

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: P963049

Luminaire Tested: **NAV-SB2D-750-U-T2R-HSS**

Issue Date: 1/21/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P963049  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB2D-750-U-T2R-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(2) 70 CRI, 5000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II  
ROADWAY OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18684.7 lumens  
Efficiency: N/A  
Efficacy: 126.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B1 - 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

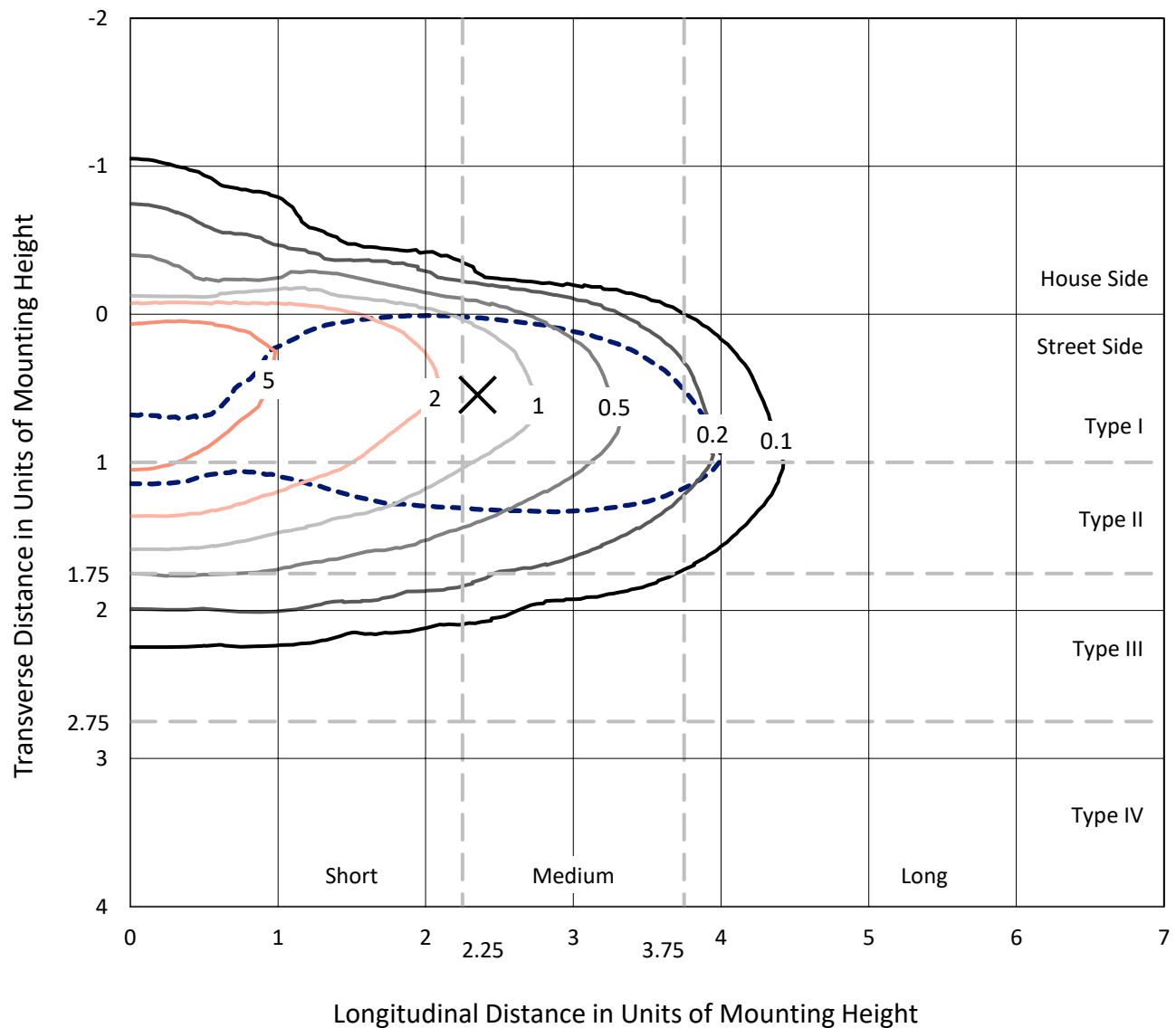


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## Iso-Footcandle Lines of Horizontal Illumination

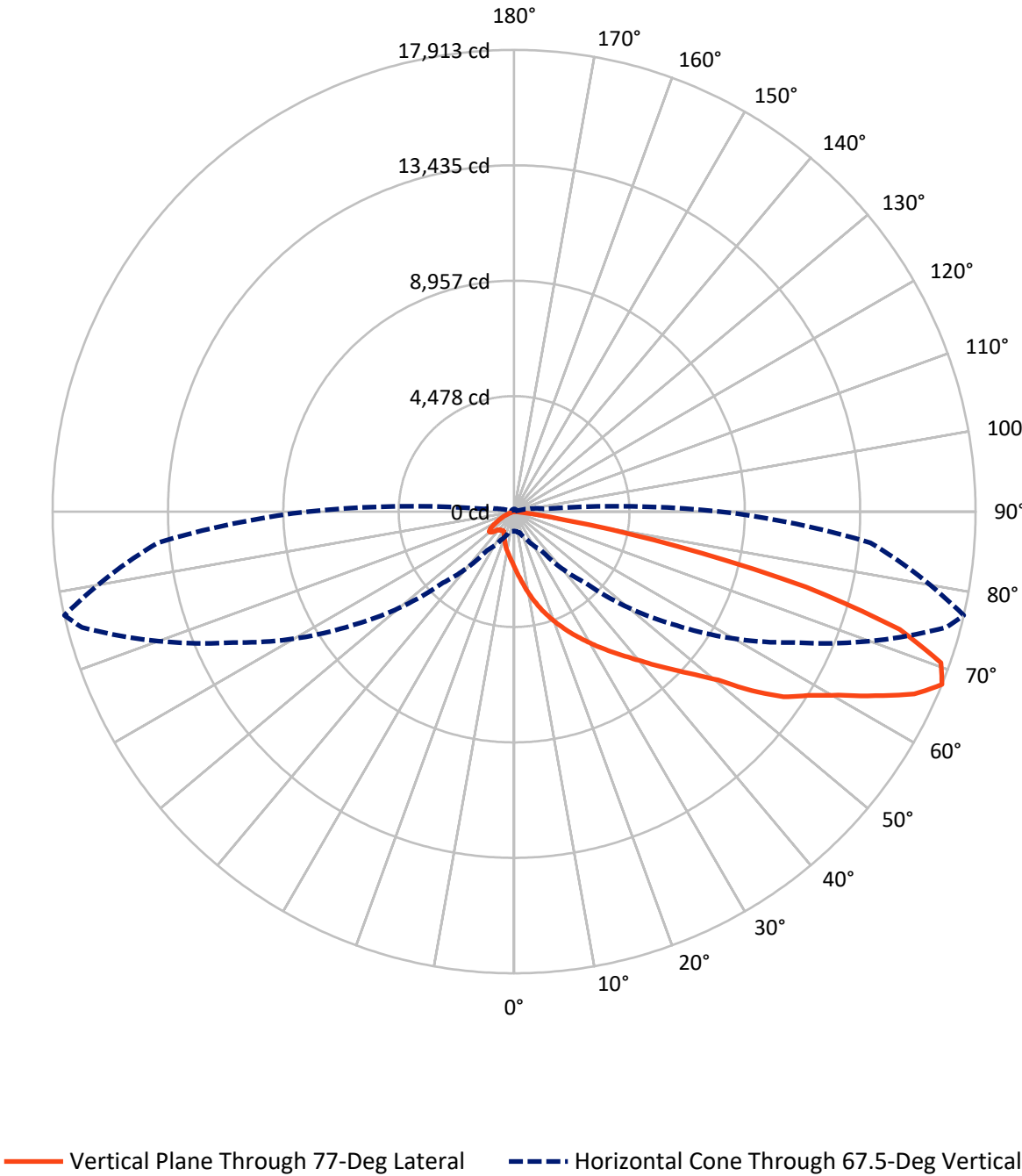
× Max cd  
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.1 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    | 1374.7   | 0.0    | 1374.7  |
|                    | % Fixture | 7.4      | 0.0    | 7.4     |
| <b>Street Side</b> | Lumens    | 17310.1  | 0.0    | 17310.1 |
|                    | % Fixture | 92.6     | 0.0    | 92.6    |
| <b>Total</b>       | Lumens    | 18684.7  | 0.0    | 18684.7 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 219.9   | 1.2       |
| 10°-20°   | 770.1   | 4.1       |
| 20°-30°   | 1486.1  | 8.0       |
| 30°-40°   | 2580.0  | 13.8      |
| 40°-50°   | 3746.0  | 20.0      |
| 50°-60°   | 4301.8  | 23.0      |
| 60°-70°   | 3734.7  | 20.0      |
| 70°-80°   | 1759.1  | 9.4       |
| 80°-90°   | 87.0    | 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°    | 18684.7 | 100.0     |
| 0°-180°   | 18684.7 | 100.0     |

**Coefficient of Utilization**



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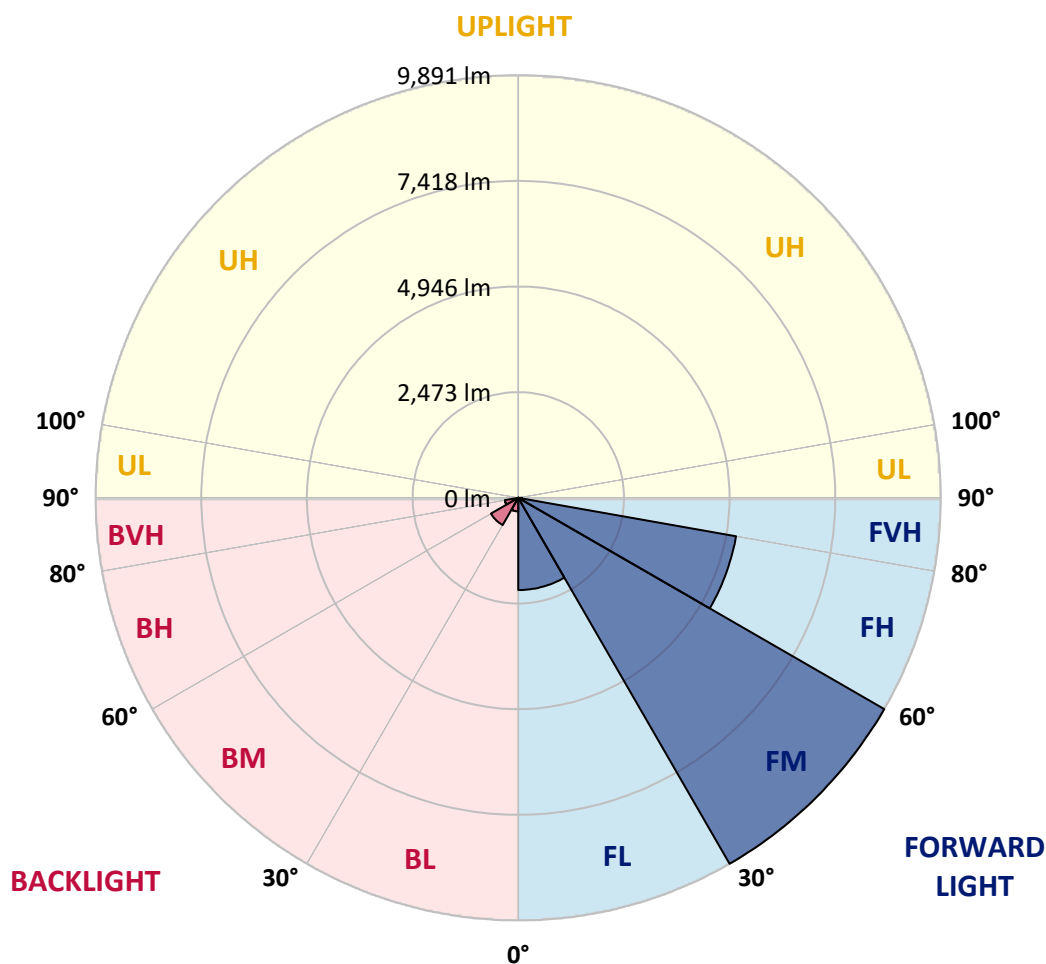
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 2157.9 | 11.5      |                         |      |         |
| FM   | (30°-60°)   | 9891.2 | 52.9      |                         |      |         |
| FH   | (60°-80°)   | 5175.6 | 27.7      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 85.4   | 0.5       |                         |      | G1/100  |
| BL   | (0°-30°)    | 318.3  | 1.7       | B1/500                  |      |         |
| BM   | (30°-60°)   | 736.6  | 3.9       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 318.2  | 1.7       | 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-G3**

Type II Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°     | 65°     | 75°     | 77°     | 85°     |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| 0°    | 2154.7 | 2154.7 | 2154.7 | 2154.7 | 2154.7 | 2154.7 | 2154.7  | 2154.7  | 2154.7  | 2154.7  | 2154.7  |
| 2.5°  | 2983.1 | 3001.6 | 2975.0 | 2923.9 | 2847.3 | 2797.4 | 2675.6  | 2560.8  | 2433.0  | 2392.5  | 2264.8  |
| 5°    | 3636.3 | 3652.5 | 3622.4 | 3566.7 | 3464.6 | 3367.1 | 3207.0  | 2966.9  | 2717.4  | 2637.3  | 2411.0  |
| 7.5°  | 4120.1 | 4129.4 | 4117.8 | 4066.8 | 3969.3 | 3859.0 | 3680.4  | 3396.1  | 3026.0  | 2937.9  | 2590.9  |
| 10°   | 4468.2 | 4498.4 | 4494.9 | 4475.2 | 4410.2 | 4320.9 | 4130.5  | 3806.8  | 3371.7  | 3258.1  | 2793.9  |
| 12.5° | 4699.1 | 4732.7 | 4752.5 | 4796.6 | 4793.1 | 4736.2 | 4569.1  | 4226.9  | 3716.3  | 3582.9  | 3022.5  |
| 15°   | 4766.4 | 4802.3 | 4877.8 | 4979.9 | 5070.4 | 5099.4 | 4982.2  | 4638.7  | 4095.8  | 3925.2  | 3256.8  |
| 17.5° | 4728.1 | 4783.8 | 4874.3 | 5035.6 | 5234.0 | 5365.1 | 5352.3  | 5036.7  | 4440.4  | 4245.4  | 3486.6  |
| 20°   | 4812.8 | 4866.2 | 4936.9 | 5072.7 | 5303.6 | 5541.5 | 5636.6  | 5417.3  | 4782.6  | 4578.5  | 3727.9  |
| 22.5° | 5281.5 | 5272.3 | 5279.3 | 5301.3 | 5439.4 | 5674.9 | 5871.0  | 5763.1  | 5121.4  | 4912.6  | 3983.3  |
| 25°   | 6024.1 | 5982.3 | 5911.6 | 5792.1 | 5757.2 | 5871.0 | 6075.2  | 6069.3  | 5478.8  | 5254.9  | 4244.3  |
| 27.5° | 6875.8 | 6868.8 | 6702.9 | 6415.2 | 6252.7 | 6208.6 | 6306.1  | 6367.6  | 5832.7  | 5593.6  | 4506.5  |
| 30°   | 7691.4 | 7710.0 | 7486.1 | 7165.9 | 6867.6 | 6694.8 | 6606.5  | 6650.7  | 6192.3  | 5959.1  | 4776.8  |
| 32.5° | 8401.5 | 8421.3 | 8177.6 | 7802.8 | 7433.8 | 7225.0 | 7039.4  | 6930.3  | 6584.5  | 6330.4  | 5073.9  |
| 35°   | 9001.3 | 9021.1 | 8741.5 | 8327.3 | 7933.9 | 7744.8 | 7534.8  | 7236.6  | 6979.0  | 6742.3  | 5404.5  |
| 37.5° | 9537.4 | 9531.6 | 9156.8 | 8739.2 | 8352.8 | 8203.1 | 8092.9  | 7613.7  | 7385.1  | 7156.6  | 5771.2  |
| 40°   | 9854.1 | 9878.5 | 9558.3 | 9097.7 | 8723.0 | 8613.9 | 8606.9  | 8081.3  | 7853.9  | 7632.3  | 6172.7  |
| 42.5° | 9947.0 | 9990.0 | 9757.9 | 9379.7 | 9039.7 | 8921.3 | 9103.5  | 8587.1  | 8399.2  | 8183.4  | 6626.3  |
| 45°   | 9779.9 | 9821.7 | 9716.1 | 9453.9 | 9255.4 | 9178.9 | 9530.4  | 9111.6  | 8981.7  | 8768.2  | 7138.0  |
| 47.5° | 9292.6 | 9344.8 | 9370.3 | 9314.7 | 9312.3 | 9390.0 | 9913.4  | 9663.9  | 9673.1  | 9455.0  | 7730.9  |
| 50°   | 8349.3 | 8437.5 | 8671.9 | 8869.1 | 9174.3 | 9557.2 | 10285.8 | 10262.6 | 10452.8 | 10265.0 | 8503.6  |
| 52.5° | 6634.4 | 6759.8 | 7567.3 | 8106.8 | 8792.6 | 9525.8 | 10695.4 | 11223.3 | 11820.8 | 11545.9 | 9593.1  |
| 55°   | 5331.4 | 5331.4 | 5988.2 | 6997.6 | 8047.7 | 9319.3 | 10874.0 | 11847.6 | 12752.5 | 12687.6 | 10360.1 |
| 57.5° | 4346.4 | 4398.6 | 4817.4 | 5709.7 | 6969.8 | 8827.3 | 10984.3 | 12239.7 | 13503.2 | 13455.7 | 11109.6 |
| 60°   | 2682.5 | 2795.1 | 3586.4 | 4467.1 | 5743.4 | 7951.3 | 10914.7 | 12636.5 | 14414.1 | 14452.3 | 12012.3 |
| 62.5° | 1510.6 | 1552.5 | 1905.2 | 3214.0 | 4465.9 | 6773.7 | 10382.1 | 12858.1 | 15579.0 | 15741.4 | 12942.8 |
| 65°   | 1043.0 | 1063.9 | 1199.8 | 2000.3 | 3095.6 | 5392.9 | 9341.3  | 12720.0 | 16746.1 | 17074.6 | 13731.8 |
| 67.5° | 757.7  | 768.1  | 852.8  | 1221.8 | 1836.7 | 3910.1 | 7710.0  | 12023.9 | 17364.6 | 17913.4 | 13882.6 |
| 70°   | 582.4  | 589.4  | 650.9  | 802.9  | 1084.9 | 2413.4 | 5599.5  | 10639.7 | 16916.7 | 17572.3 | 13109.9 |
| 72.5° | 473.3  | 480.3  | 527.9  | 594.1  | 719.3  | 1427.1 | 3393.8  | 8640.5  | 14939.7 | 15647.4 | 11160.6 |
| 75°   | 399.1  | 408.5  | 451.3  | 494.3  | 563.9  | 916.7  | 1591.9  | 6017.2  | 11234.9 | 11699.0 | 7761.1  |
| 77.5° | 221.6  | 204.2  | 366.6  | 409.6  | 475.7  | 580.2  | 744.9   | 3541.2  | 6292.2  | 6420.9  | 3443.7  |
| 80°   | 138.1  | 142.7  | 291.2  | 329.5  | 365.5  | 292.4  | 341.1   | 1363.4  | 2181.3  | 2072.2  | 667.2   |
| 82.5° | 8.1    | 18.6   | 224.0  | 237.9  | 250.6  | 125.4  | 128.7   | 463.0   | 525.6   | 482.7   | 118.4   |
| 85°   | 0.0    | 0.0    | 102.1  | 82.4   | 87.0   | 36.0   | 37.1    | 107.9   | 70.8    | 76.6    | 23.2    |
| 87.5° | 0.0    | 0.0    | 0.0    | 2.4    | 0.0    | 3.5    | 7.0     | 9.3     | 3.5     | 4.6     | 8.1     |
| 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°    | 2154.7 | 2154.7 | 2154.7 | 2154.7 | 2154.7 | 2154.7 | 2154.7 | 2154.7 | 2154.7 | 2154.7 | 2154.7 |
| 2.5°  | 2183.7 | 2102.4 | 1937.7 | 1776.3 | 1645.2 | 1523.5 | 1436.4 | 1354.0 | 1312.3 | 1309.9 | 1307.6 |
| 5°    | 2249.8 | 2079.2 | 1749.7 | 1458.5 | 1224.1 | 1036.2 | 914.3  | 827.3  | 783.2  | 768.1  | 765.8  |
| 7.5°  | 2342.6 | 2086.2 | 1585.0 | 1180.0 | 903.8  | 742.6  | 672.9  | 645.1  | 635.8  | 625.4  | 623.1  |
| 10°   | 2459.8 | 2102.4 | 1437.6 | 950.3  | 712.4  | 631.2  | 603.3  | 591.7  | 584.8  | 577.8  | 575.5  |
| 12.5° | 2590.9 | 2117.4 | 1291.4 | 788.9  | 626.6  | 584.8  | 565.1  | 551.1  | 541.8  | 533.7  | 531.4  |
| 15°   | 2718.5 | 2126.8 | 1139.4 | 676.4  | 582.4  | 548.8  | 527.9  | 512.8  | 500.1  | 490.8  | 489.6  |
| 17.5° | 2845.0 | 2139.6 | 996.7  | 609.2  | 546.5  | 512.8  | 492.0  | 473.3  | 463.0  | 452.5  | 451.3  |
| 20°   | 2985.4 | 2137.2 | 862.1  | 561.6  | 510.6  | 476.8  | 454.8  | 437.5  | 427.0  | 415.3  | 414.2  |
| 22.5° | 3115.3 | 2125.6 | 743.7  | 521.0  | 473.3  | 440.9  | 416.6  | 399.1  | 388.7  | 379.5  | 378.2  |
| 25°   | 3265.0 | 2116.3 | 645.1  | 483.8  | 438.6  | 406.1  | 379.5  | 363.2  | 351.6  | 343.5  | 342.2  |
| 27.5° | 3408.8 | 2102.4 | 573.2  | 450.2  | 405.0  | 373.6  | 348.1  | 329.5  | 319.1  | 313.2  | 313.2  |
| 30°   | 3550.4 | 2098.9 | 546.5  | 417.7  | 374.7  | 343.5  | 318.0  | 300.5  | 292.4  | 290.1  | 288.9  |
| 32.5° | 3721.0 | 2108.2 | 558.1  | 406.1  | 347.0  | 315.6  | 291.2  | 278.5  | 270.3  | 270.3  | 270.3  |
| 35°   | 3903.2 | 2105.9 | 575.5  | 416.6  | 328.3  | 287.7  | 269.2  | 261.1  | 253.0  | 253.0  | 253.0  |
| 37.5° | 4131.8 | 2109.3 | 589.4  | 434.0  | 321.4  | 264.6  | 254.1  | 243.6  | 239.0  | 239.0  | 239.0  |
| 40°   | 4472.9 | 2224.2 | 582.4  | 449.1  | 319.1  | 248.3  | 227.4  | 224.0  | 220.5  | 220.5  | 220.5  |
| 42.5° | 4890.6 | 2473.7 | 591.7  | 450.2  | 318.0  | 236.7  | 208.9  | 215.8  | 207.7  | 206.5  | 205.4  |
| 45°   | 5347.7 | 2746.4 | 650.9  | 425.8  | 316.7  | 230.9  | 199.6  | 207.7  | 195.0  | 195.0  | 195.0  |
| 47.5° | 5801.4 | 3016.7 | 711.2  | 391.0  | 313.2  | 229.7  | 191.5  | 186.8  | 183.4  | 184.5  | 184.5  |
| 50°   | 6426.7 | 3237.2 | 734.4  | 343.5  | 305.1  | 227.4  | 176.4  | 177.5  | 175.2  | 177.5  | 177.5  |
| 52.5° | 7107.9 | 3283.6 | 706.6  | 290.1  | 282.0  | 220.5  | 165.9  | 170.6  | 169.4  | 171.7  | 171.7  |
| 55°   | 7532.5 | 3233.7 | 583.6  | 241.4  | 246.0  | 192.6  | 155.5  | 164.7  | 164.7  | 164.7  | 164.7  |
| 57.5° | 7971.0 | 3021.4 | 414.2  | 196.1  | 204.2  | 157.7  | 146.2  | 159.0  | 157.7  | 156.6  | 156.6  |
| 60°   | 8286.6 | 2677.9 | 272.6  | 161.2  | 162.5  | 130.0  | 135.7  | 149.6  | 148.5  | 142.7  | 142.7  |
| 62.5° | 8522.2 | 2298.5 | 175.2  | 136.9  | 124.1  | 117.2  | 124.1  | 135.7  | 131.1  | 118.4  | 116.0  |
| 65°   | 8495.5 | 1772.9 | 134.6  | 117.2  | 102.1  | 102.1  | 107.9  | 118.4  | 104.4  | 83.5   | 81.2   |
| 67.5° | 8000.0 | 1199.8 | 111.4  | 98.6   | 85.9   | 84.7   | 89.4   | 98.6   | 89.4   | 70.8   | 68.5   |
| 70°   | 7114.8 | 784.3  | 89.4   | 76.6   | 68.5   | 62.6   | 72.0   | 84.7   | 75.4   | 56.9   | 54.5   |
| 72.5° | 5774.6 | 478.1  | 67.3   | 55.7   | 49.9   | 40.6   | 56.9   | 69.6   | 60.4   | 41.8   | 39.5   |
| 75°   | 3736.0 | 243.6  | 46.4   | 36.0   | 26.6   | 24.4   | 41.8   | 52.2   | 41.8   | 25.5   | 22.0   |
| 77.5° | 1429.5 | 102.1  | 25.5   | 16.2   | 13.9   | 11.6   | 23.2   | 31.4   | 17.4   | 5.8    | 4.6    |
| 80°   | 275.0  | 42.9   | 12.8   | 8.1    | 7.0    | 4.6    | 3.5    | 2.4    | 0.0    | 0.0    | 0.0    |
| 82.5° | 47.6   | 13.9   | 4.6    | 2.4    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 16.2   | 2.4    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 5.8    | 0.0    | 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)