

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: P959961

Luminaire Tested: **NAV-SB1B-827-U-T4W**

Issue Date: 1/21/2025

### Test Information

Test Method: LM-79-08  
Report Number: P959961  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB1B-827-U-T4W  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(1) 80 CRI, 2700K, 450mA LIGHTSQUARE WITH 26 LEDS AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: -

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 5011.2 lumens  
Efficiency: N/A  
Efficacy: 125.9 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): 39.8  
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

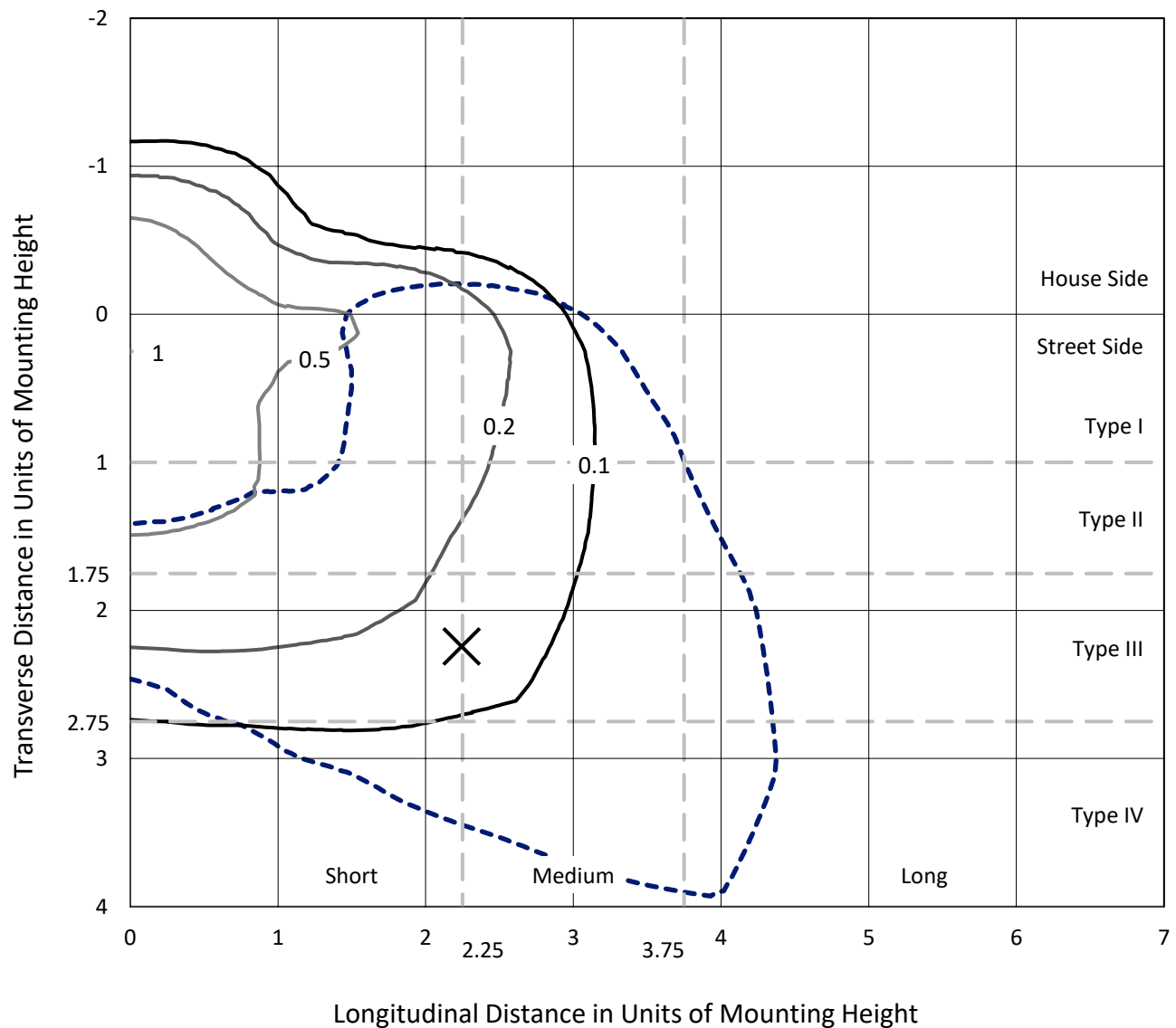


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## Iso-Footcandle Lines of Horizontal Illumination

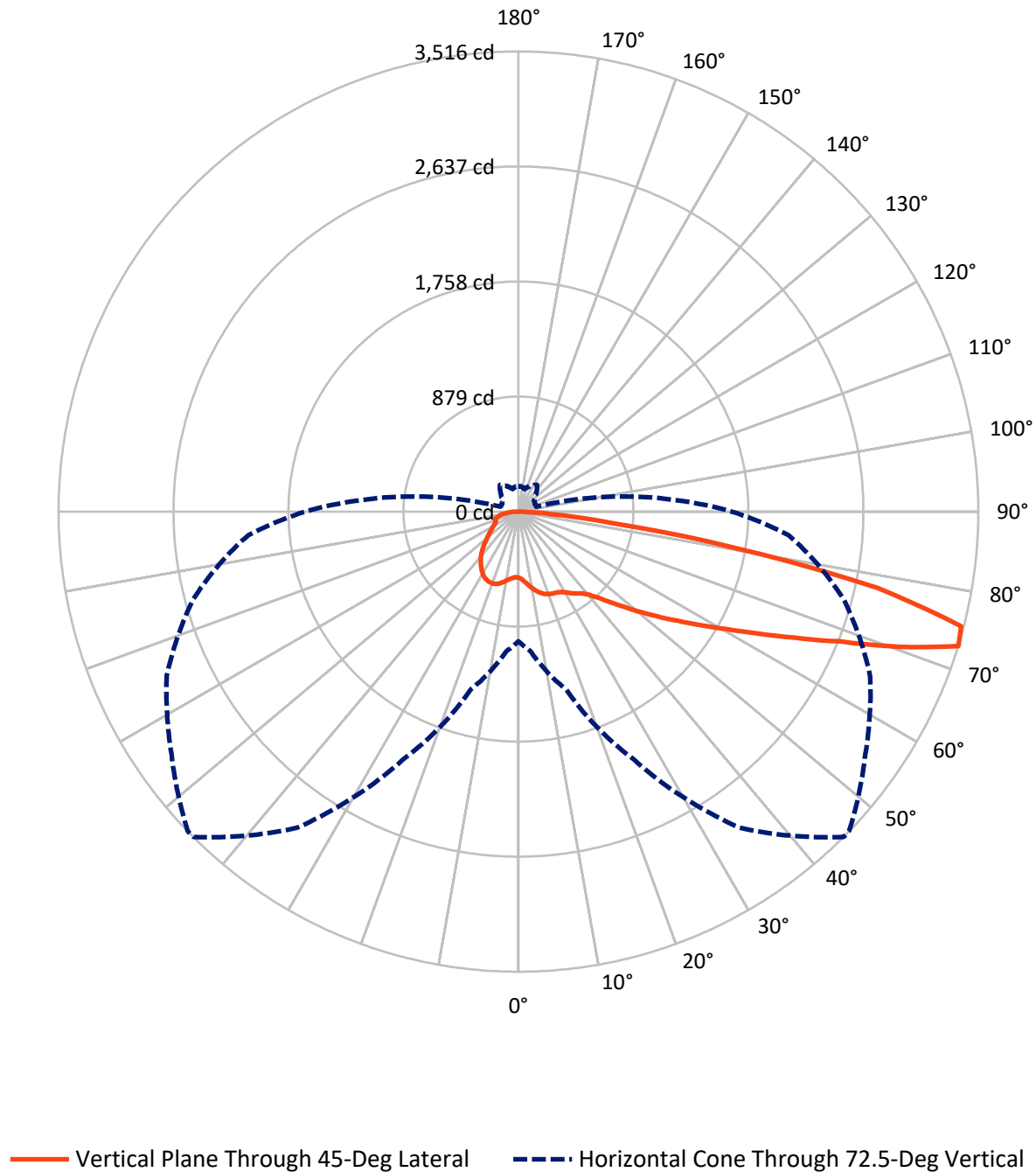
× Max cd  
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1 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    | 1132.9   | 0.0    | 1132.9 |
|                    | % Fixture | 22.6     | 0.0    | 22.6   |
| <b>Street Side</b> | Lumens    | 3878.4   | 0.0    | 3878.4 |
|                    | % Fixture | 77.4     | 0.0    | 77.4   |
| <b>Total</b>       | Lumens    | 5011.2   | 0.0    | 5011.2 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 51.5   | 1.0       |
| 10°-20°   | 171.6  | 3.4       |
| 20°-30°   | 298.4  | 6.0       |
| 30°-40°   | 427.8  | 8.5       |
| 40°-50°   | 602.4  | 12.0      |
| 50°-60°   | 922.7  | 18.4      |
| 60°-70°   | 1336.6 | 26.7      |
| 70°-80°   | 1067.4 | 21.3      |
| 80°-90°   | 132.9  | 2.7       |
| 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°    | 5011.2 | 100.0     |
| 0°-180°   | 5011.2 | 100.0     |

**Coefficient of Utilization**



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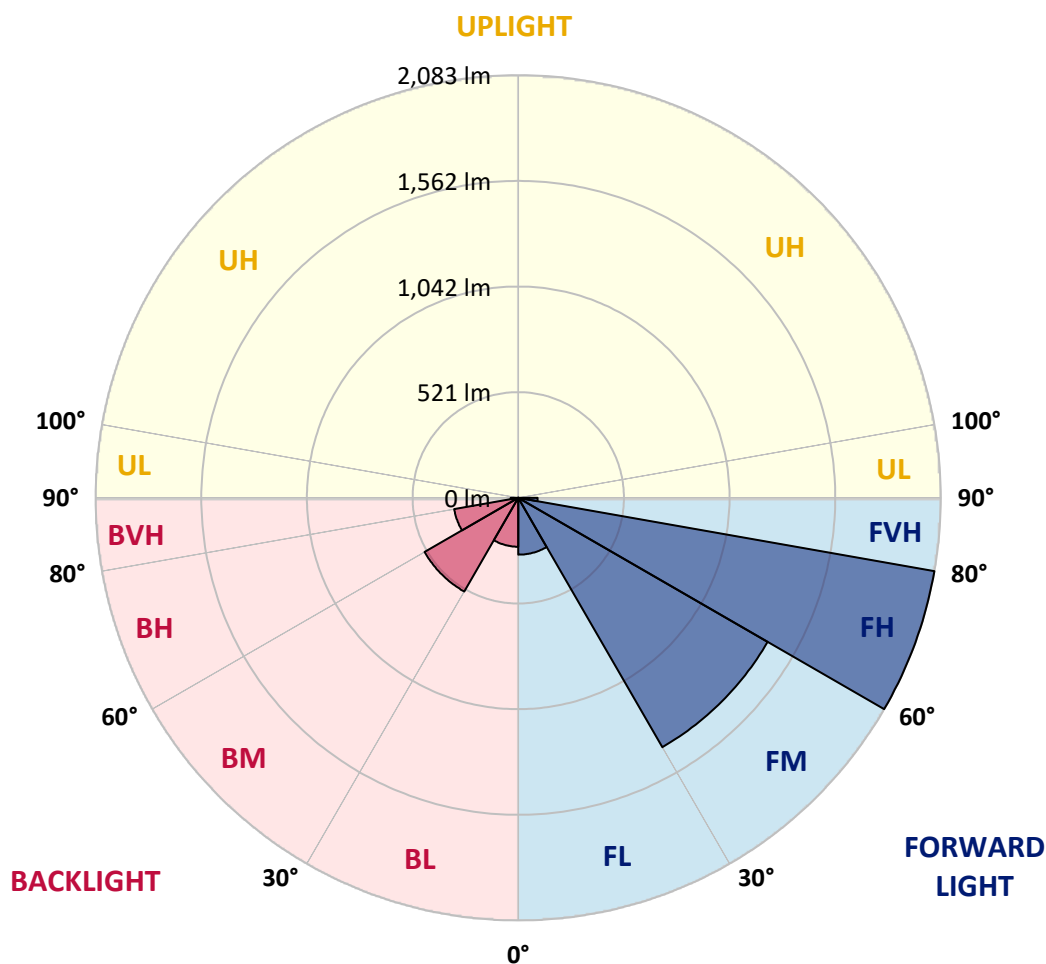
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 280.2  | 5.6       |                         |      |         |
| FM   | (30°-60°)   | 1419.4 | 28.3      |                         |      |         |
| FH   | (60°-80°)   | 2083.3 | 41.6      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 95.4   | 1.9       |                         |      | G1/100  |
| BL   | (0°-30°)    | 241.2  | 4.8       | B1/500                  |      |         |
| BM   | (30°-60°)   | 533.4  | 10.6      | B1/1000                 |      |         |
| BH   | (60°-80°)   | 320.7  | 6.4       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 37.6   | 0.7       |                         |      | G1/100  |
| 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°    | 45°    | 46°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 505.5  | 505.5  | 505.5  | 505.5  | 505.5  | 505.5  | 505.5  | 505.5  | 505.5  | 505.5  | 505.5  |
| 2.5°  | 525.3  | 528.8  | 525.6  | 522.6  | 521.4  | 517.9  | 517.7  | 515.6  | 514.2  | 510.6  | 509.5  |
| 5°    | 562.0  | 566.5  | 561.2  | 555.4  | 550.1  | 541.7  | 540.7  | 534.5  | 527.7  | 519.8  | 515.3  |
| 7.5°  | 603.5  | 607.4  | 601.4  | 592.7  | 583.4  | 569.4  | 569.2  | 558.1  | 547.2  | 533.8  | 526.1  |
| 10°   | 639.6  | 644.9  | 636.7  | 624.8  | 613.3  | 597.4  | 595.5  | 582.9  | 569.2  | 551.8  | 540.1  |
| 12.5° | 671.6  | 675.3  | 667.4  | 652.8  | 639.4  | 623.5  | 621.2  | 607.2  | 591.8  | 572.1  | 557.3  |
| 15°   | 696.9  | 701.7  | 691.2  | 675.6  | 661.3  | 645.8  | 643.6  | 630.9  | 615.6  | 594.8  | 575.7  |
| 17.5° | 713.6  | 717.5  | 706.7  | 689.3  | 675.6  | 662.6  | 661.0  | 650.5  | 637.0  | 615.9  | 595.5  |
| 20°   | 719.9  | 724.2  | 712.8  | 695.1  | 682.4  | 672.4  | 671.6  | 663.9  | 654.7  | 635.4  | 614.8  |
| 22.5° | 726.2  | 730.2  | 715.4  | 696.9  | 685.8  | 679.5  | 679.3  | 674.2  | 670.6  | 654.7  | 634.6  |
| 25°   | 751.8  | 752.9  | 733.1  | 706.4  | 690.5  | 685.0  | 684.8  | 684.5  | 686.1  | 673.7  | 656.0  |
| 27.5° | 774.0  | 773.8  | 756.9  | 731.7  | 707.2  | 695.6  | 695.4  | 698.0  | 703.0  | 692.7  | 678.1  |
| 30°   | 806.5  | 803.6  | 783.5  | 757.4  | 734.9  | 717.0  | 715.4  | 713.0  | 717.0  | 708.8  | 700.4  |
| 32.5° | 875.4  | 866.1  | 833.6  | 787.2  | 757.9  | 744.2  | 742.1  | 727.2  | 728.9  | 723.9  | 719.7  |
| 35°   | 974.2  | 962.0  | 918.7  | 843.7  | 786.4  | 766.9  | 765.8  | 747.1  | 743.9  | 739.4  | 741.0  |
| 37.5° | 1091.6 | 1076.6 | 1026.1 | 925.6  | 835.5  | 793.2  | 791.7  | 774.8  | 761.9  | 757.1  | 766.1  |
| 40°   | 1209.6 | 1190.5 | 1148.9 | 1025.3 | 907.8  | 837.3  | 832.3  | 806.8  | 791.9  | 784.0  | 803.1  |
| 42.5° | 1324.2 | 1308.3 | 1272.6 | 1137.2 | 997.1  | 901.8  | 890.7  | 846.9  | 835.8  | 828.4  | 862.7  |
| 45°   | 1425.6 | 1411.3 | 1385.2 | 1256.9 | 1101.6 | 989.4  | 978.6  | 907.0  | 903.6  | 903.6  | 953.2  |
| 47.5° | 1507.9 | 1504.7 | 1477.0 | 1378.8 | 1224.9 | 1089.2 | 1070.5 | 990.8  | 1000.0 | 1014.2 | 1081.8 |
| 50°   | 1599.2 | 1590.5 | 1561.0 | 1499.0 | 1369.8 | 1203.6 | 1188.2 | 1093.5 | 1128.0 | 1167.1 | 1267.6 |
| 52.5° | 1683.2 | 1688.0 | 1655.0 | 1624.0 | 1533.5 | 1331.1 | 1304.1 | 1214.6 | 1289.3 | 1354.0 | 1485.4 |
| 55°   | 1769.5 | 1769.8 | 1760.5 | 1756.3 | 1705.1 | 1472.0 | 1442.4 | 1360.3 | 1479.1 | 1559.3 | 1739.4 |
| 57.5° | 1850.5 | 1851.0 | 1864.8 | 1902.0 | 1904.1 | 1634.6 | 1601.0 | 1539.3 | 1690.0 | 1771.9 | 2001.3 |
| 60°   | 1922.9 | 1926.6 | 1964.1 | 2051.2 | 2079.2 | 1821.0 | 1789.3 | 1750.8 | 1908.1 | 1990.4 | 2276.6 |
| 62.5° | 1947.2 | 1960.6 | 2044.1 | 2167.9 | 2252.0 | 2049.6 | 2018.4 | 1995.5 | 2137.2 | 2213.8 | 2506.8 |
| 65°   | 1906.0 | 1936.8 | 2098.2 | 2264.2 | 2430.0 | 2321.2 | 2290.4 | 2265.2 | 2375.3 | 2447.4 | 2695.9 |
| 67.5° | 1804.9 | 1844.7 | 2095.0 | 2365.3 | 2645.9 | 2648.1 | 2619.3 | 2560.4 | 2630.7 | 2658.3 | 2757.4 |
| 70°   | 1538.5 | 1598.2 | 1910.5 | 2403.1 | 2893.8 | 3095.0 | 3067.3 | 2915.7 | 2885.4 | 2751.3 | 2584.1 |
| 72.5° | 991.3  | 1071.5 | 1406.8 | 2092.3 | 2949.0 | 3515.5 | 3513.9 | 3236.4 | 2965.9 | 2570.7 | 2072.5 |
| 75°   | 361.6  | 410.7  | 653.6  | 1313.3 | 2475.4 | 3494.1 | 3504.5 | 3181.6 | 2707.4 | 1985.7 | 1291.2 |
| 77.5° | 131.7  | 144.1  | 213.3  | 504.7  | 1522.4 | 2803.6 | 2824.9 | 2543.5 | 1927.1 | 996.5  | 511.6  |
| 80°   | 69.2   | 76.1   | 109.3  | 195.9  | 652.3  | 1665.0 | 1698.5 | 1511.6 | 905.7  | 300.1  | 153.3  |
| 82.5° | 38.2   | 41.4   | 61.3   | 106.4  | 293.9  | 712.0  | 732.1  | 597.2  | 318.7  | 127.2  | 63.3   |
| 85°   | 20.6   | 21.9   | 28.8   | 58.1   | 143.6  | 246.8  | 252.4  | 178.5  | 127.0  | 74.7   | 30.6   |
| 87.5° | 6.0    | 7.4    | 9.5    | 18.4   | 56.3   | 55.5   | 56.8   | 35.4   | 50.1   | 37.7   | 10.0   |
| 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°    | 505.5  | 505.5  | 505.5 | 505.5 | 505.5 | 505.5 | 505.5 | 505.5 | 505.5 | 505.5 | 505.5 |
| 2.5°  | 507.9  | 507.2  | 504.2 | 502.9 | 501.3 | 501.0 | 502.4 | 502.7 | 502.9 | 503.2 | 504.2 |
| 5°    | 512.7  | 510.0  | 507.4 | 505.8 | 506.4 | 506.6 | 509.2 | 511.1 | 512.4 | 513.4 | 513.9 |
| 7.5°  | 521.9  | 519.8  | 515.3 | 515.1 | 515.8 | 518.2 | 521.6 | 525.8 | 528.3 | 530.1 | 530.6 |
| 10°   | 535.7  | 531.7  | 526.4 | 527.2 | 528.8 | 532.2 | 539.4 | 542.7 | 546.7 | 550.1 | 549.4 |
| 12.5° | 549.6  | 546.2  | 540.1 | 540.7 | 543.2 | 549.4 | 556.3 | 560.5 | 563.1 | 565.7 | 566.8 |
| 15°   | 567.8  | 561.8  | 555.1 | 555.1 | 560.0 | 566.5 | 569.7 | 573.1 | 574.7 | 577.6 | 578.6 |
| 17.5° | 586.6  | 578.6  | 569.9 | 569.4 | 575.2 | 578.4 | 580.3 | 580.8 | 581.3 | 584.5 | 585.5 |
| 20°   | 605.4  | 596.7  | 584.2 | 583.1 | 584.5 | 583.9 | 583.6 | 583.1 | 583.9 | 587.9 | 589.5 |
| 22.5° | 623.8  | 613.8  | 596.7 | 591.8 | 588.1 | 583.1 | 582.9 | 582.6 | 583.1 | 587.1 | 589.8 |
| 25°   | 645.4  | 633.3  | 610.4 | 596.0 | 583.6 | 576.8 | 577.6 | 577.9 | 578.4 | 581.6 | 585.8 |
| 27.5° | 668.9  | 655.5  | 623.0 | 594.8 | 572.4 | 567.5 | 566.2 | 567.0 | 568.9 | 573.9 | 578.9 |
| 30°   | 692.4  | 676.6  | 634.6 | 589.5 | 558.1 | 551.4 | 547.2 | 549.1 | 554.9 | 560.0 | 565.5 |
| 32.5° | 713.8  | 698.0  | 643.9 | 577.9 | 539.9 | 529.5 | 524.0 | 526.4 | 532.2 | 534.0 | 540.7 |
| 35°   | 738.9  | 721.0  | 647.8 | 559.3 | 520.1 | 504.2 | 496.8 | 493.4 | 496.3 | 494.5 | 500.3 |
| 37.5° | 766.9  | 748.1  | 647.3 | 535.2 | 496.8 | 478.6 | 468.3 | 455.4 | 449.3 | 443.0 | 446.9 |
| 40°   | 808.3  | 781.4  | 640.9 | 505.8 | 468.0 | 451.4 | 433.0 | 411.0 | 397.3 | 384.9 | 385.7 |
| 42.5° | 864.8  | 827.6  | 629.3 | 473.6 | 435.6 | 420.0 | 394.9 | 369.3 | 347.7 | 327.1 | 325.2 |
| 45°   | 949.0  | 888.1  | 614.8 | 439.3 | 400.5 | 385.2 | 357.9 | 329.2 | 304.6 | 278.3 | 275.1 |
| 47.5° | 1070.5 | 969.3  | 601.1 | 400.2 | 363.5 | 349.5 | 324.9 | 298.3 | 269.3 | 243.6 | 240.8 |
| 50°   | 1237.3 | 1086.1 | 588.5 | 362.2 | 327.1 | 316.5 | 296.9 | 269.8 | 240.5 | 219.9 | 218.5 |
| 52.5° | 1449.6 | 1244.7 | 583.1 | 325.5 | 293.0 | 289.0 | 273.5 | 248.2 | 220.5 | 203.1 | 201.7 |
| 55°   | 1693.2 | 1434.5 | 583.1 | 290.4 | 263.2 | 264.6 | 253.7 | 230.2 | 206.1 | 190.5 | 189.0 |
| 57.5° | 1941.9 | 1626.7 | 572.6 | 257.9 | 237.9 | 243.4 | 236.6 | 216.0 | 194.3 | 178.1 | 175.6 |
| 60°   | 2171.1 | 1787.7 | 529.8 | 228.4 | 215.5 | 224.2 | 219.7 | 201.9 | 175.6 | 162.1 | 160.0 |
| 62.5° | 2347.1 | 1878.5 | 447.4 | 204.9 | 196.9 | 206.9 | 204.6 | 183.5 | 172.1 | 166.6 | 164.7 |
| 65°   | 2435.3 | 1863.8 | 342.1 | 184.0 | 181.3 | 196.9 | 191.9 | 191.2 | 182.1 | 175.8 | 173.7 |
| 67.5° | 2381.2 | 1736.6 | 248.2 | 168.7 | 172.4 | 187.7 | 206.9 | 210.1 | 193.5 | 181.1 | 179.0 |
| 70°   | 2143.8 | 1506.3 | 184.8 | 154.2 | 161.0 | 188.0 | 236.0 | 219.9 | 189.8 | 175.3 | 172.9 |
| 72.5° | 1630.9 | 1123.3 | 143.3 | 138.9 | 146.3 | 189.3 | 249.0 | 215.5 | 179.3 | 193.7 | 192.2 |
| 75°   | 932.6  | 616.6  | 115.1 | 120.1 | 127.8 | 176.9 | 242.3 | 203.8 | 171.1 | 177.9 | 177.9 |
| 77.5° | 355.6  | 237.1  | 95.0  | 101.7 | 102.7 | 154.5 | 231.8 | 203.1 | 162.9 | 158.9 | 144.9 |
| 80°   | 123.3  | 92.7   | 78.6  | 80.8  | 79.4  | 137.2 | 222.3 | 176.6 | 133.4 | 119.3 | 115.3 |
| 82.5° | 50.4   | 46.2   | 62.3  | 59.7  | 56.5  | 106.6 | 179.5 | 144.4 | 109.1 | 96.4  | 95.3  |
| 85°   | 21.9   | 29.3   | 41.2  | 36.2  | 32.7  | 73.9  | 143.9 | 122.2 | 92.1  | 79.4  | 79.2  |
| 87.5° | 4.5    | 11.1   | 17.4  | 16.4  | 16.9  | 49.4  | 102.2 | 86.8  | 65.2  | 48.8  | 38.2  |
| 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)