

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: P959412

Luminaire Tested: **NAV-SB1A-827-U-SL3-HSS**

Issue Date: 1/21/2025

### Test Information

Test Method: LM-79-08  
Report Number: P959412  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-13)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB1A-827-U-SL3-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(1) 80 CRI, 2700K, 350mA LIGHTSQUARE WITH 26 LEDS AND TYPE III SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: -

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 3220.5 lumens  
Efficiency: N/A  
Efficacy: 104.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B0 - U0 - G1

Input Watts (W): 30.9  
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

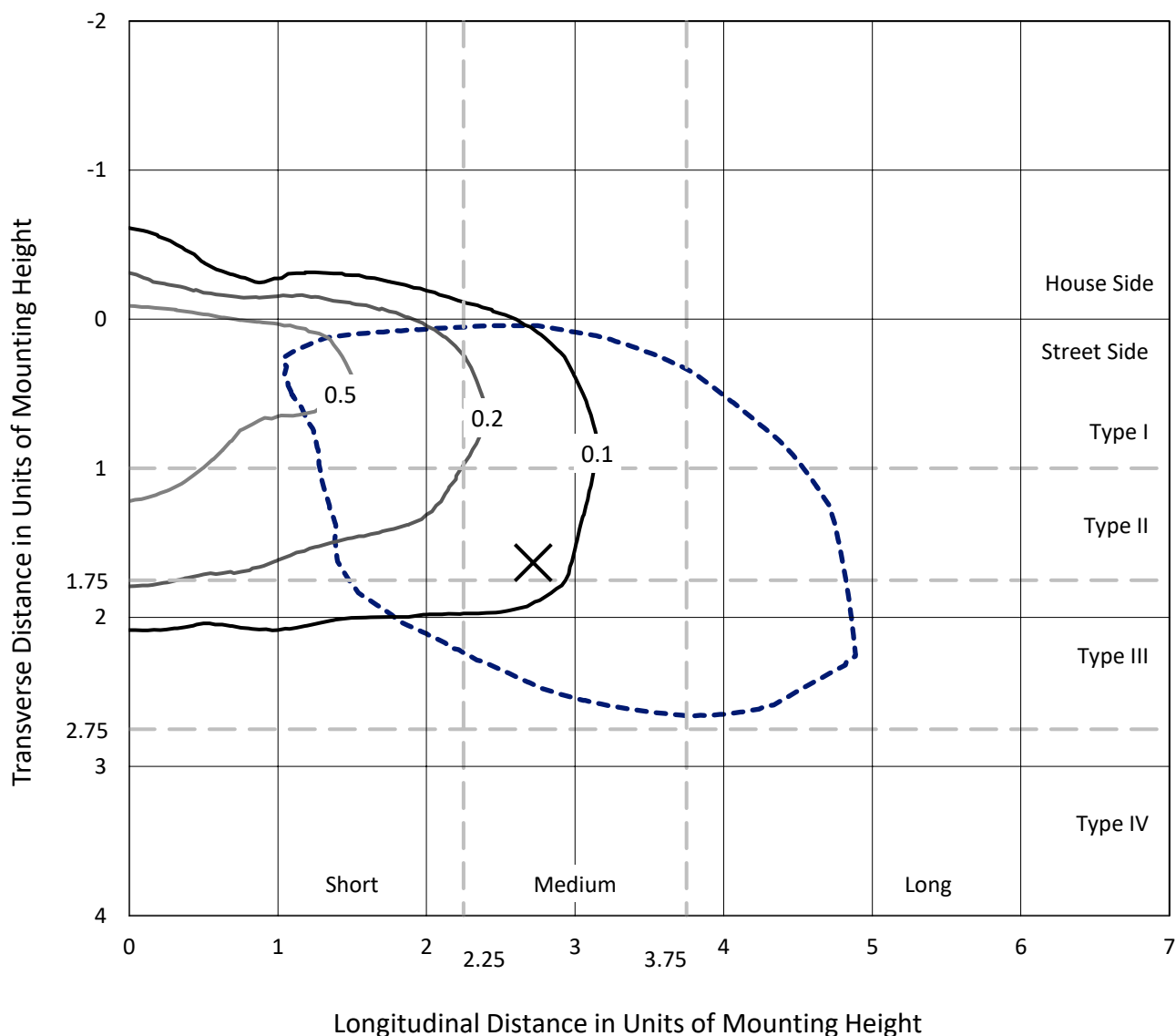


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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

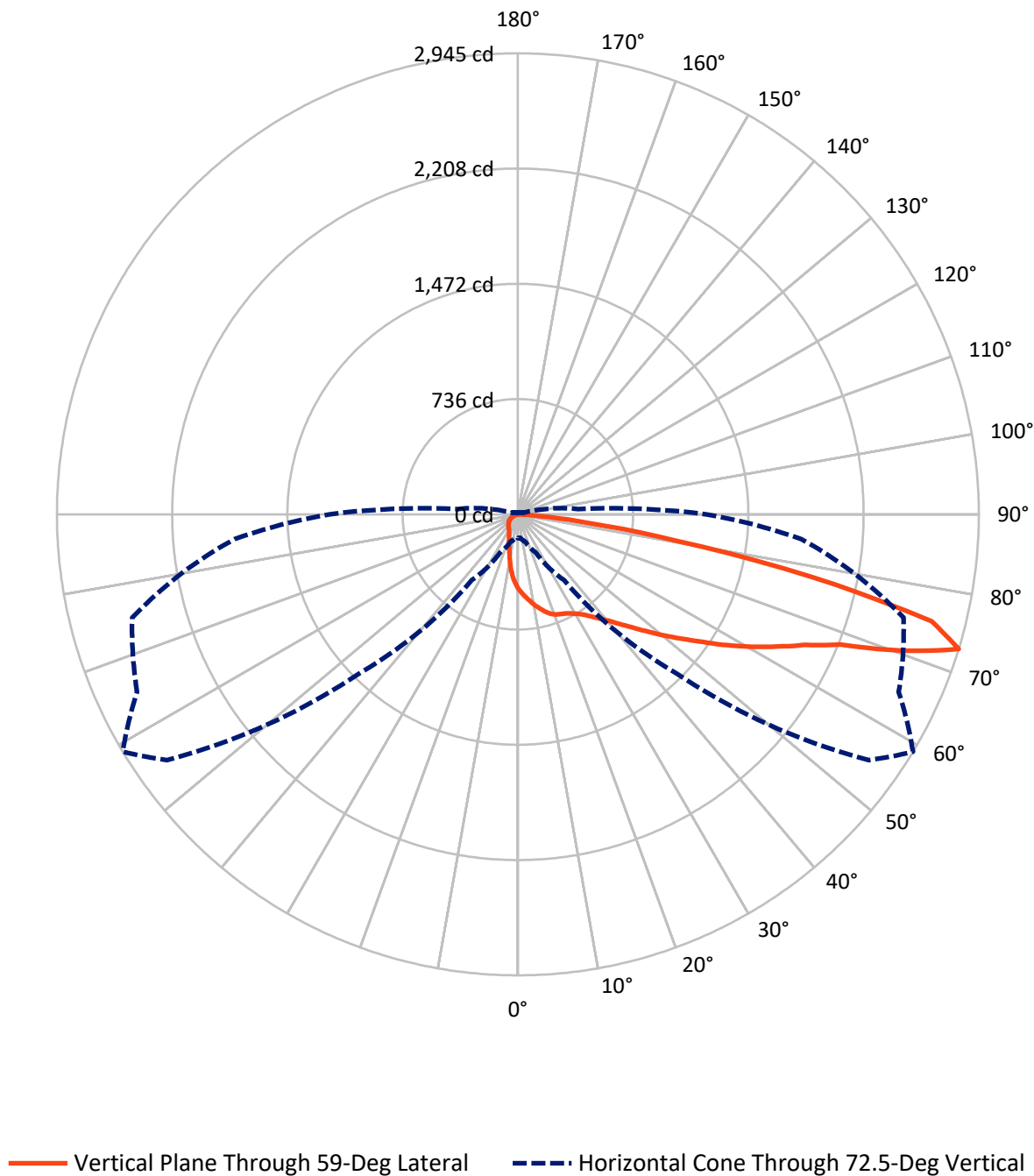


Based on 25 foot mounting height. Maximum calculated value = 0.9 fc  
 Type III - Medium - N/A

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## Luminous Intensity Polar Plot



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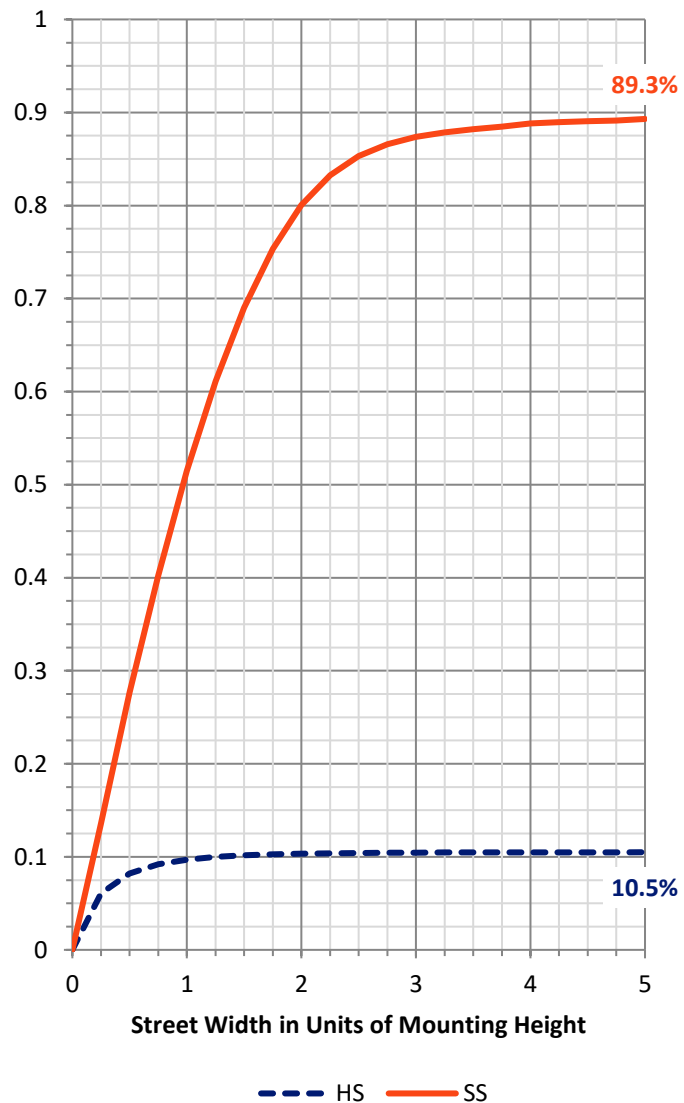
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 340.2    | 0.0    | 340.2  |
|                    | % Fixture | 10.6     | 0.0    | 10.6   |
| <b>Street Side</b> | Lumens    | 2880.4   | 0.0    | 2880.4 |
|                    | % Fixture | 89.4     | 0.0    | 89.4   |
| <b>Total</b>       | Lumens    | 3220.5   | 0.0    | 3220.5 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 43.1   | 1.3       |
| 10°-20°   | 114.4  | 3.6       |
| 20°-30°   | 181.4  | 5.6       |
| 30°-40°   | 291.1  | 9.0       |
| 40°-50°   | 464.9  | 14.4      |
| 50°-60°   | 673.1  | 20.9      |
| 60°-70°   | 798.8  | 24.8      |
| 70°-80°   | 593.0  | 18.4      |
| 80°-90°   | 60.6   | 1.9       |
| 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°    | 3220.5 | 100.0     |
| 0°-180°   | 3220.5 | 100.0     |

**Coefficient of Utilization**



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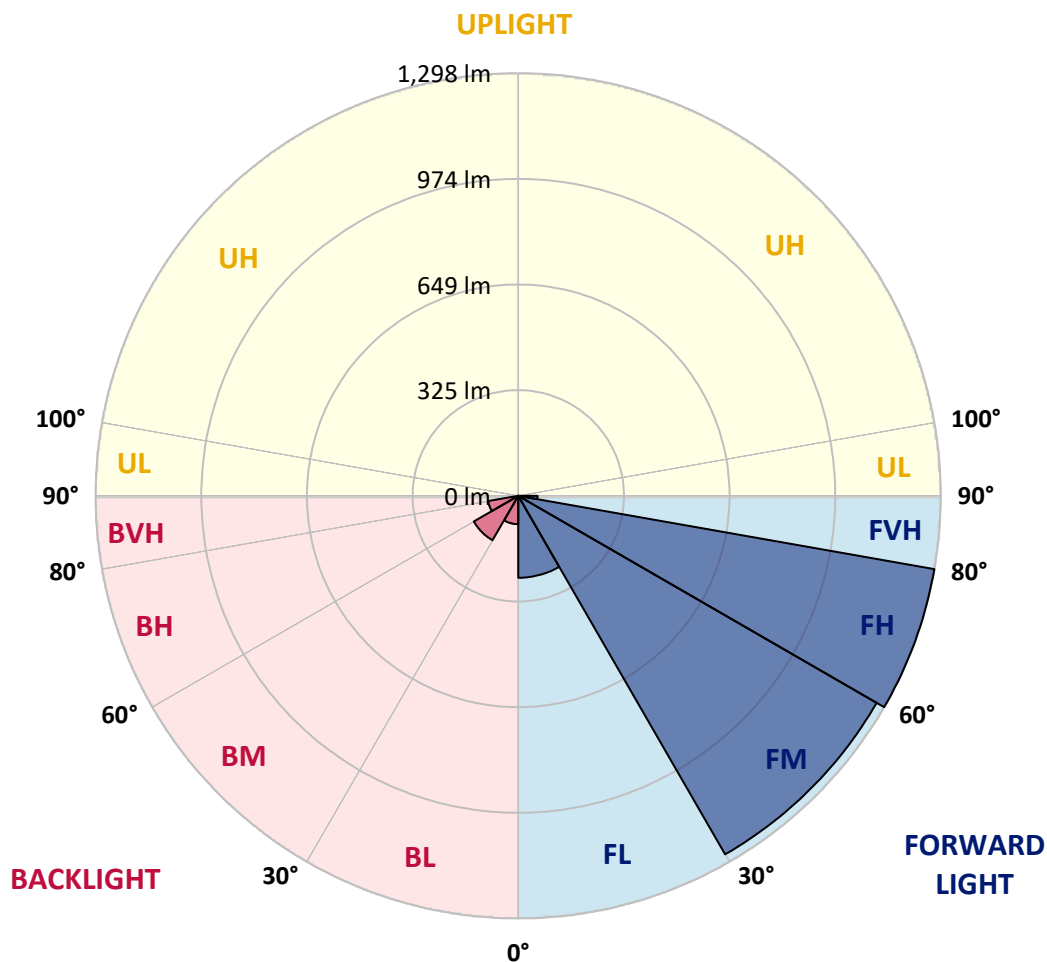
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 251.8  | 7.8       |                         |      |         |
| FM   | (30°-60°)   | 1271.4 | 39.5      |                         |      |         |
| FH   | (60°-80°)   | 1298.1 | 40.3      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 59.1   | 1.8       |                         |      | G1/100  |
| BL   | (0°-30°)    | 87.1   | 2.7       | B0/110                  |      |         |
| BM   | (30°-60°)   | 157.7  | 4.9       | B0/220                  |      |         |
| BH   | (60°-80°)   | 93.8   | 2.9       | B0/110                  |      | G0/110  |
| BVH  | (80°-90°)   | 1.5    | 0.0       |                         |      | G0/10   |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B0-U0-G1**

Type III Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 59°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 476.2  | 476.2  | 476.2  | 476.2  | 476.2  | 476.2  | 476.2  | 476.2  | 476.2  | 476.2  | 476.2  |
| 2.5°  | 528.4  | 525.4  | 525.8  | 520.8  | 517.2  | 513.4  | 506.1  | 505.0  | 499.8  | 490.6  | 481.0  |
| 5°    | 574.4  | 572.6  | 570.8  | 565.2  | 557.8  | 548.6  | 536.2  | 531.8  | 522.0  | 506.1  | 487.6  |
| 7.5°  | 608.0  | 605.8  | 606.6  | 601.0  | 595.0  | 584.8  | 567.7  | 559.5  | 546.6  | 522.3  | 494.4  |
| 10°   | 614.6  | 613.4  | 618.8  | 620.9  | 620.9  | 614.4  | 597.8  | 589.6  | 570.8  | 539.8  | 501.2  |
| 12.5° | 578.0  | 578.2  | 591.9  | 608.3  | 629.8  | 635.8  | 624.7  | 615.8  | 597.4  | 558.2  | 510.1  |
| 15°   | 535.4  | 535.6  | 548.8  | 569.8  | 605.0  | 640.0  | 648.8  | 643.2  | 624.0  | 578.2  | 520.4  |
| 17.5° | 509.6  | 508.6  | 517.4  | 534.7  | 571.5  | 620.9  | 663.6  | 667.4  | 651.8  | 600.3  | 531.8  |
| 20°   | 506.1  | 504.2  | 508.8  | 517.4  | 543.8  | 597.0  | 665.2  | 683.2  | 680.4  | 625.4  | 544.8  |
| 22.5° | 528.0  | 525.0  | 522.5  | 523.0  | 534.0  | 577.0  | 661.0  | 692.0  | 709.8  | 655.4  | 562.6  |
| 25°   | 571.2  | 566.6  | 558.4  | 548.0  | 545.6  | 572.8  | 658.2  | 701.6  | 737.2  | 693.8  | 586.2  |
| 27.5° | 624.2  | 617.8  | 602.0  | 586.2  | 572.8  | 584.6  | 664.2  | 717.0  | 768.1  | 738.6  | 613.6  |
| 30°   | 682.5  | 674.6  | 658.8  | 628.9  | 607.4  | 610.8  | 678.8  | 737.2  | 807.6  | 789.4  | 647.8  |
| 32.5° | 768.1  | 749.6  | 722.0  | 676.4  | 648.0  | 639.2  | 700.6  | 762.8  | 856.6  | 856.8  | 697.4  |
| 35°   | 841.4  | 831.2  | 803.4  | 746.6  | 688.4  | 676.8  | 729.4  | 799.0  | 924.6  | 946.2  | 766.8  |
| 37.5° | 889.6  | 875.6  | 851.2  | 808.4  | 751.0  | 715.6  | 767.8  | 843.4  | 996.4  | 1048.0 | 852.4  |
| 40°   | 943.4  | 929.6  | 897.2  | 857.0  | 823.8  | 782.0  | 816.4  | 894.4  | 1075.3 | 1152.4 | 950.2  |
| 42.5° | 1008.4 | 990.4  | 952.0  | 908.8  | 874.0  | 869.4  | 880.0  | 958.2  | 1156.2 | 1266.0 | 1052.0 |
| 45°   | 1084.8 | 1067.7 | 1023.8 | 969.1  | 938.6  | 930.4  | 959.8  | 1032.4 | 1246.4 | 1390.4 | 1154.8 |
| 47.5° | 1156.2 | 1136.4 | 1089.2 | 1039.4 | 1005.4 | 979.6  | 1044.8 | 1120.0 | 1348.6 | 1520.6 | 1251.9 |
| 50°   | 1217.0 | 1196.8 | 1153.5 | 1100.3 | 1077.4 | 1043.6 | 1128.2 | 1217.8 | 1450.0 | 1652.9 | 1340.6 |
| 52.5° | 1258.6 | 1240.8 | 1189.8 | 1153.7 | 1138.2 | 1121.1 | 1226.0 | 1321.5 | 1550.9 | 1774.0 | 1428.3 |
| 55°   | 1249.2 | 1233.2 | 1188.4 | 1185.9 | 1184.8 | 1202.7 | 1343.0 | 1439.0 | 1653.7 | 1888.6 | 1515.6 |
| 57.5° | 1219.1 | 1201.0 | 1145.1 | 1183.6 | 1220.8 | 1275.4 | 1469.5 | 1578.0 | 1766.4 | 1996.6 | 1599.7 |
| 60°   | 1130.6 | 1124.2 | 1090.2 | 1179.2 | 1235.9 | 1346.7 | 1614.2 | 1717.6 | 1888.4 | 2091.7 | 1674.3 |
| 62.5° | 943.2  | 948.7  | 948.5  | 1188.4 | 1263.2 | 1427.9 | 1745.6 | 1858.9 | 2007.6 | 2183.1 | 1740.8 |
| 65°   | 706.2  | 725.2  | 749.4  | 1105.2 | 1299.8 | 1572.8 | 1902.7 | 2012.2 | 2128.7 | 2289.5 | 1808.2 |
| 67.5° | 474.6  | 489.7  | 506.1  | 906.6  | 1190.9 | 1725.0 | 2163.6 | 2222.3 | 2273.8 | 2407.5 | 1884.2 |
| 70°   | 271.6  | 276.5  | 299.4  | 566.2  | 918.0  | 1682.9 | 2588.5 | 2609.8 | 2490.1 | 2552.8 | 1939.4 |
| 72.5° | 152.2  | 150.6  | 180.8  | 268.8  | 513.0  | 1441.1 | 2737.4 | 2944.5 | 2683.8 | 2550.5 | 1816.0 |
| 75°   | 101.8  | 102.0  | 124.4  | 169.4  | 200.0  | 1008.8 | 2358.9 | 2730.3 | 2567.7 | 2261.6 | 1483.8 |
| 77.5° | 69.4   | 71.8   | 91.4   | 131.0  | 92.6   | 492.2  | 1560.6 | 1912.5 | 2078.9 | 1746.4 | 1024.4 |
| 80°   | 30.0   | 30.2   | 60.4   | 94.0   | 62.4   | 156.6  | 809.1  | 1024.6 | 1303.8 | 980.6  | 405.8  |
| 82.5° | 15.6   | 17.6   | 38.4   | 60.8   | 39.4   | 54.8   | 382.2  | 447.6  | 547.1  | 287.8  | 83.2   |
| 85°   | 5.4    | 6.6    | 23.8   | 29.8   | 19.8   | 19.6   | 133.0  | 135.6  | 115.8  | 43.4   | 23.0   |
| 87.5° | 0.0    | 1.0    | 9.2    | 7.4    | 2.6    | 2.4    | 15.8   | 13.2   | 10.6   | 6.0    | 7.6    |
| 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°    | 476.2  | 476.2 | 476.2 | 476.2 | 476.2 | 476.2 | 476.2 | 476.2 | 476.2 | 476.2 | 476.2 |
| 2.5°  | 476.6  | 471.0 | 461.8 | 450.4 | 437.2 | 430.0 | 419.6 | 413.4 | 407.7 | 408.0 | 412.6 |
| 5°    | 477.3  | 467.8 | 444.2 | 419.2 | 391.5 | 371.2 | 348.4 | 332.4 | 320.2 | 317.2 | 321.7 |
| 7.5°  | 479.2  | 463.2 | 424.8 | 383.1 | 336.8 | 302.6 | 271.2 | 251.4 | 240.4 | 237.4 | 240.4 |
| 10°   | 481.7  | 458.2 | 402.6 | 339.0 | 281.6 | 240.4 | 214.2 | 201.6 | 196.6 | 192.8 | 195.2 |
| 12.5° | 483.8  | 452.9 | 374.9 | 293.4 | 232.4 | 200.2 | 180.4 | 169.8 | 165.4 | 162.8 | 164.2 |
| 15°   | 487.4  | 446.0 | 344.8 | 250.8 | 199.2 | 172.8 | 154.2 | 146.4 | 145.0 | 145.5 | 146.2 |
| 17.5° | 491.0  | 439.2 | 311.2 | 217.6 | 174.8 | 148.8 | 137.6 | 136.2 | 138.0 | 139.6 | 140.2 |
| 20°   | 495.0  | 429.6 | 277.2 | 192.6 | 152.2 | 132.2 | 129.4 | 130.2 | 131.0 | 134.0 | 134.8 |
| 22.5° | 500.8  | 417.4 | 247.2 | 171.4 | 133.6 | 124.2 | 122.8 | 123.4 | 124.0 | 127.0 | 127.8 |
| 25°   | 509.2  | 404.4 | 223.0 | 151.8 | 121.8 | 117.8 | 116.2 | 116.2 | 117.2 | 119.8 | 121.0 |
| 27.5° | 518.0  | 385.8 | 203.6 | 133.8 | 114.8 | 110.6 | 108.0 | 108.0 | 109.2 | 112.2 | 113.6 |
| 30°   | 528.0  | 369.0 | 188.2 | 120.2 | 109.0 | 103.4 | 100.0 | 99.2  | 100.6 | 104.6 | 105.6 |
| 32.5° | 545.8  | 358.0 | 177.2 | 114.0 | 103.6 | 97.0  | 92.4  | 90.0  | 91.2  | 95.8  | 97.2  |
| 35°   | 573.0  | 355.6 | 169.6 | 110.8 | 98.6  | 91.0  | 84.6  | 81.0  | 82.0  | 86.8  | 88.4  |
| 37.5° | 604.8  | 360.8 | 162.4 | 106.6 | 93.8  | 85.4  | 76.8  | 72.2  | 73.8  | 78.2  | 79.4  |
| 40°   | 650.4  | 382.6 | 156.6 | 103.4 | 89.0  | 78.6  | 69.0  | 64.4  | 67.0  | 70.8  | 71.4  |
| 42.5° | 705.4  | 421.6 | 155.2 | 100.6 | 83.0  | 71.4  | 61.8  | 58.4  | 60.6  | 64.2  | 64.8  |
| 45°   | 773.8  | 471.2 | 162.0 | 96.8  | 76.6  | 64.6  | 56.2  | 54.2  | 54.8  | 58.4  | 60.2  |
| 47.5° | 847.2  | 522.0 | 180.4 | 93.4  | 70.8  | 58.8  | 51.8  | 50.0  | 49.6  | 53.0  | 55.0  |
| 50°   | 921.4  | 567.2 | 202.2 | 90.8  | 66.8  | 54.2  | 48.4  | 46.2  | 45.2  | 47.4  | 48.2  |
| 52.5° | 994.8  | 603.2 | 216.6 | 86.6  | 62.8  | 49.6  | 45.4  | 42.2  | 40.4  | 41.4  | 42.2  |
| 55°   | 1069.2 | 634.8 | 217.4 | 80.4  | 59.0  | 46.6  | 42.4  | 38.8  | 36.6  | 36.6  | 37.0  |
| 57.5° | 1138.8 | 662.6 | 205.0 | 72.0  | 53.8  | 44.0  | 38.4  | 35.6  | 33.0  | 32.2  | 32.4  |
| 60°   | 1200.4 | 683.2 | 184.4 | 62.4  | 49.2  | 40.4  | 34.4  | 32.2  | 29.0  | 27.4  | 27.0  |
| 62.5° | 1255.2 | 693.2 | 156.2 | 52.8  | 43.6  | 36.2  | 30.6  | 28.2  | 24.0  | 21.8  | 21.6  |
| 65°   | 1301.8 | 683.0 | 126.8 | 43.8  | 38.6  | 31.6  | 26.2  | 23.8  | 19.2  | 16.6  | 16.6  |
| 67.5° | 1347.8 | 635.8 | 95.8  | 36.8  | 33.6  | 26.4  | 21.6  | 19.4  | 16.0  | 13.8  | 13.8  |
| 70°   | 1353.6 | 536.8 | 67.0  | 31.0  | 28.0  | 20.4  | 17.4  | 16.0  | 13.0  | 11.2  | 11.0  |
| 72.5° | 1205.0 | 386.2 | 40.8  | 25.2  | 21.8  | 14.6  | 13.8  | 12.6  | 9.6   | 8.4   | 8.2   |
| 75°   | 963.2  | 236.8 | 24.0  | 19.0  | 14.6  | 10.4  | 10.4  | 9.0   | 6.6   | 5.4   | 5.4   |
| 77.5° | 665.7  | 123.8 | 14.0  | 12.2  | 8.6   | 6.0   | 6.8   | 5.4   | 3.2   | 2.6   | 2.6   |
| 80°   | 266.6  | 47.0  | 7.6   | 5.6   | 4.0   | 2.8   | 2.4   | 1.2   | 0.6   | 0.4   | 0.6   |
| 82.5° | 53.2   | 12.4  | 2.6   | 1.4   | 1.4   | 0.6   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 85°   | 13.6   | 2.8   | 0.6   | 0.4   | 0.4   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 87.5° | 4.2    | 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)