

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: P963024

Luminaire Tested: **NAV-SB2D-740-U-T3R-HSS**

Issue Date: 1/21/2025

### Test Information

Test Method: LM-79-08  
Report Number: P963024  
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-SB2D-740-U-T3R-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(2) 70 CRI, 4000K, 900mA 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: 18373.1 lumens  
Efficiency: N/A  
Efficacy: 124.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B2 - 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



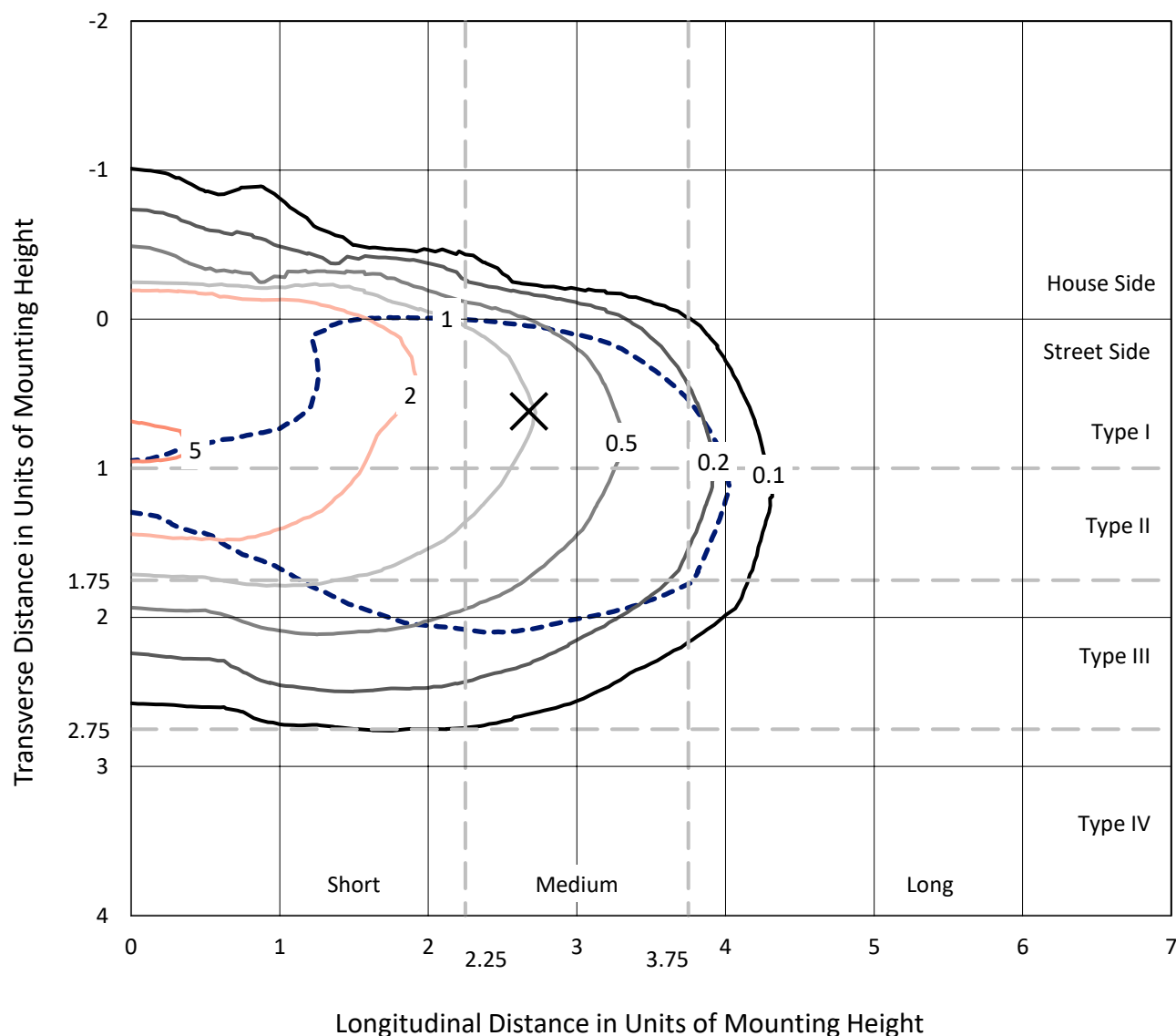
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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

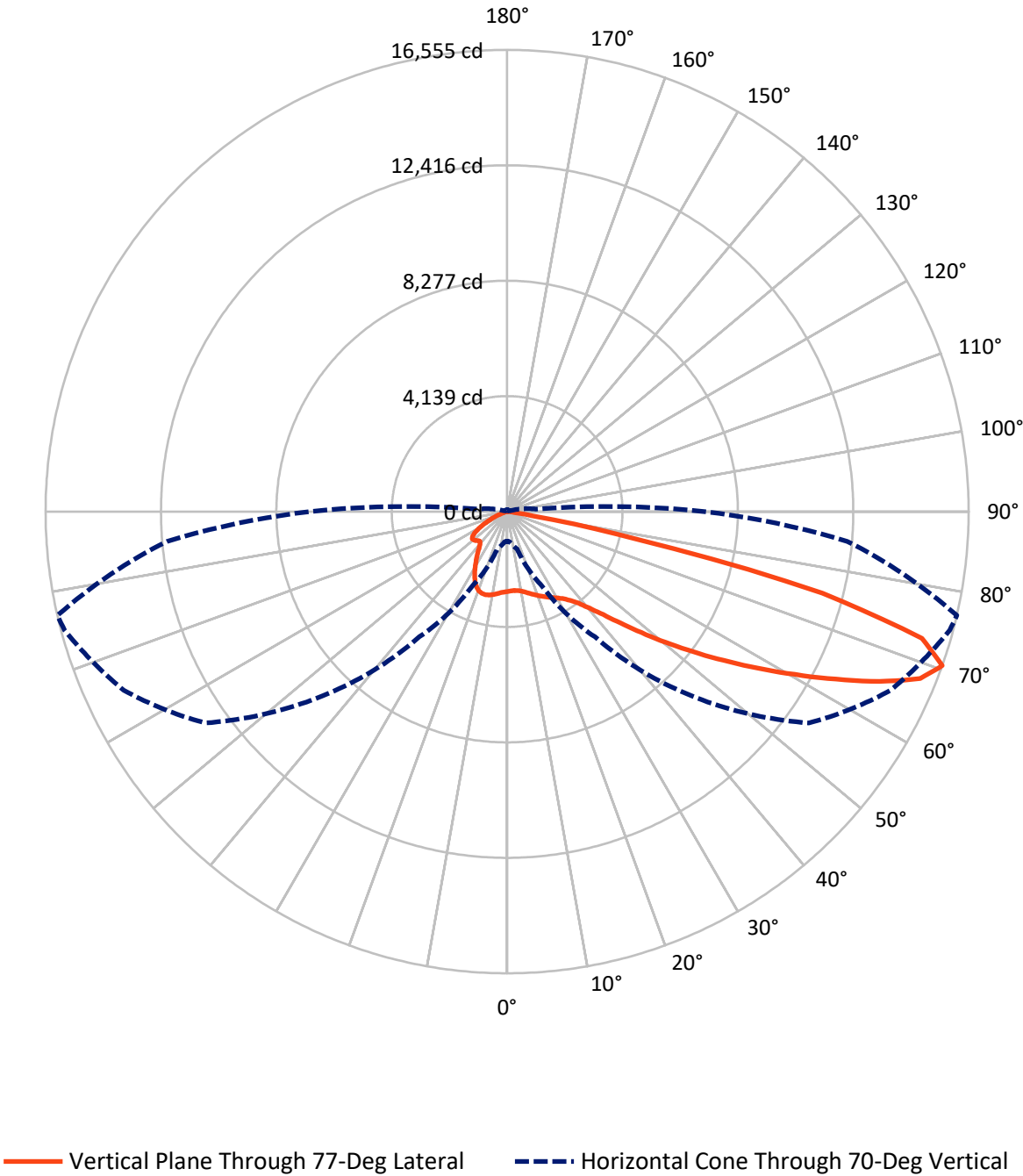


Based on 25 foot mounting height. Maximum calculated value = 5.4 fc

Type III - Medium - N/A

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Luminous Intensity Polar Plot



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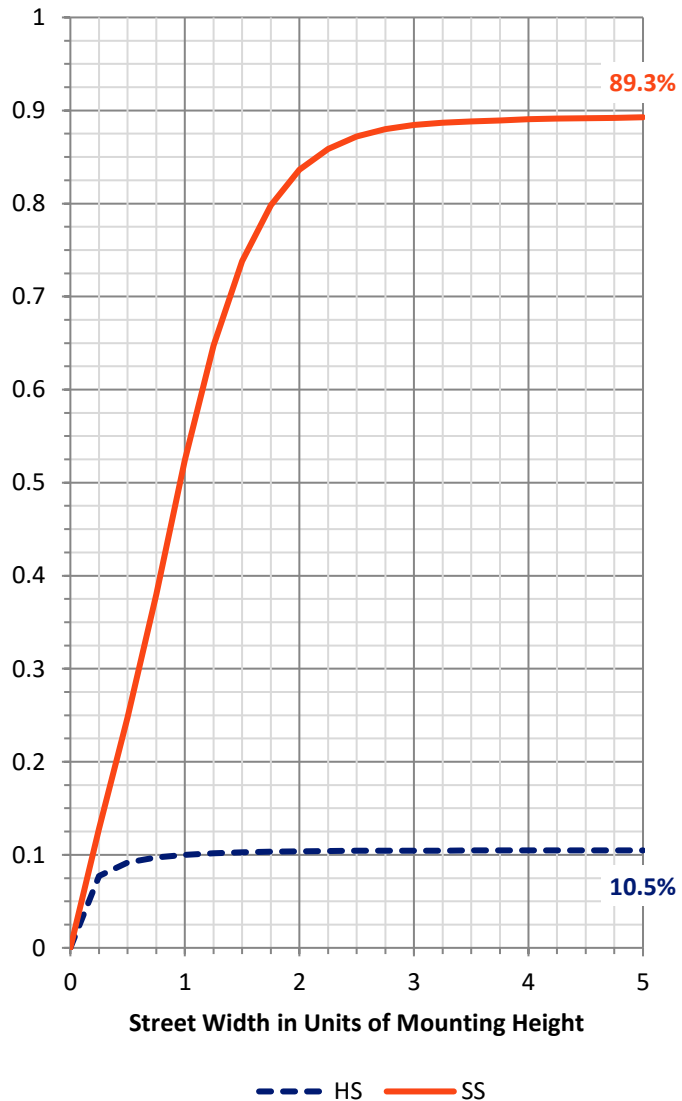
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 1936.8   | 0.0    | 1936.8  |
|                    | % Fixture | 10.5     | 0.0    | 10.5    |
| <b>Street Side</b> | Lumens    | 16436.3  | 0.0    | 16436.3 |
|                    | % Fixture | 89.5     | 0.0    | 89.5    |
| <b>Total</b>       | Lumens    | 18373.1  | 0.0    | 18373.1 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 247.0   | 1.3       |
| 10°-20°   | 586.3   | 3.2       |
| 20°-30°   | 906.9   | 4.9       |
| 30°-40°   | 1645.6  | 9.0       |
| 40°-50°   | 3106.3  | 16.9      |
| 50°-60°   | 4488.3  | 24.4      |
| 60°-70°   | 4777.7  | 26.0      |
| 70°-80°   | 2531.8  | 13.8      |
| 80°-90°   | 83.1    | 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°    | 18373.1 | 100.0     |
| 0°-180°   | 18373.1 | 100.0     |

**Coefficient of Utilization**



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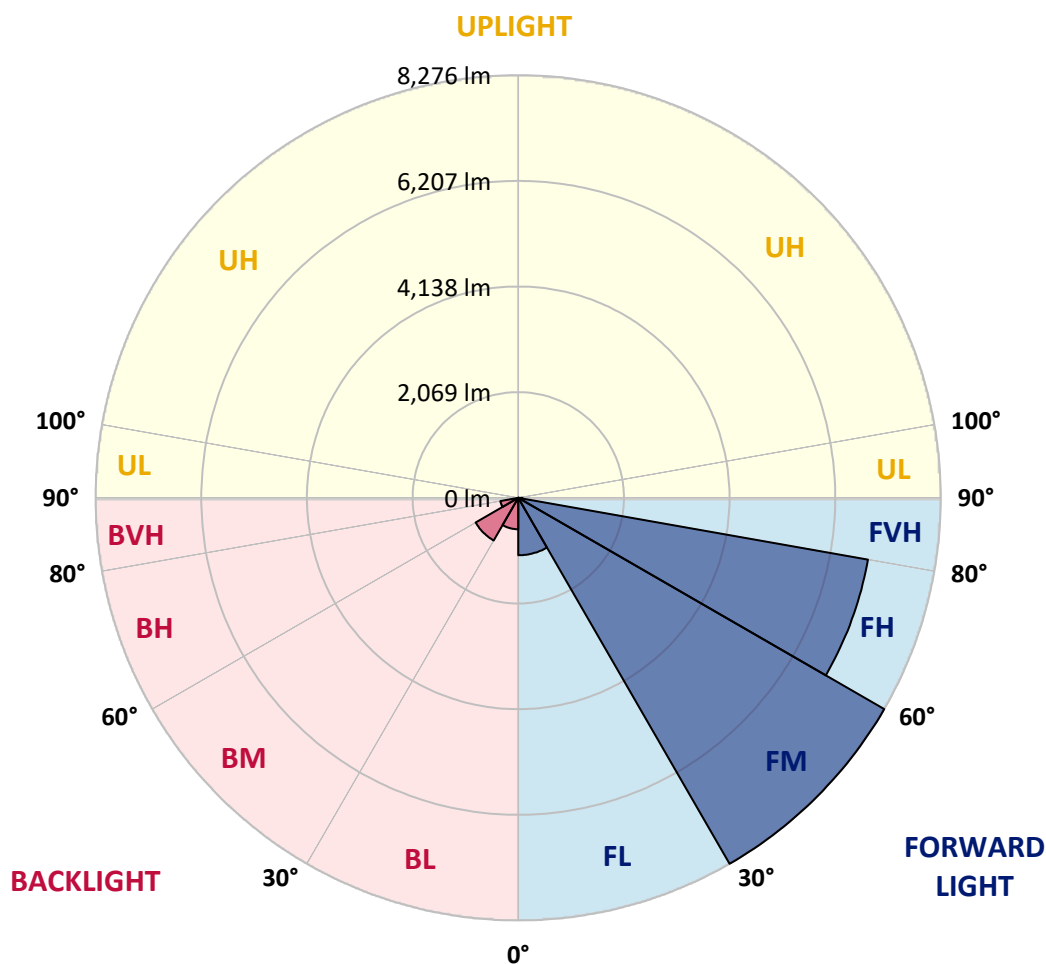
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1124.9 | 6.1       |                         |      |         |
| FM   | (30°-60°)   | 8276.1 | 45.0      |                         |      |         |
| FH   | (60°-80°)   | 6954.5 | 37.9      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 80.9   | 0.4       |                         |      | G1/100  |
| BL   | (0°-30°)    | 615.4  | 3.3       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 964.1  | 5.2       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 355.1  | 1.9       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 2.2    | 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-G3**

Type III Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°     | 45°     | 55°     | 65°     | 75°     | 77°     | 85°     |
|-------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 2865.9 | 2865.9 | 2865.9 | 2865.9 | 2865.9  | 2865.9  | 2865.9  | 2865.9  | 2865.9  | 2865.9  | 2865.9  |
| 2.5°  | 2690.6 | 2715.0 | 2711.5 | 2727.8 | 2733.6  | 2756.8  | 2780.0  | 2811.4  | 2846.1  | 2845.0  | 2868.2  |
| 5°    | 2538.7 | 2563.0 | 2568.9 | 2590.9 | 2618.8  | 2654.7  | 2702.3  | 2764.9  | 2829.9  | 2840.4  | 2886.8  |
| 7.5°  | 2358.8 | 2384.4 | 2399.4 | 2443.5 | 2494.5  | 2568.9  | 2646.5  | 2738.3  | 2846.1  | 2861.2  | 2950.6  |
| 10°   | 2178.9 | 2202.2 | 2221.9 | 2284.6 | 2365.8  | 2476.0  | 2602.5  | 2734.8  | 2879.8  | 2901.9  | 3028.4  |
| 12.5° | 2067.6 | 2089.7 | 2111.7 | 2166.2 | 2267.2  | 2401.8  | 2573.5  | 2751.0  | 2935.5  | 2966.9  | 3133.9  |
| 15°   | 2028.2 | 2047.8 | 2065.3 | 2114.1 | 2208.0  | 2361.2  | 2567.7  | 2784.6  | 3006.2  | 3048.0  | 3261.5  |
| 17.5° | 2034.0 | 2044.4 | 2056.0 | 2093.2 | 2184.8  | 2342.6  | 2578.1  | 2842.6  | 3089.8  | 3127.0  | 3389.2  |
| 20°   | 2067.6 | 2073.4 | 2074.6 | 2100.1 | 2181.3  | 2340.3  | 2599.0  | 2898.4  | 3168.7  | 3218.6  | 3515.6  |
| 22.5° | 2110.6 | 2112.8 | 2110.6 | 2127.9 | 2203.3  | 2357.7  | 2626.9  | 2965.6  | 3256.9  | 3303.3  | 3643.3  |
| 25°   | 2311.3 | 2267.2 | 2211.4 | 2177.8 | 2240.4  | 2391.3  | 2668.6  | 3056.1  | 3353.2  | 3398.5  | 3767.4  |
| 27.5° | 2934.4 | 2807.9 | 2608.3 | 2384.4 | 2317.1  | 2440.0  | 2726.6  | 3147.8  | 3450.7  | 3491.3  | 3900.8  |
| 30°   | 3946.0 | 3780.2 | 3441.3 | 2936.6 | 2563.0  | 2542.2  | 2802.0  | 3239.5  | 3553.9  | 3598.1  | 4043.5  |
| 32.5° | 4960.2 | 4919.6 | 4528.6 | 3830.0 | 3116.5  | 2769.5  | 2927.4  | 3363.6  | 3690.8  | 3725.7  | 4236.1  |
| 35°   | 5985.9 | 5903.5 | 5583.3 | 4892.8 | 3969.3  | 3232.5  | 3136.2  | 3526.1  | 3870.7  | 3910.2  | 4517.0  |
| 37.5° | 6771.4 | 6721.4 | 6523.1 | 5954.5 | 4981.1  | 3947.3  | 3493.6  | 3777.8  | 4131.8  | 4175.8  | 4876.6  |
| 40°   | 7465.2 | 7442.0 | 7374.7 | 6999.9 | 6112.3  | 4882.4  | 4049.4  | 4167.8  | 4493.7  | 4546.0  | 5317.5  |
| 42.5° | 8010.5 | 8065.1 | 8103.3 | 7998.9 | 7278.4  | 5949.9  | 4796.6  | 4715.3  | 4998.4  | 5051.8  | 5879.1  |
| 45°   | 8568.6 | 8587.1 | 8741.5 | 8892.4 | 8436.4  | 7066.0  | 5638.9  | 5357.0  | 5626.1  | 5692.3  | 6552.1  |
| 47.5° | 8927.1 | 9001.4 | 9272.9 | 9538.6 | 9409.8  | 8172.9  | 6543.9  | 6114.6  | 6353.7  | 6477.8  | 7306.2  |
| 50°   | 8953.8 | 9094.2 | 9467.8 | 9930.8 | 10118.7 | 9226.5  | 7527.8  | 6977.9  | 7232.0  | 7368.9  | 8111.4  |
| 52.5° | 8509.4 | 8727.6 | 9306.6 | 9984.1 | 10501.6 | 10118.7 | 8545.4  | 7841.1  | 8167.2  | 8345.9  | 8946.9  |
| 55°   | 6524.2 | 6809.7 | 8699.7 | 9694.0 | 10516.7 | 10795.2 | 9536.3  | 8740.4  | 9209.1  | 9410.9  | 9849.5  |
| 57.5° | 5684.1 | 5828.0 | 6839.8 | 9190.6 | 10237.1 | 11067.8 | 10432.0 | 9596.7  | 10342.7 | 10593.3 | 10702.3 |
| 60°   | 4729.2 | 4918.4 | 5736.4 | 8366.8 | 9857.7  | 11094.5 | 11223.3 | 10701.2 | 11571.4 | 11853.3 | 11484.4 |
| 62.5° | 3214.0 | 3419.3 | 4232.6 | 6951.2 | 9339.1  | 11081.8 | 11872.0 | 11838.2 | 12937.0 | 13239.9 | 12146.9 |
| 65°   | 1991.1 | 2119.8 | 2655.9 | 5676.0 | 8613.9  | 11095.7 | 12550.7 | 13219.0 | 14378.1 | 14685.6 | 12659.8 |
| 67.5° | 1573.4 | 1632.5 | 1912.1 | 4358.0 | 7364.2  | 10782.4 | 13228.2 | 14517.4 | 15734.5 | 15978.1 | 12816.4 |
| 70°   | 1057.0 | 1093.0 | 1391.1 | 2921.6 | 5478.8  | 9336.7  | 13215.5 | 15169.4 | 16433.0 | 16554.8 | 12245.6 |
| 72.5° | 556.9  | 584.8  | 813.3  | 1352.9 | 3309.1  | 6636.8  | 11139.8 | 14389.7 | 15738.0 | 15554.6 | 10466.8 |
| 75°   | 278.5  | 324.9  | 547.7  | 686.9  | 1413.2  | 3701.3  | 6917.5  | 11345.1 | 12387.1 | 11677.0 | 6715.7  |
| 77.5° | 211.2  | 255.2  | 452.5  | 452.5  | 492.0   | 1246.1  | 2929.7  | 6187.7  | 5707.4  | 4752.5  | 1971.3  |
| 80°   | 134.6  | 174.0  | 395.6  | 342.2  | 205.4   | 316.7   | 763.4   | 1733.5  | 1212.5  | 922.4   | 358.5   |
| 82.5° | 78.9   | 113.7  | 329.5  | 226.2  | 114.9   | 117.2   | 215.8   | 369.0   | 314.5   | 244.8   | 110.2   |
| 85°   | 31.4   | 74.2   | 226.2  | 89.4   | 45.2    | 29.0    | 65.0    | 78.9    | 65.0    | 48.7    | 27.9    |
| 87.5° | 0.0    | 17.4   | 39.5   | 0.0    | 3.5     | 2.4     | 4.6     | 5.8     | 5.8     | 4.6     | 9.3     |
| 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):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2865.9 | 2865.9 | 2865.9 | 2865.9 | 2865.9 | 2865.9 | 2865.9 | 2865.9 | 2865.9 | 2865.9 | 2865.9 |
| 2.5°  | 2878.6 | 2881.0 | 2887.9 | 2889.1 | 2872.9 | 2852.0 | 2843.9 | 2840.4 | 2826.4 | 2825.3 | 2827.6 |
| 5°    | 2913.5 | 2923.9 | 2913.5 | 2883.3 | 2811.4 | 2710.4 | 2633.8 | 2571.2 | 2514.3 | 2496.9 | 2486.4 |
| 7.5°  | 2983.1 | 2993.5 | 2962.1 | 2843.9 | 2662.8 | 2462.0 | 2281.1 | 2153.4 | 2038.6 | 1995.7 | 1978.2 |
| 10°   | 3082.9 | 3096.7 | 2998.1 | 2759.1 | 2438.9 | 2116.3 | 1810.0 | 1594.2 | 1426.0 | 1357.5 | 1328.5 |
| 12.5° | 3208.1 | 3214.0 | 3017.9 | 2630.4 | 2147.7 | 1687.0 | 1253.1 | 1022.2 | 872.5  | 816.8  | 799.4  |
| 15°   | 3346.2 | 3338.1 | 3020.2 | 2455.2 | 1750.8 | 1192.8 | 817.9  | 671.8  | 611.5  | 592.9  | 592.9  |
| 17.5° | 3491.3 | 3457.6 | 2973.7 | 2202.2 | 1315.8 | 815.7  | 606.8  | 572.1  | 561.6  | 556.9  | 555.8  |
| 20°   | 3633.9 | 3558.6 | 2889.1 | 1871.5 | 944.4  | 609.2  | 551.1  | 540.7  | 534.8  | 532.6  | 530.2  |
| 22.5° | 3763.9 | 3635.2 | 2744.0 | 1487.5 | 685.7  | 538.3  | 521.0  | 511.7  | 501.2  | 496.6  | 495.5  |
| 25°   | 3890.4 | 3679.2 | 2539.8 | 1128.9 | 548.8  | 503.6  | 489.6  | 472.2  | 458.3  | 452.5  | 450.2  |
| 27.5° | 4013.4 | 3707.1 | 2284.6 | 835.4  | 489.6  | 471.1  | 445.6  | 421.2  | 410.7  | 408.5  | 406.1  |
| 30°   | 4144.5 | 3716.3 | 1994.5 | 623.1  | 453.7  | 430.5  | 393.3  | 365.5  | 359.7  | 360.8  | 360.8  |
| 32.5° | 4304.6 | 3730.3 | 1702.1 | 510.6  | 423.5  | 381.7  | 337.6  | 308.6  | 304.0  | 308.6  | 307.5  |
| 35°   | 4496.1 | 3758.2 | 1420.1 | 469.9  | 396.8  | 331.8  | 284.2  | 259.9  | 255.2  | 258.7  | 257.6  |
| 37.5° | 4756.0 | 3803.4 | 1156.8 | 461.8  | 374.7  | 290.1  | 239.0  | 219.2  | 219.2  | 220.5  | 219.2  |
| 40°   | 5101.7 | 3924.0 | 921.3  | 456.0  | 363.2  | 258.7  | 201.9  | 193.7  | 197.2  | 199.6  | 199.6  |
| 42.5° | 5522.9 | 4180.5 | 762.3  | 449.1  | 350.4  | 244.8  | 183.4  | 179.9  | 185.6  | 188.0  | 188.0  |
| 45°   | 5995.1 | 4505.4 | 706.6  | 437.5  | 338.8  | 254.1  | 175.2  | 170.6  | 177.5  | 178.7  | 179.9  |
| 47.5° | 6483.6 | 4823.2 | 699.7  | 424.7  | 327.2  | 268.0  | 172.9  | 162.5  | 170.6  | 171.7  | 172.9  |
| 50°   | 6977.9 | 5030.9 | 706.6  | 405.0  | 308.6  | 268.0  | 174.0  | 154.4  | 161.2  | 164.7  | 165.9  |
| 52.5° | 7475.6 | 5126.1 | 701.9  | 362.0  | 276.1  | 251.7  | 174.0  | 147.4  | 154.4  | 156.6  | 156.6  |
| 55°   | 7958.3 | 5107.6 | 631.2  | 298.2  | 234.4  | 222.7  | 169.4  | 141.6  | 146.2  | 147.4  | 147.4  |
| 57.5° | 8340.0 | 4848.8 | 500.1  | 232.1  | 190.2  | 185.6  | 154.4  | 134.6  | 138.1  | 136.9  | 136.9  |
| 60°   | 8539.6 | 4280.3 | 357.3  | 178.7  | 149.6  | 146.2  | 135.7  | 125.4  | 127.6  | 121.9  | 120.6  |
| 62.5° | 8541.9 | 3528.4 | 239.0  | 141.6  | 119.5  | 116.0  | 116.0  | 112.5  | 110.2  | 98.6   | 95.1   |
| 65°   | 8359.8 | 2694.1 | 159.0  | 112.5  | 96.4   | 90.5   | 97.5   | 96.4   | 88.1   | 72.0   | 69.6   |
| 67.5° | 7946.7 | 1766.0 | 120.6  | 88.1   | 74.2   | 70.8   | 77.7   | 81.2   | 75.4   | 60.4   | 59.1   |
| 70°   | 7097.4 | 1028.0 | 99.7   | 68.5   | 55.7   | 52.2   | 62.6   | 69.6   | 62.6   | 48.7   | 46.4   |
| 72.5° | 5895.4 | 554.6  | 81.2   | 51.0   | 38.3   | 34.8   | 49.9   | 56.9   | 49.9   | 36.0   | 34.8   |
| 75°   | 3825.4 | 297.0  | 62.6   | 33.6   | 19.7   | 22.0   | 37.1   | 41.8   | 34.8   | 23.2   | 20.9   |
| 77.5° | 1284.4 | 131.1  | 39.5   | 16.2   | 9.3    | 9.3    | 22.0   | 25.5   | 16.2   | 8.1    | 7.0    |
| 80°   | 286.6  | 54.5   | 16.2   | 7.0    | 3.5    | 3.5    | 4.6    | 4.6    | 2.4    | 0.0    | 0.0    |
| 82.5° | 94.0   | 22.0   | 7.0    | 2.4    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 36.0   | 8.1    | 2.4    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 13.9   | 1.1    | 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)