.5   | 78.5   | 76.9   | 72.0   | 57.3   | 43.4   | 41.7   |
| 72.5° | 112.0  | 63.0   | 58.1   | 80.2   | 54.0   | 66.3   | 58.9   | 44.2   | 32.7   | 31.1   |
| 75°   | 82.6   | 45.0   | 40.9   | 46.6   | 39.3   | 49.9   | 41.7   | 29.4   | 20.5   | 19.7   |
| 77.5° | 60.6   | 28.6   | 24.5   | 22.9   | 22.9   | 31.1   | 22.9   | 12.3   | 9.0    | 8.2    |
| 80°   | 42.5   | 13.1   | 11.5   | 9.8    | 9.0    | 7.4    | 3.3    | 1.6    | 0.8    | 0.8    |
| 82.5° | 25.3   | 5.7    | 5.7    | 4.1    | 2.5    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 5.7    | 2.5    | 2.5    | 0.8    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 0.8    | 0.8    | 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    |

(END OF REPORT)