

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: P960468

Luminaire Tested: **NAV-SB1C-827-U-SL4-HSS**

Issue Date: 1/21/2025

### Test Information

Test Method: LM-79-08  
Report Number: P960468  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB1C-827-U-SL4-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(1) 80 CRI, 2700K, 615mA LIGHTSQUARE WITH 26 LEDS AND TYPE IV SPILL LIGHT  
ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: -

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 4660.7 lumens  
Efficiency: N/A  
Efficacy: 85.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

Input Watts (W): 54.4  
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



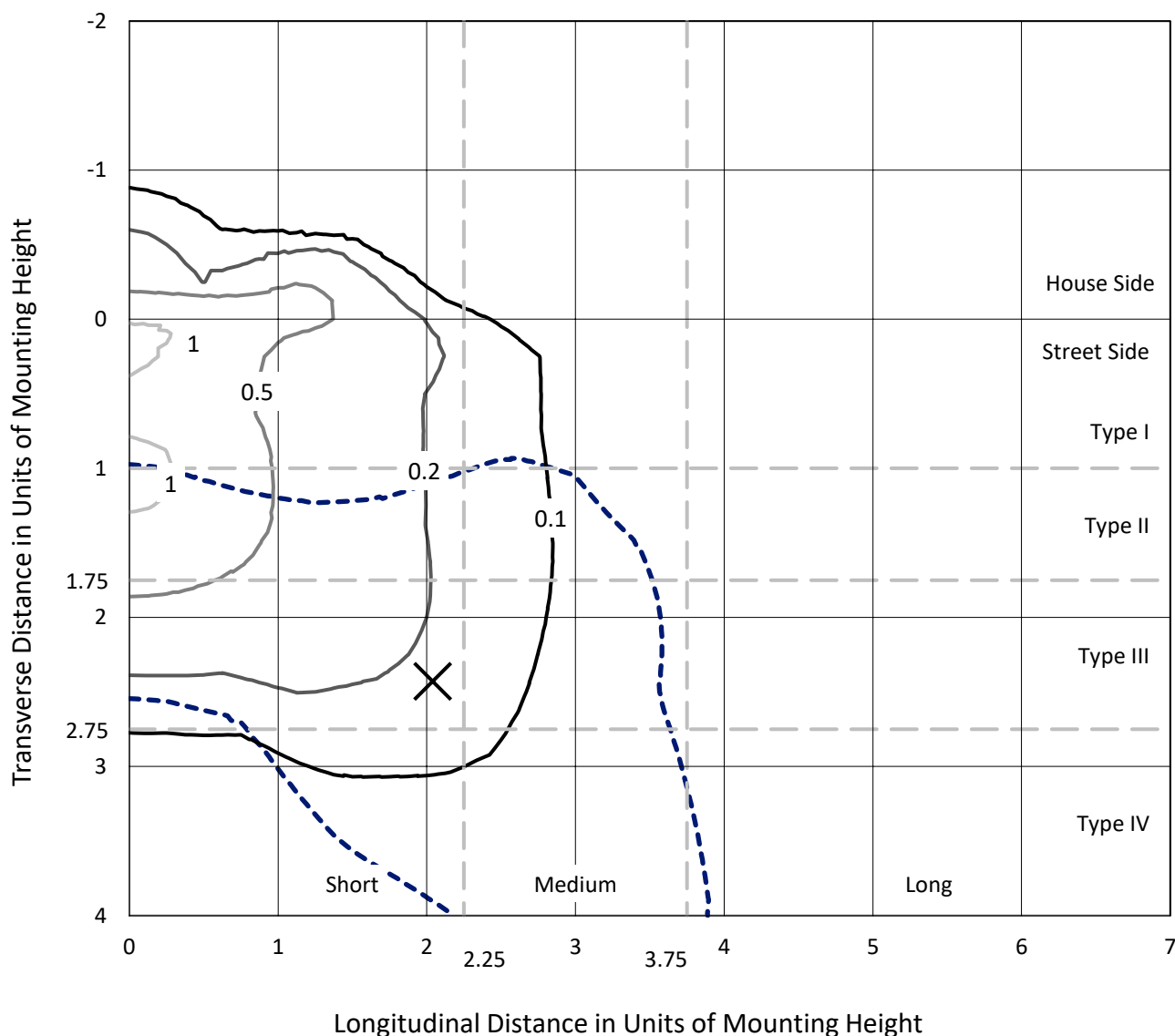
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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

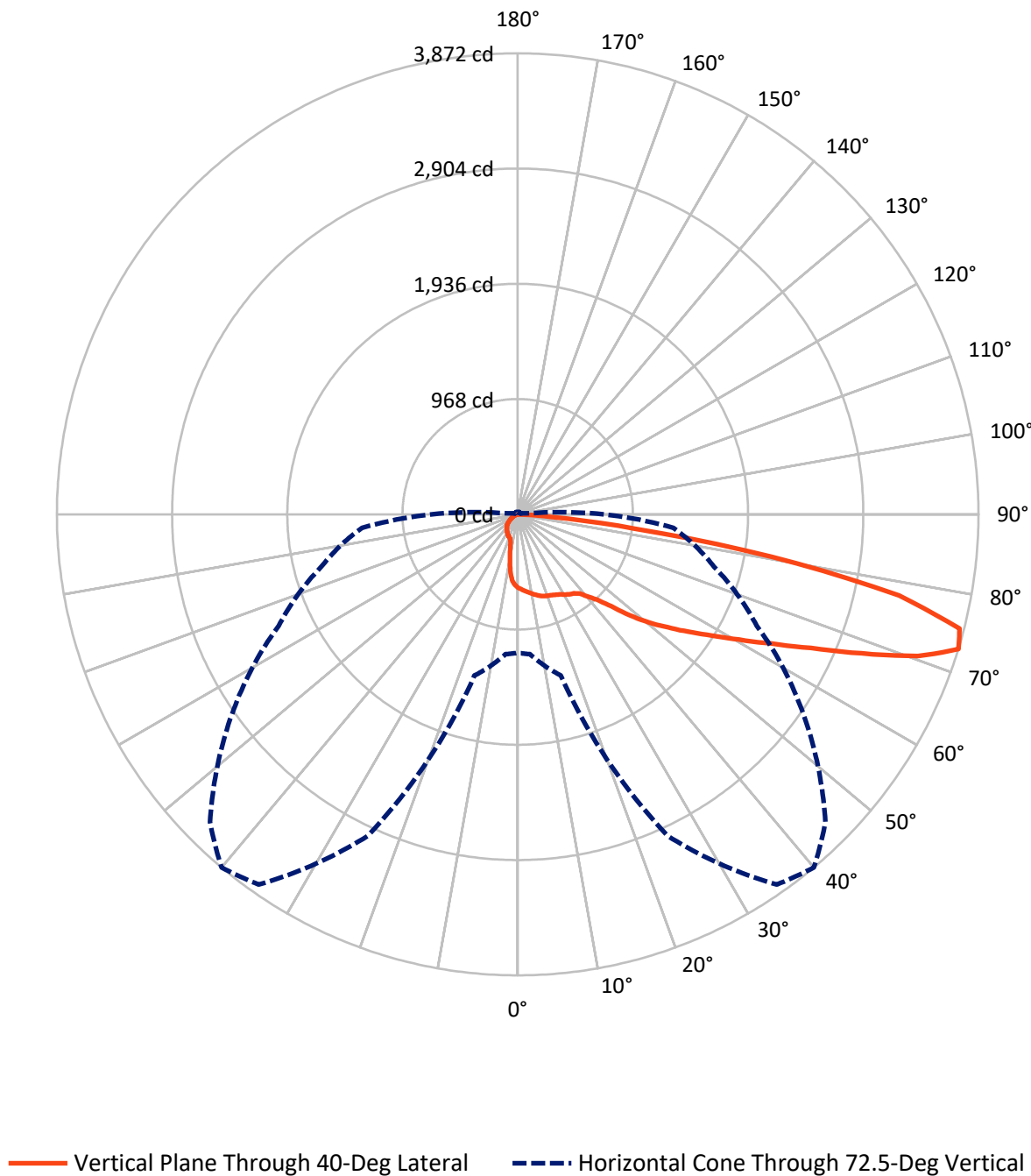


Based on 25 foot mounting height. Maximum calculated value = 1.1 fc

Type IV - Short - N/A

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## Luminous Intensity Polar Plot



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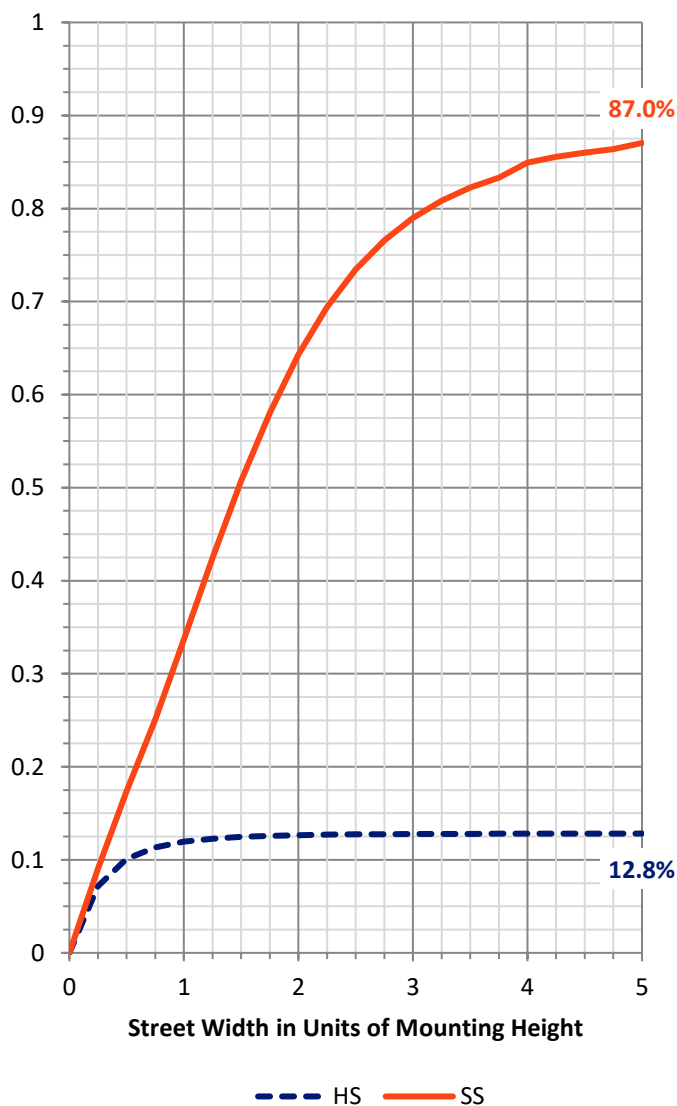
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 601.9    | 0.0    | 601.9  |
|                    | % Fixture | 12.9     | 0.0    | 12.9   |
| <b>Street Side</b> | Lumens    | 4058.8   | 0.0    | 4058.8 |
|                    | % Fixture | 87.1     | 0.0    | 87.1   |
| <b>Total</b>       | Lumens    | 4660.7   | 0.0    | 4660.7 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 56.4   | 1.2       |
| 10°-20°   | 153.1  | 3.3       |
| 20°-30°   | 247.7  | 5.3       |
| 30°-40°   | 365.6  | 7.8       |
| 40°-50°   | 615.4  | 13.2      |
| 50°-60°   | 955.5  | 20.5      |
| 60°-70°   | 1195.6 | 25.7      |
| 70°-80°   | 978.8  | 21.0      |
| 80°-90°   | 92.8   | 2.0       |
| 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°    | 4660.7 | 100.0     |
| 0°-180°   | 4660.7 | 100.0     |

**Coefficient of Utilization**



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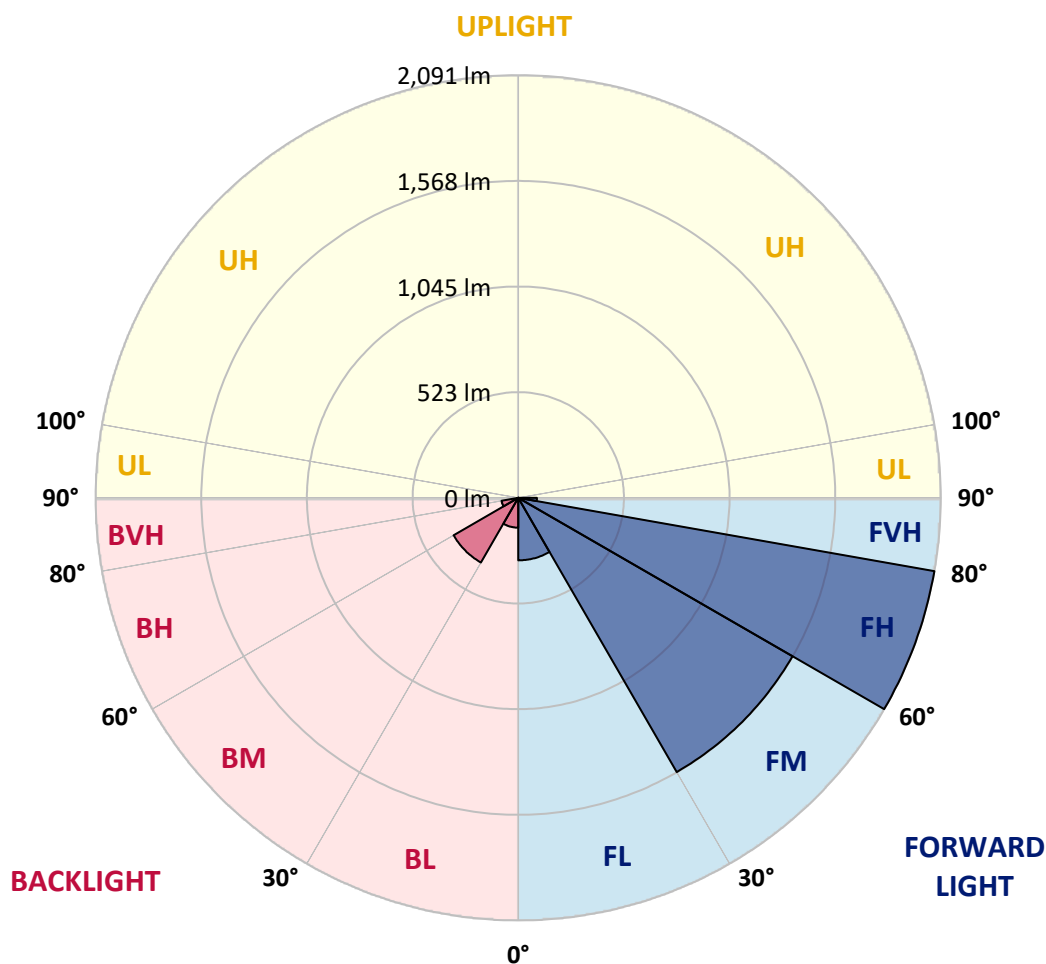
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 309.3  | 6.6       |                         |      |         |
| FM   | (30°-60°)   | 1566.8 | 33.6      |                         |      |         |
| FH   | (60°-80°)   | 2090.5 | 44.9      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 92.1   | 2.0       |                         |      | G1/100  |
| BL   | (0°-30°)    | 147.7  | 3.2       | B1/500                  |      |         |
| BM   | (30°-60°)   | 369.6  | 7.9       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 83.8   | 1.8       | B0/110                  |      | G0/110  |
| BVH  | (80°-90°)   | 0.7    | 0.0       |                         |      | G0/10   |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

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

Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 40°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 617.2  | 617.2  | 617.2  | 617.2  | 617.2  | 617.2  | 617.2  | 617.2  | 617.2  | 617.2  | 617.2  |
| 2.5°  | 635.7  | 638.2  | 636.7  | 634.0  | 633.2  | 631.8  | 630.1  | 629.3  | 626.9  | 624.8  | 622.4  |
| 5°    | 653.6  | 656.1  | 654.4  | 650.5  | 648.7  | 647.0  | 644.5  | 642.4  | 637.4  | 632.9  | 627.3  |
| 7.5°  | 673.3  | 675.4  | 673.3  | 667.7  | 664.8  | 662.8  | 659.3  | 656.1  | 650.5  | 643.8  | 636.7  |
| 10°   | 695.1  | 696.8  | 693.6  | 686.2  | 681.7  | 678.6  | 675.4  | 671.9  | 666.6  | 659.3  | 650.8  |
| 12.5° | 715.4  | 717.5  | 712.6  | 703.8  | 698.5  | 695.4  | 691.9  | 689.1  | 683.8  | 676.8  | 668.0  |
| 15°   | 734.0  | 737.2  | 728.8  | 719.2  | 713.3  | 710.8  | 707.4  | 705.6  | 702.0  | 697.1  | 689.1  |
| 17.5° | 748.0  | 750.2  | 741.4  | 730.1  | 723.4  | 721.7  | 719.2  | 720.3  | 719.7  | 717.2  | 711.9  |
| 20°   | 759.9  | 761.4  | 749.8  | 736.2  | 728.8  | 729.1  | 728.4  | 731.8  | 733.3  | 733.3  | 733.0  |
| 22.5° | 774.7  | 775.1  | 760.3  | 743.1  | 734.3  | 736.8  | 737.9  | 741.7  | 744.6  | 747.3  | 753.7  |
| 25°   | 794.1  | 793.3  | 775.8  | 752.2  | 744.6  | 748.0  | 750.5  | 751.9  | 755.0  | 759.6  | 774.0  |
| 27.5° | 822.8  | 820.7  | 798.3  | 767.0  | 757.9  | 761.1  | 765.6  | 764.9  | 763.5  | 767.0  | 791.2  |
| 30°   | 859.4  | 856.5  | 826.7  | 787.7  | 779.3  | 782.1  | 783.5  | 777.2  | 767.0  | 770.2  | 806.4  |
| 32.5° | 917.3  | 912.4  | 870.9  | 810.9  | 797.9  | 801.0  | 799.3  | 786.3  | 771.2  | 774.4  | 821.4  |
| 35°   | 1018.0 | 1006.0 | 947.4  | 859.4  | 819.0  | 815.5  | 811.2  | 798.6  | 780.0  | 776.8  | 834.0  |
| 37.5° | 1232.2 | 1211.0 | 1111.0 | 953.8  | 866.7  | 843.9  | 830.9  | 818.3  | 789.5  | 776.8  | 848.4  |
| 40°   | 1473.6 | 1452.2 | 1336.7 | 1111.7 | 946.1  | 907.4  | 876.5  | 841.4  | 799.3  | 781.4  | 870.9  |
| 42.5° | 1725.7 | 1702.1 | 1583.5 | 1307.6 | 1059.4 | 980.1  | 922.5  | 860.0  | 815.5  | 795.4  | 900.8  |
| 45°   | 2007.2 | 1977.7 | 1822.6 | 1511.9 | 1224.1 | 1100.8 | 996.6  | 898.3  | 843.6  | 820.3  | 941.5  |
| 47.5° | 2304.2 | 2265.9 | 2060.9 | 1710.2 | 1401.3 | 1267.9 | 1132.1 | 966.8  | 885.0  | 857.6  | 996.6  |
| 50°   | 2567.4 | 2529.5 | 2307.0 | 1917.7 | 1567.0 | 1426.9 | 1286.5 | 1061.5 | 947.1  | 910.2  | 1070.6 |
| 52.5° | 2756.6 | 2727.8 | 2530.9 | 2131.8 | 1739.3 | 1576.1 | 1426.6 | 1171.8 | 1025.7 | 977.6  | 1158.0 |
| 55°   | 2883.3 | 2857.1 | 2689.6 | 2334.7 | 1939.8 | 1740.4 | 1564.6 | 1291.4 | 1120.5 | 1058.3 | 1254.6 |
| 57.5° | 2960.2 | 2945.1 | 2804.4 | 2515.9 | 2138.5 | 1920.1 | 1722.5 | 1423.1 | 1232.2 | 1153.5 | 1362.3 |
| 60°   | 2987.6 | 2975.4 | 2875.6 | 2688.6 | 2378.6 | 2136.0 | 1908.2 | 1571.5 | 1367.7 | 1261.6 | 1472.9 |
| 62.5° | 2914.6 | 2917.0 | 2926.9 | 2893.2 | 2631.7 | 2388.8 | 2130.8 | 1749.9 | 1517.8 | 1384.2 | 1576.9 |
| 65°   | 2570.9 | 2591.3 | 2778.1 | 3120.0 | 2966.9 | 2705.4 | 2414.1 | 1967.5 | 1689.8 | 1523.5 | 1659.3 |
| 67.5° | 2128.6 | 2158.1 | 2390.5 | 3252.6 | 3324.3 | 3116.4 | 2808.6 | 2244.9 | 1894.8 | 1665.3 | 1690.5 |
| 70°   | 1629.4 | 1661.1 | 1942.6 | 3225.0 | 3658.7 | 3565.8 | 3296.5 | 2597.7 | 2107.2 | 1763.6 | 1610.9 |
| 72.5° | 1163.0 | 1179.2 | 1401.0 | 2978.1 | 3796.1 | 3871.8 | 3656.0 | 2931.8 | 2215.7 | 1709.2 | 1313.9 |
| 75°   | 817.2  | 814.4  | 961.4  | 2398.2 | 3582.3 | 3834.6 | 3530.0 | 2751.0 | 2005.1 | 1357.8 | 810.2  |
| 77.5° | 356.0  | 356.6  | 480.2  | 1456.4 | 2859.1 | 3275.1 | 2934.3 | 1723.2 | 1397.8 | 719.7  | 341.9  |
| 80°   | 92.4   | 95.1   | 176.2  | 579.9  | 1721.5 | 2161.6 | 1789.5 | 757.5  | 645.9  | 175.5  | 65.3   |
| 82.5° | 32.6   | 34.7   | 81.1   | 182.1  | 635.0  | 991.3  | 796.8  | 242.2  | 168.5  | 50.2   | 17.5   |
| 85°   | 9.4    | 11.3   | 43.6   | 55.9   | 131.3  | 280.1  | 193.4  | 47.0   | 41.4   | 25.9   | 4.6    |
| 87.5° | 0.0    | 1.4    | 8.8    | 7.7    | 7.7    | 5.2    | 9.8    | 5.2    | 6.7    | 3.2    | 1.4    |
| 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°    | 617.2  | 617.2  | 617.2  | 617.2 | 617.2 | 617.2 | 617.2 | 617.2 | 617.2 | 617.2 | 617.2 |
| 2.5°  | 620.2  | 617.8  | 612.5  | 606.9 | 601.7 | 596.8 | 595.3 | 590.1 | 587.6 | 587.9 | 587.6 |
| 5°    | 623.4  | 618.9  | 608.6  | 596.4 | 583.7 | 569.4 | 557.4 | 540.6 | 526.2 | 524.4 | 523.4 |
| 7.5°  | 631.8  | 624.5  | 608.0  | 584.1 | 552.5 | 512.8 | 476.0 | 439.5 | 418.8 | 407.5 | 406.8 |
| 10°   | 644.8  | 635.0  | 609.8  | 564.1 | 497.0 | 426.2 | 370.3 | 324.3 | 300.8 | 290.0 | 287.8 |
| 12.5° | 660.3  | 649.4  | 612.5  | 530.0 | 425.5 | 332.4 | 272.0 | 244.0 | 239.0 | 238.3 | 238.0 |
| 15°   | 682.0  | 670.1  | 615.7  | 484.1 | 347.9 | 253.1 | 225.4 | 225.7 | 229.6 | 231.6 | 231.3 |
| 17.5° | 706.2  | 694.3  | 611.1  | 427.9 | 271.3 | 216.3 | 215.6 | 218.7 | 224.3 | 226.4 | 226.0 |
| 20°   | 730.8  | 719.7  | 595.0  | 361.9 | 219.4 | 206.0 | 208.9 | 212.4 | 218.0 | 220.8 | 220.8 |
| 22.5° | 756.1  | 746.3  | 569.4  | 291.7 | 198.0 | 198.6 | 202.2 | 205.7 | 212.1 | 215.1 | 215.1 |
| 25°   | 783.1  | 774.7  | 535.4  | 233.8 | 188.8 | 191.0 | 195.6 | 199.8 | 206.4 | 210.2 | 210.2 |
| 27.5° | 810.6  | 804.2  | 496.7  | 195.2 | 180.4 | 182.9 | 188.2 | 193.7 | 200.4 | 205.0 | 205.3 |
| 30°   | 840.4  | 836.8  | 465.9  | 180.8 | 172.4 | 174.5 | 180.4 | 186.8 | 194.1 | 199.8 | 200.4 |
| 32.5° | 870.9  | 870.2  | 450.7  | 191.3 | 165.0 | 166.4 | 171.7 | 177.9 | 187.1 | 194.1 | 194.9 |
| 35°   | 901.1  | 902.5  | 442.0  | 221.2 | 162.6 | 158.7 | 162.2 | 167.8 | 178.7 | 187.5 | 188.8 |
| 37.5° | 939.7  | 943.2  | 441.6  | 253.5 | 168.5 | 151.0 | 153.4 | 157.2 | 166.8 | 176.9 | 178.7 |
| 40°   | 997.3  | 1015.9 | 464.0  | 281.2 | 179.1 | 143.9 | 144.6 | 145.3 | 150.3 | 158.7 | 161.4 |
| 42.5° | 1073.8 | 1128.2 | 545.2  | 300.1 | 183.3 | 137.6 | 135.2 | 131.3 | 130.6 | 135.2 | 137.6 |
| 45°   | 1168.9 | 1264.0 | 687.7  | 310.7 | 179.1 | 130.6 | 123.9 | 113.8 | 109.9 | 113.1 | 113.1 |
| 47.5° | 1280.9 | 1412.9 | 856.5  | 313.1 | 172.0 | 121.8 | 109.9 | 96.6  | 93.4  | 94.4  | 94.1  |
| 50°   | 1390.1 | 1524.5 | 1005.0 | 292.7 | 160.4 | 110.6 | 94.4  | 83.2  | 81.1  | 81.5  | 81.5  |
| 52.5° | 1486.7 | 1562.8 | 1047.1 | 244.7 | 144.9 | 96.9  | 81.1  | 73.4  | 72.0  | 72.0  | 71.6  |
| 55°   | 1550.5 | 1521.4 | 933.8  | 187.1 | 125.7 | 82.8  | 69.5  | 65.6  | 65.0  | 64.6  | 63.9  |
| 57.5° | 1563.8 | 1386.6 | 705.2  | 135.2 | 98.3  | 69.9  | 61.8  | 59.7  | 58.2  | 56.9  | 56.2  |
| 60°   | 1516.1 | 1161.9 | 449.0  | 94.4  | 73.7  | 59.7  | 54.7  | 53.4  | 50.5  | 47.8  | 46.6  |
| 62.5° | 1412.9 | 877.6  | 248.6  | 65.6  | 59.3  | 50.9  | 48.5  | 46.6  | 41.4  | 36.9  | 35.5  |
| 65°   | 1274.3 | 583.4  | 109.9  | 51.2  | 48.5  | 42.8  | 41.4  | 38.9  | 32.6  | 27.4  | 26.3  |
| 67.5° | 1134.9 | 335.9  | 49.5   | 41.1  | 38.9  | 35.1  | 34.0  | 32.3  | 27.8  | 22.9  | 22.1  |
| 70°   | 975.9  | 170.3  | 34.0   | 32.6  | 30.2  | 26.6  | 27.8  | 27.4  | 22.9  | 18.7  | 17.9  |
| 72.5° | 726.6  | 84.6   | 25.6   | 24.6  | 21.7  | 19.0  | 22.9  | 22.4  | 17.9  | 14.0  | 13.3  |
| 75°   | 411.4  | 41.8   | 18.7   | 17.2  | 13.0  | 14.0  | 18.2  | 17.2  | 12.3  | 9.1   | 8.4   |
| 77.5° | 163.2  | 21.4   | 12.3   | 10.6  | 7.7   | 9.4   | 13.3  | 11.6  | 6.4   | 3.9   | 3.5   |
| 80°   | 37.5   | 10.6   | 6.4    | 4.6   | 3.5   | 5.6   | 7.0   | 4.2   | 1.7   | 0.3   | 0.0   |
| 82.5° | 10.6   | 4.6    | 2.2    | 1.7   | 1.7   | 2.2   | 1.7   | 0.7   | 0.0   | 0.0   | 0.0   |
| 85°   | 3.5    | 2.2    | 0.7    | 0.3   | 0.3   | 0.3   | 0.3   | 0.0   | 0.0   | 0.0   | 0.0   |
| 87.5° | 1.4    | 0.7    | 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)