

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: P963459

Luminaire Tested: **NAV-SB3A-727-U-T3R**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963459
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-5)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB3A-727-U-T3R
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(3) 70 CRI, 2700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13136.4 lumens
Efficiency: N/A
Efficacy: 155.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B2 - U0 - G2

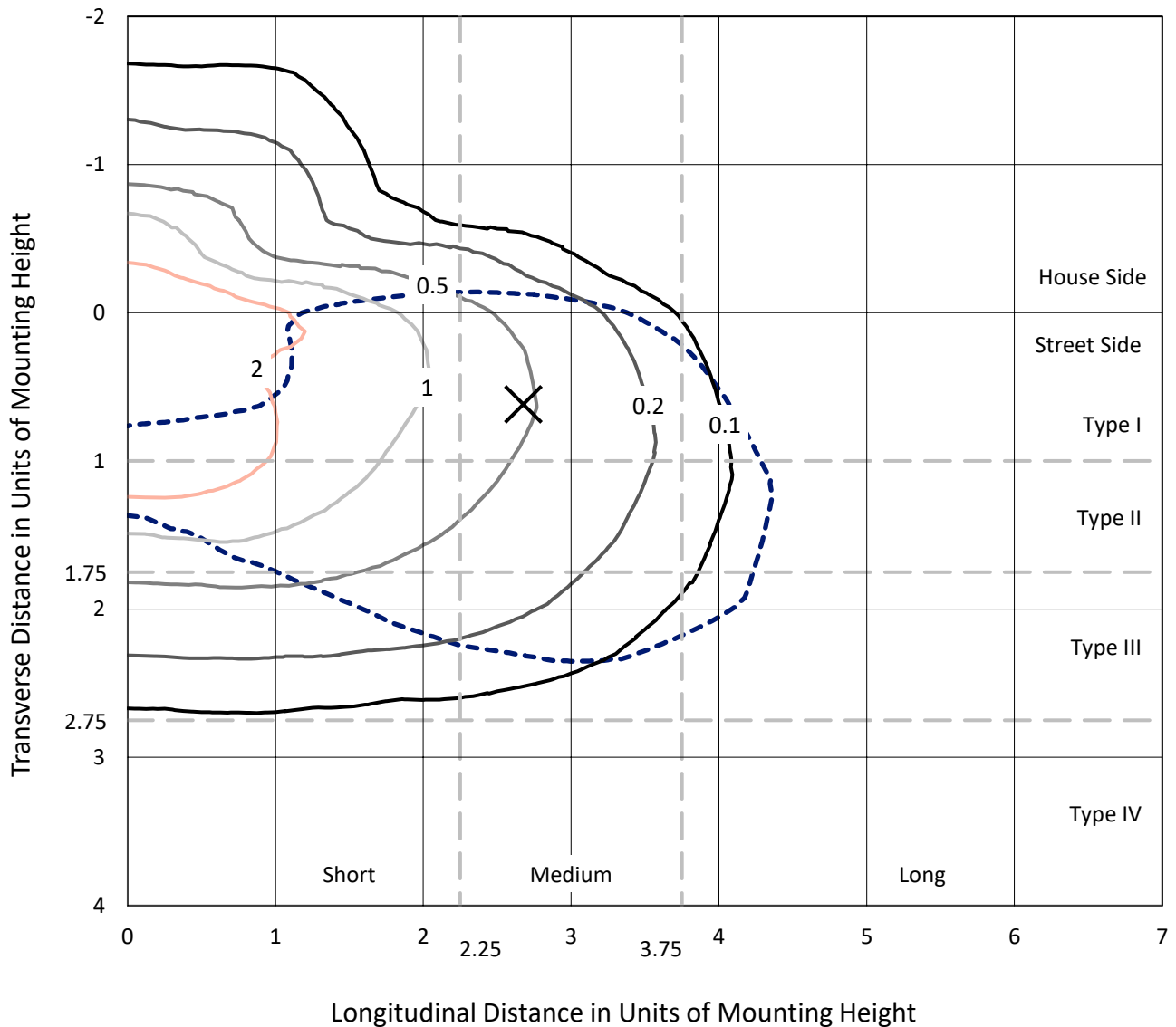
Input Watts (W): 84.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

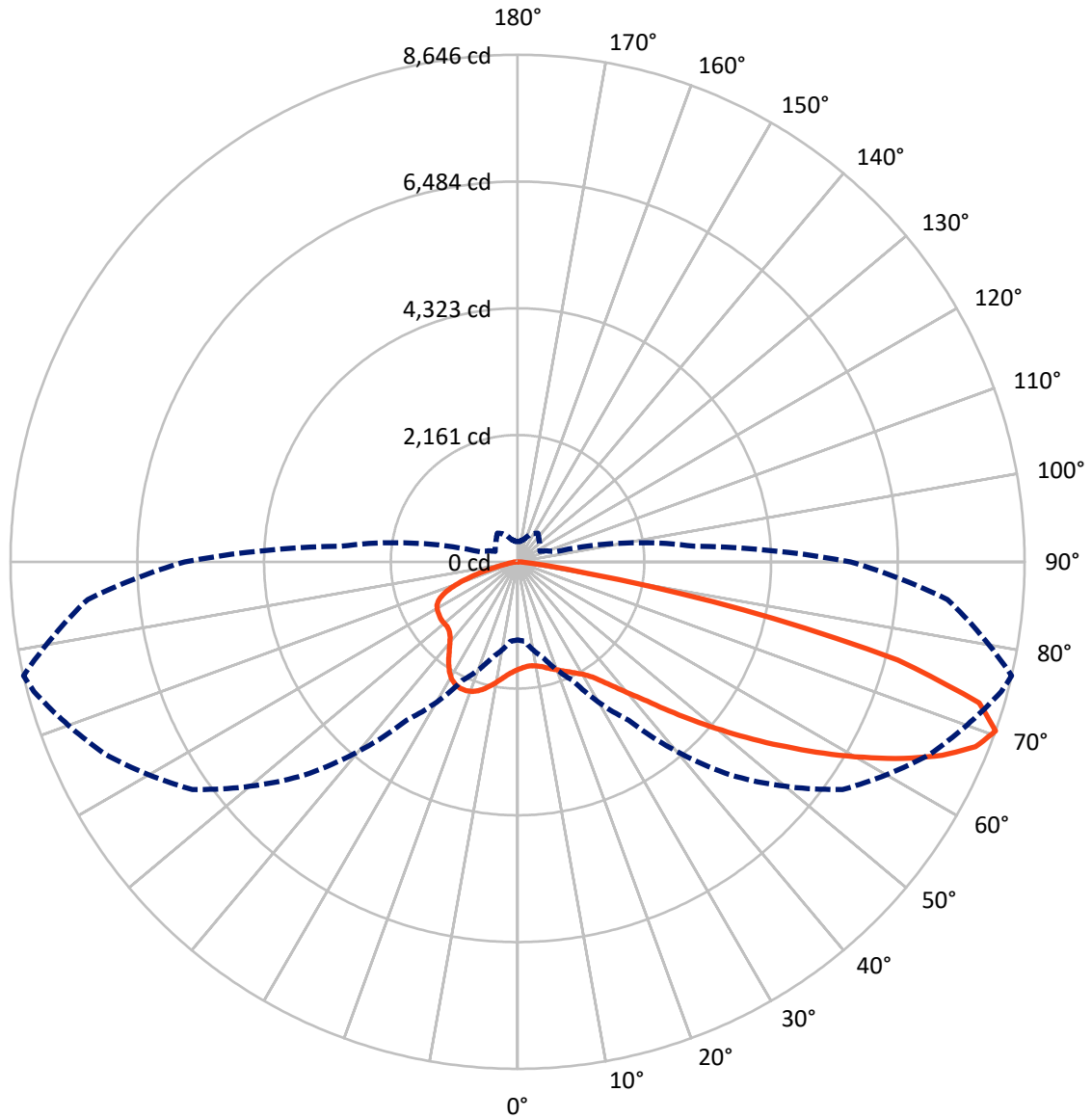
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.5 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 77-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2876.7 | 0.0 | 2876.7 |
| | % Fixture | 21.9 | 0.0 | 21.9 |
| Street Side | Lumens | 10259.7 | 0.0 | 10259.7 |
| | % Fixture | 78.1 | 0.0 | 78.1 |
| Total | Lumens | 13136.4 | 0.0 | 13136.4 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 174.8 | 1.3 |
| 10°-20° | 504.4 | 3.8 |
| 20°-30° | 862.7 | 6.6 |
| 30°-40° | 1387.3 | 10.6 |
| 40°-50° | 2165.9 | 16.5 |
| 50°-60° | 2893.1 | 22.0 |
| 60°-70° | 3083.6 | 23.5 |
| 70°-80° | 1898.3 | 14.5 |
| 80°-90° | 166.3 | 1.3 |
| 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° | 13136.4 | 100.0 |
| 0°-180° | 13136.4 | 100.0 |

Coefficient of Utilization

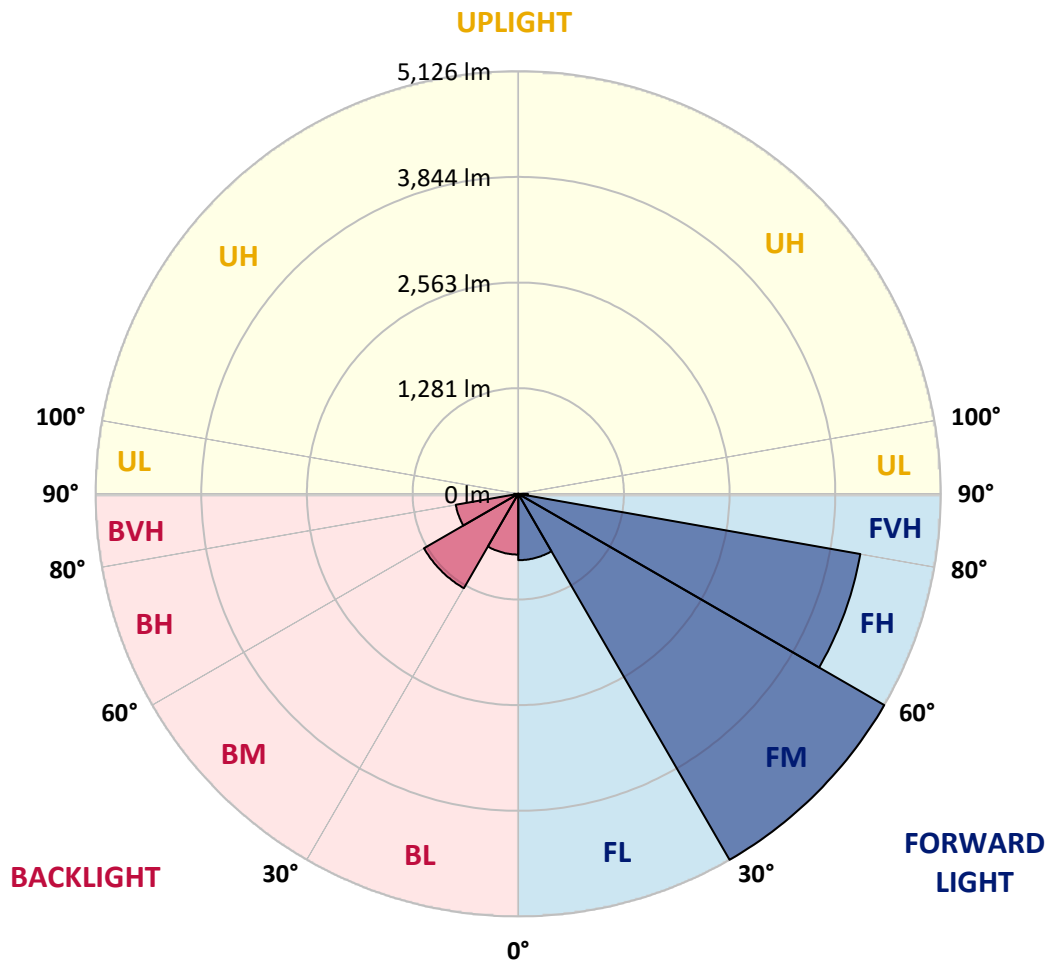


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 804.8 | 6.1 | | | |
| FM (30°-60°) | 5125.5 | 39.0 | | | |
| FH (60°-80°) | 4213.1 | 32.1 | | | G2/5000 |
| FVH (80°-90°) | 116.3 | 0.9 | | | G2/225 |
| BL (0°-30°) | 737.1 | 5.6 | B2/1000 | | |
| BM (30°-60°) | 1320.7 | 10.1 | B2/2500 | | |
| BH (60°-80°) | 768.8 | 5.9 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 50.0 | 0.4 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G2
 Type III Medium



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 77° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1832.6 | 1832.6 | 1832.6 | 1832.6 | 1832.6 | 1832.6 | 1832.6 | 1832.6 | 1832.6 | 1832.6 | 1832.6 |
| 2.5° | 1689.3 | 1688.7 | 1697.4 | 1700.1 | 1716.3 | 1727.7 | 1749.3 | 1772.1 | 1801.7 | 1805.0 | 1823.3 |
| 5° | 1591.8 | 1591.8 | 1601.9 | 1612.6 | 1633.5 | 1656.4 | 1689.3 | 1729.1 | 1780.2 | 1788.2 | 1833.3 |
| 7.5° | 1509.0 | 1514.4 | 1523.1 | 1544.1 | 1568.2 | 1601.3 | 1651.7 | 1708.2 | 1775.5 | 1788.2 | 1860.9 |
| 10° | 1442.5 | 1448.5 | 1459.3 | 1476.1 | 1512.4 | 1558.2 | 1624.1 | 1696.8 | 1786.9 | 1807.1 | 1901.3 |
| 12.5° | 1421.6 | 1427.6 | 1433.7 | 1446.5 | 1480.1 | 1533.9 | 1612.6 | 1702.1 | 1814.5 | 1834.6 | 1956.4 |
| 15° | 1470.1 | 1477.4 | 1472.7 | 1469.3 | 1486.9 | 1536.0 | 1618.1 | 1721.6 | 1848.8 | 1877.7 | 2024.4 |
| 17.5° | 1581.7 | 1584.3 | 1573.6 | 1542.0 | 1539.3 | 1565.6 | 1643.6 | 1748.5 | 1891.8 | 1923.5 | 2093.0 |
| 20° | 1762.0 | 1757.3 | 1735.1 | 1672.5 | 1636.8 | 1631.5 | 1687.4 | 1788.9 | 1936.2 | 1969.8 | 2167.1 |
| 22.5° | 2006.8 | 2001.5 | 1957.1 | 1858.2 | 1778.8 | 1726.3 | 1750.6 | 1841.4 | 1986.0 | 2023.8 | 2239.0 |
| 25° | 2312.3 | 2304.9 | 2239.7 | 2105.1 | 1982.0 | 1852.2 | 1836.7 | 1910.7 | 2047.2 | 2082.3 | 2314.3 |
| 27.5° | 2668.9 | 2662.8 | 2592.2 | 2414.6 | 2237.0 | 2024.4 | 1943.6 | 1992.1 | 2111.2 | 2150.9 | 2399.1 |
| 30° | 3052.3 | 3069.9 | 2944.7 | 2753.7 | 2529.0 | 2249.1 | 2087.6 | 2092.3 | 2193.9 | 2229.6 | 2502.0 |
| 32.5° | 3503.1 | 3533.4 | 3382.7 | 3140.5 | 2833.7 | 2493.3 | 2269.2 | 2232.2 | 2314.3 | 2344.0 | 2631.9 |
| 35° | 3949.8 | 3984.2 | 3859.0 | 3591.3 | 3238.1 | 2781.2 | 2459.0 | 2393.1 | 2474.5 | 2506.7 | 2804.1 |
| 37.5° | 4336.1 | 4381.8 | 4317.2 | 4084.4 | 3670.6 | 3128.4 | 2706.6 | 2582.1 | 2671.6 | 2711.9 | 3035.5 |
| 40° | 4640.8 | 4710.8 | 4706.1 | 4560.7 | 4180.7 | 3549.6 | 3020.8 | 2815.6 | 2916.5 | 2960.2 | 3316.1 |
| 42.5° | 4888.4 | 4948.9 | 5001.4 | 4994.0 | 4712.8 | 4027.9 | 3390.1 | 3119.0 | 3195.7 | 3246.2 | 3631.7 |
| 45° | 5059.3 | 5123.9 | 5236.9 | 5358.7 | 5224.8 | 4539.9 | 3813.3 | 3479.0 | 3548.9 | 3624.9 | 4007.7 |
| 47.5° | 5212.0 | 5285.3 | 5432.0 | 5625.1 | 5659.4 | 5053.9 | 4276.8 | 3898.1 | 3962.0 | 4040.8 | 4385.2 |
| 50° | 5225.4 | 5288.7 | 5516.1 | 5789.9 | 5968.2 | 5547.7 | 4774.8 | 4368.3 | 4428.2 | 4512.4 | 4789.5 |
| 52.5° | 4900.5 | 5000.1 | 5397.0 | 5785.2 | 6110.1 | 5960.8 | 5269.2 | 4857.5 | 4924.7 | 5025.7 | 5208.0 |
| 55° | 3803.9 | 3949.8 | 5047.8 | 5604.9 | 6059.7 | 6227.9 | 5739.5 | 5377.6 | 5463.7 | 5569.2 | 5629.1 |
| 57.5° | 3276.4 | 3340.4 | 4007.0 | 5276.6 | 5829.6 | 6297.2 | 6136.4 | 5903.0 | 6041.6 | 6157.3 | 6074.6 |
| 60° | 2944.7 | 2997.9 | 3392.1 | 4765.9 | 5526.9 | 6187.5 | 6443.2 | 6392.7 | 6632.3 | 6770.1 | 6530.0 |
| 62.5° | 2589.6 | 2640.0 | 2998.5 | 3979.5 | 5139.3 | 6005.2 | 6637.0 | 6844.8 | 7237.7 | 7388.4 | 6959.2 |
| 65° | 2237.0 | 2280.0 | 2623.8 | 3343.8 | 4646.8 | 5822.9 | 6737.2 | 7235.7 | 7798.2 | 7954.2 | 7315.8 |
| 67.5° | 1844.1 | 1879.7 | 2204.7 | 2821.0 | 4048.1 | 5573.3 | 6786.9 | 7543.2 | 8285.9 | 8419.9 | 7492.0 |
| 70° | 1330.8 | 1358.3 | 1694.0 | 2230.9 | 3296.6 | 5144.1 | 6766.8 | 7761.2 | 8538.9 | 8645.9 | 7358.9 |
| 72.5° | 629.0 | 653.9 | 1048.2 | 1448.5 | 2328.5 | 4308.5 | 6358.4 | 7588.3 | 8281.9 | 8228.7 | 6543.4 |
| 75° | 335.7 | 357.2 | 602.2 | 794.6 | 1229.8 | 2953.5 | 5203.3 | 6536.7 | 6954.5 | 6696.1 | 4836.0 |
| 77.5° | 227.4 | 244.3 | 372.7 | 477.0 | 561.8 | 1402.1 | 3344.4 | 4525.8 | 4354.2 | 3927.7 | 2422.0 |
| 80° | 180.3 | 197.8 | 305.4 | 323.0 | 271.8 | 506.6 | 1381.9 | 2095.0 | 1505.0 | 1203.6 | 688.9 |
| 82.5° | 138.6 | 158.1 | 257.0 | 234.1 | 148.0 | 207.9 | 402.3 | 662.7 | 385.5 | 293.4 | 166.9 |
| 85° | 84.8 | 105.6 | 201.8 | 149.3 | 83.4 | 94.8 | 136.5 | 184.3 | 117.8 | 98.2 | 59.9 |
| 87.5° | 43.0 | 60.6 | 102.3 | 54.5 | 37.7 | 22.2 | 36.3 | 36.3 | 31.0 | 27.0 | 15.5 |
| 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° | 1832.6 | 1832.6 | 1832.6 | 1832.6 | 1832.6 | 1832.6 | 1832.6 | 1832.6 | 1832.6 | 1832.6 | 1832.6 |
| 2.5° | 1839.4 | 1852.8 | 1875.7 | 1897.3 | 1914.1 | 1930.2 | 1946.4 | 1955.1 | 1957.7 | 1968.5 | 1974.6 |
| 5° | 1860.9 | 1885.8 | 1930.2 | 1971.9 | 1998.1 | 2014.3 | 2025.7 | 2032.5 | 2033.8 | 2037.2 | 2042.5 |
| 7.5° | 1900.6 | 1940.3 | 2002.2 | 2043.8 | 2063.4 | 2062.1 | 2057.4 | 2040.6 | 2033.8 | 2027.8 | 2029.1 |
| 10° | 1956.4 | 2008.9 | 2085.0 | 2113.9 | 2101.8 | 2069.5 | 2027.8 | 1978.7 | 1955.8 | 1933.6 | 1926.8 |
| 12.5° | 2025.7 | 2092.3 | 2167.1 | 2165.7 | 2105.8 | 2023.0 | 1926.2 | 1850.8 | 1803.1 | 1768.7 | 1760.6 |
| 15° | 2109.9 | 2186.5 | 2243.7 | 2198.0 | 2066.8 | 1918.1 | 1776.1 | 1677.9 | 1634.9 | 1597.2 | 1593.2 |
| 17.5° | 2196.6 | 2278.7 | 2304.9 | 2187.9 | 1968.5 | 1762.7 | 1601.9 | 1524.5 | 1482.1 | 1462.0 | 1468.0 |
| 20° | 2281.3 | 2362.8 | 2341.3 | 2130.1 | 1819.2 | 1586.4 | 1443.1 | 1400.8 | 1391.9 | 1396.7 | 1394.7 |
| 22.5° | 2370.8 | 2443.5 | 2348.7 | 2018.3 | 1628.8 | 1406.1 | 1327.4 | 1328.7 | 1348.3 | 1362.3 | 1365.7 |
| 25° | 2462.4 | 2511.5 | 2329.1 | 1856.9 | 1424.2 | 1273.6 | 1254.1 | 1275.6 | 1313.9 | 1341.5 | 1348.9 |
| 27.5° | 2550.5 | 2572.0 | 2286.8 | 1657.0 | 1248.7 | 1178.8 | 1182.0 | 1226.5 | 1284.3 | 1322.7 | 1332.1 |
| 30° | 2650.0 | 2625.8 | 2205.4 | 1432.3 | 1126.9 | 1097.3 | 1125.6 | 1177.3 | 1235.2 | 1269.6 | 1277.6 |
| 32.5° | 2762.5 | 2672.3 | 2076.2 | 1224.5 | 1040.8 | 1032.1 | 1078.5 | 1112.1 | 1137.6 | 1147.8 | 1153.1 |
| 35° | 2902.4 | 2737.6 | 1910.7 | 1078.5 | 963.4 | 984.3 | 1028.7 | 1011.9 | 1001.7 | 996.4 | 1001.7 |
| 37.5° | 3084.0 | 2825.6 | 1717.0 | 983.6 | 900.9 | 950.0 | 968.1 | 915.6 | 876.0 | 856.5 | 861.2 |
| 40° | 3302.7 | 2954.9 | 1530.5 | 910.3 | 861.2 | 920.3 | 888.8 | 825.5 | 775.0 | 747.4 | 749.5 |
| 42.5° | 3545.6 | 3090.1 | 1373.8 | 855.1 | 839.0 | 896.2 | 830.2 | 754.8 | 673.4 | 664.7 | 673.4 |
| 45° | 3800.5 | 3229.4 | 1266.8 | 812.7 | 828.2 | 875.2 | 796.5 | 674.8 | 616.9 | 652.6 | 671.5 |
| 47.5° | 4055.5 | 3357.2 | 1202.2 | 781.0 | 822.8 | 851.8 | 767.0 | 630.4 | 589.4 | 641.1 | 665.3 |
| 50° | 4339.4 | 3471.6 | 1173.3 | 758.2 | 816.7 | 842.3 | 722.5 | 619.0 | 560.5 | 594.7 | 620.3 |
| 52.5° | 4621.3 | 3560.3 | 1151.8 | 735.3 | 808.0 | 835.0 | 701.0 | 605.5 | 525.4 | 527.5 | 541.6 |
| 55° | 4902.6 | 3618.2 | 1128.2 | 705.1 | 788.5 | 818.8 | 699.0 | 590.7 | 499.2 | 489.7 | 496.5 |
| 57.5° | 5202.6 | 3651.2 | 1099.3 | 671.5 | 754.8 | 777.8 | 697.0 | 579.2 | 491.1 | 475.7 | 477.6 |
| 60° | 5508.0 | 3699.6 | 1061.7 | 630.4 | 709.8 | 728.6 | 692.3 | 575.2 | 486.5 | 460.2 | 462.2 |
| 62.5° | 5781.8 | 3716.4 | 1016.6 | 591.3 | 651.9 | 680.2 | 682.2 | 571.8 | 473.7 | 428.6 | 428.6 |
| 65° | 5961.5 | 3643.8 | 937.9 | 546.9 | 589.4 | 630.4 | 662.7 | 560.5 | 450.8 | 405.7 | 405.7 |
| 67.5° | 5954.1 | 3436.5 | 814.8 | 489.7 | 528.8 | 575.2 | 634.5 | 540.9 | 423.2 | 377.4 | 379.5 |
| 70° | 5676.9 | 3027.5 | 658.7 | 423.2 | 462.2 | 516.0 | 598.1 | 512.0 | 390.2 | 346.4 | 350.5 |
| 72.5° | 4868.9 | 2369.5 | 478.4 | 345.1 | 384.8 | 454.8 | 551.0 | 477.0 | 356.6 | 318.9 | 316.8 |
| 75° | 3478.2 | 1499.6 | 324.3 | 265.1 | 299.4 | 385.5 | 492.5 | 435.9 | 325.6 | 320.2 | 302.1 |
| 77.5° | 1776.8 | 716.5 | 214.6 | 193.7 | 208.6 | 304.1 | 413.8 | 389.5 | 330.4 | 264.4 | 235.4 |
| 80° | 577.9 | 264.4 | 135.2 | 131.8 | 138.6 | 202.5 | 320.2 | 319.6 | 250.3 | 179.7 | 158.8 |
| 82.5° | 184.3 | 113.7 | 88.1 | 84.8 | 81.4 | 127.2 | 223.3 | 253.0 | 168.8 | 113.7 | 113.1 |
| 85° | 73.3 | 68.0 | 51.8 | 47.8 | 34.3 | 59.9 | 117.1 | 168.2 | 125.8 | 82.1 | 84.0 |
| 87.5° | 27.0 | 27.0 | 14.1 | 10.0 | 7.4 | 20.2 | 31.6 | 50.4 | 72.0 | 42.4 | 41.7 |
| 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)