

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: P882556

Luminaire Tested: **NAV-SB2C-727-U-T2-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882556
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-4)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2C-727-U-T2-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10101 lumens
Efficiency: N/A
Efficacy: 100.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G2

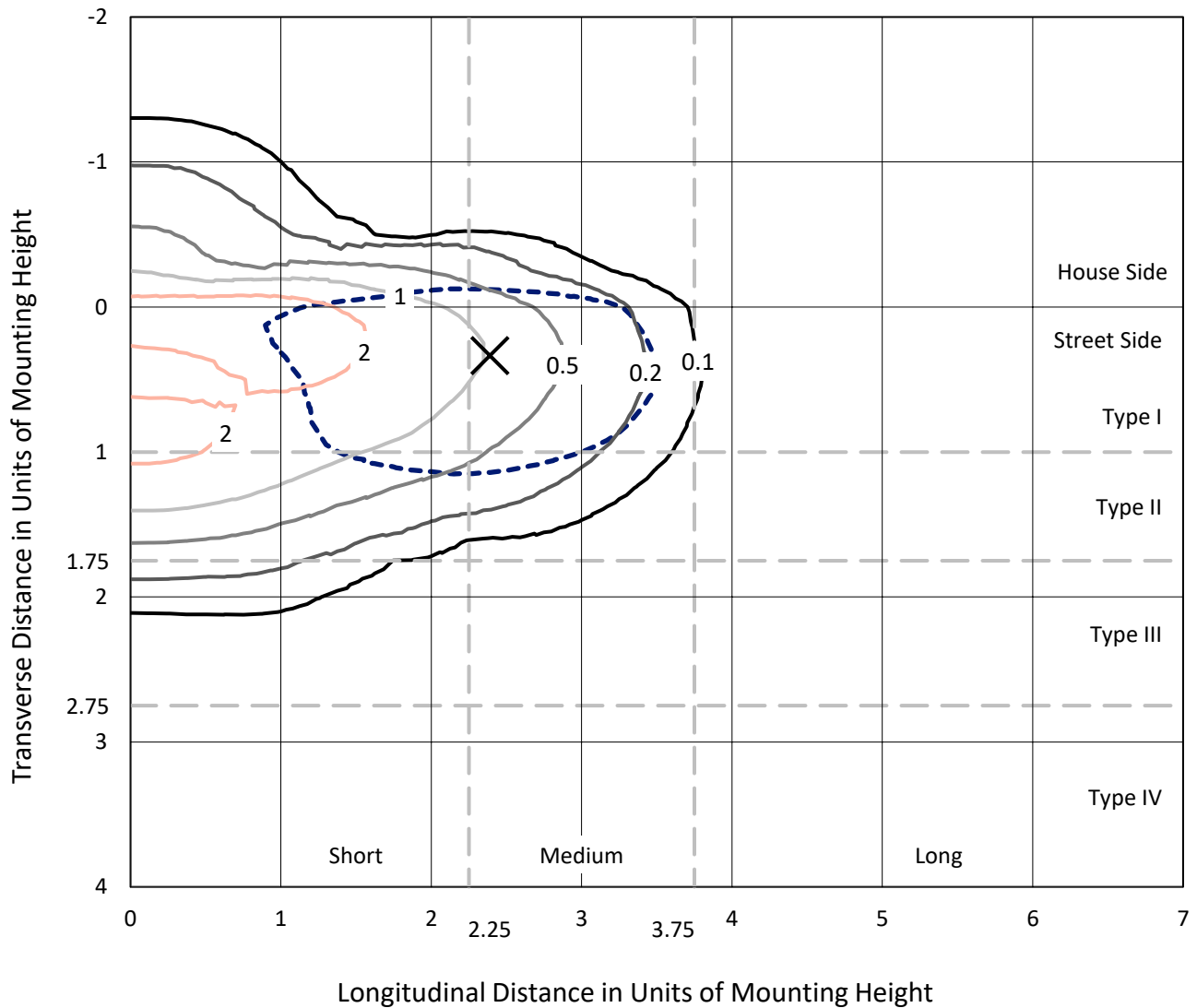
Input Watts (W): 100.9
Input Voltage (V): 120.0
Input Current (Ain): 0.857
Voltage Rise (V): NR
Power Factor: 0.994
Total Harmonic Distortion (THDi): 9.472
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

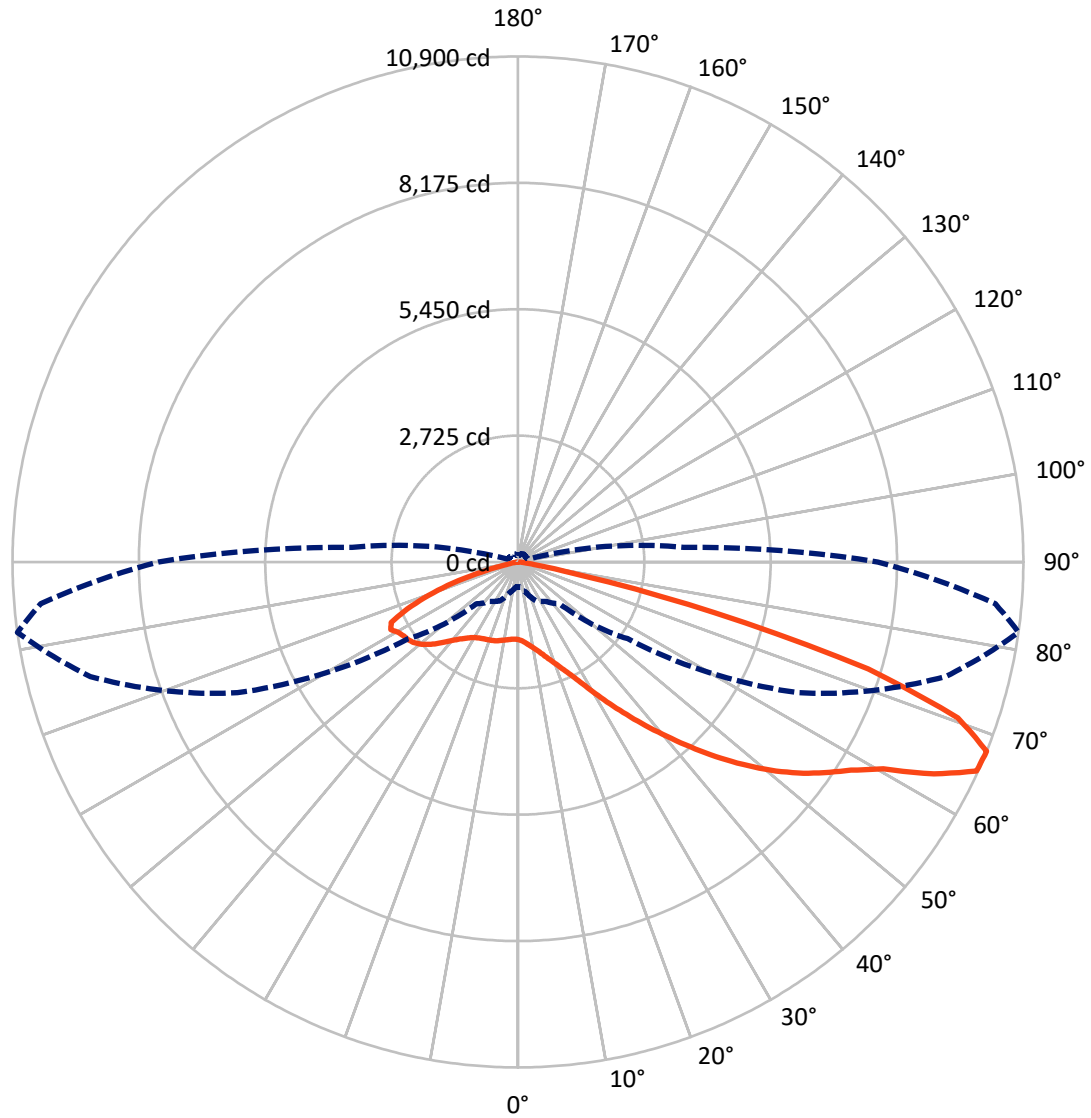
✕ Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



— Vertical Plane Through 82-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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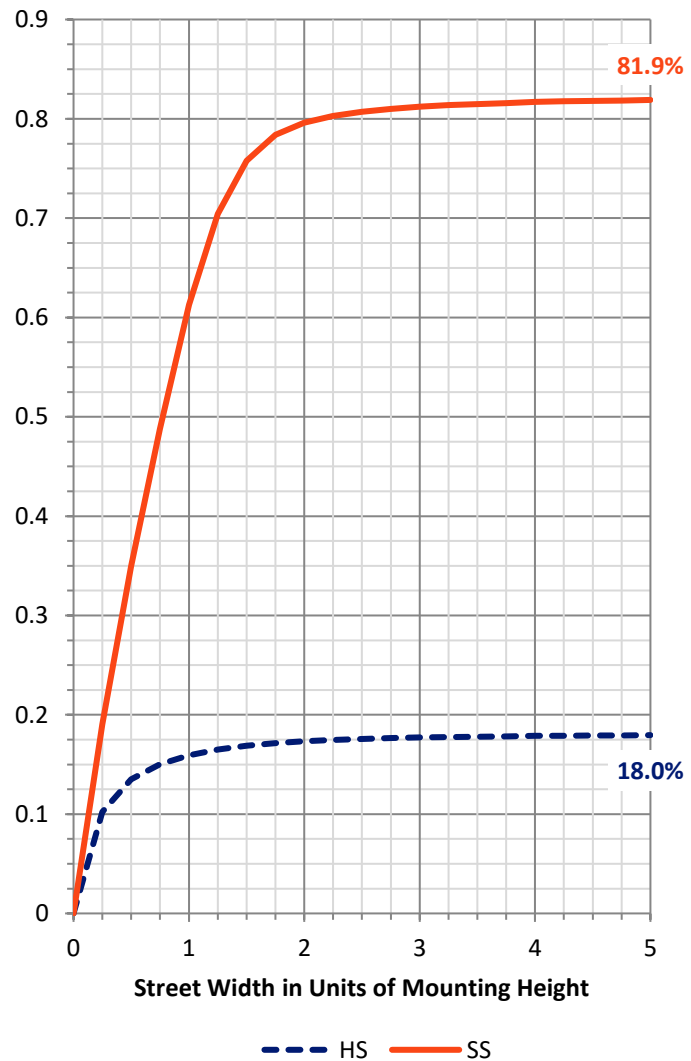
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1829.7 | 0.0 | 1829.7 |
| | % Fixture | 18.1 | 0.0 | 18.1 |
| Street Side | Lumens | 8271.3 | 0.0 | 8271.3 |
| | % Fixture | 81.9 | 0.0 | 81.9 |
| Total | Lumens | 10101.0 | 0.0 | 10101.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 149.1 | 1.5 |
| 10°-20° | 387.4 | 3.8 |
| 20°-30° | 620.5 | 6.1 |
| 30°-40° | 1097.3 | 10.9 |
| 40°-50° | 1922.5 | 19.0 |
| 50°-60° | 2564.1 | 25.4 |
| 60°-70° | 2387.1 | 23.6 |
| 70°-80° | 916.1 | 9.1 |
| 80°-90° | 56.9 | 0.6 |
| 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° | 10101.0 | 100.0 |
| 0°-180° | 10101.0 | 100.0 |

Coefficient of Utilization



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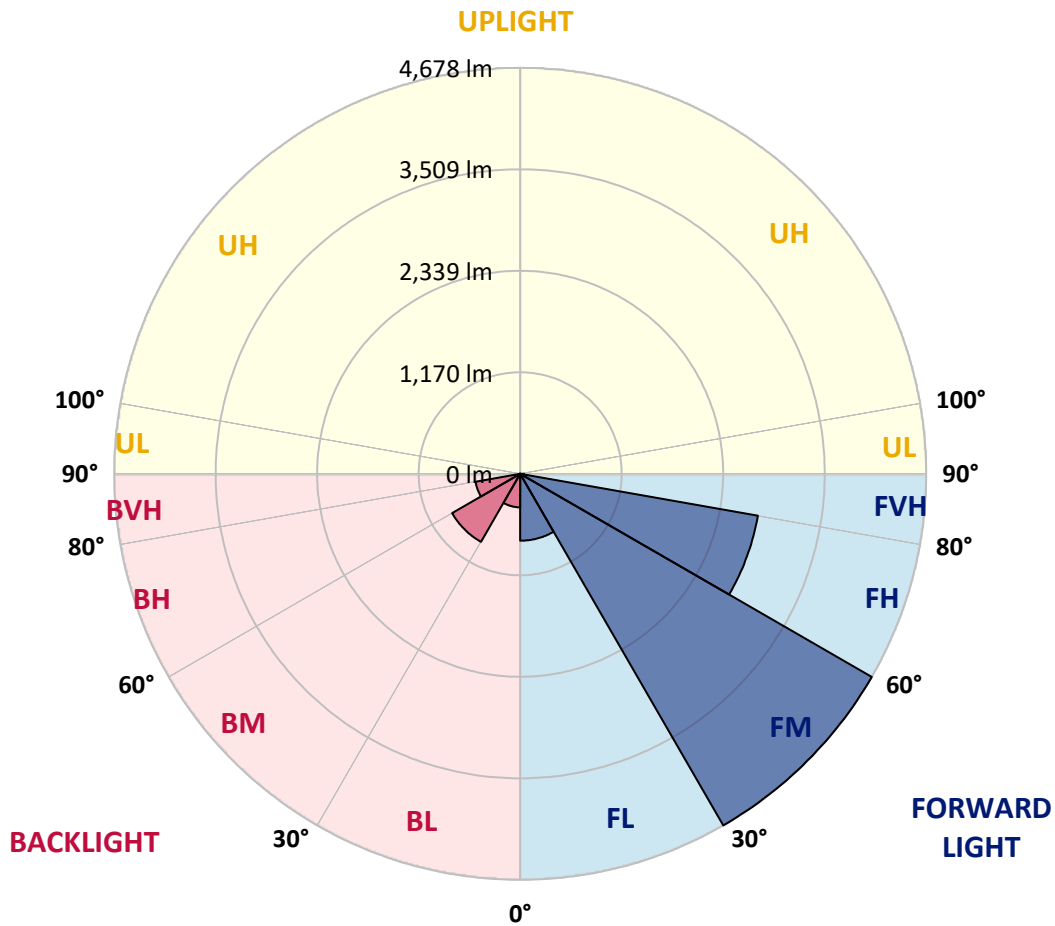
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 770.6 | 7.6 | | | |
| FM (30°-60°) | 4678.4 | 46.3 | | | |
| FH (60°-80°) | 2781.0 | 27.5 | | | G2/5000 |
| FVH (80°-90°) | 41.4 | 0.4 | | | G1/100 |
| BL (0°-30°) | 386.4 | 3.8 | B1/500 | | |
| BM (30°-60°) | 905.5 | 9.0 | B1/1000 | | |
| BH (60°-80°) | 522.2 | 5.2 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 15.5 | 0.2 | | | 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 II Medium



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 82° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|
| 0° | 1673.4 | 1673.4 | 1673.4 | 1673.4 | 1673.4 | 1673.4 | 1673.4 | 1673.4 | 1673.4 | 1673.4 | 1673.4 |
| 2.5° | 1768.7 | 1778.8 | 1773.0 | 1770.1 | 1765.0 | 1757.8 | 1751.9 | 1733.8 | 1714.8 | 1702.5 | 1698.1 |
| 5° | 1804.3 | 1814.5 | 1813.8 | 1816.7 | 1820.3 | 1822.5 | 1821.0 | 1800.7 | 1773.8 | 1752.7 | 1740.3 |
| 7.5° | 1773.8 | 1785.4 | 1794.8 | 1809.4 | 1834.8 | 1861.8 | 1874.8 | 1870.5 | 1842.8 | 1813.8 | 1798.5 |
| 10° | 1687.2 | 1699.6 | 1722.1 | 1756.3 | 1810.1 | 1868.3 | 1917.0 | 1939.6 | 1922.1 | 1890.1 | 1869.0 |
| 12.5° | 1528.7 | 1541.0 | 1585.4 | 1659.6 | 1749.8 | 1850.8 | 1943.9 | 2004.3 | 2008.7 | 1976.7 | 1951.9 |
| 15° | 1350.5 | 1362.9 | 1410.1 | 1503.2 | 1640.7 | 1802.8 | 1958.5 | 2072.7 | 2111.2 | 2083.6 | 2053.7 |
| 17.5° | 1240.0 | 1250.9 | 1286.5 | 1361.4 | 1504.7 | 1706.8 | 1953.4 | 2145.4 | 2233.4 | 2211.6 | 2175.9 |
| 20° | 1206.5 | 1216.0 | 1232.7 | 1285.0 | 1404.3 | 1607.2 | 1919.9 | 2213.7 | 2365.0 | 2352.6 | 2312.6 |
| 22.5° | 1242.1 | 1250.9 | 1256.0 | 1279.2 | 1354.1 | 1541.8 | 1877.8 | 2283.6 | 2517.7 | 2519.2 | 2470.5 |
| 25° | 1324.3 | 1333.0 | 1327.2 | 1341.8 | 1374.5 | 1521.4 | 1861.8 | 2365.7 | 2709.7 | 2725.7 | 2670.4 |
| 27.5° | 1459.6 | 1460.3 | 1446.5 | 1445.8 | 1450.9 | 1551.9 | 1878.5 | 2453.7 | 2951.9 | 2981.7 | 2913.3 |
| 30° | 1730.8 | 1719.9 | 1666.8 | 1609.4 | 1583.2 | 1643.6 | 1925.0 | 2557.7 | 3237.7 | 3290.8 | 3205.0 |
| 32.5° | 2149.0 | 2133.0 | 2035.6 | 1898.1 | 1759.9 | 1791.2 | 2008.7 | 2676.3 | 3549.0 | 3645.0 | 3540.2 |
| 35° | 2602.8 | 2598.5 | 2496.6 | 2292.3 | 2050.8 | 2001.4 | 2144.6 | 2831.9 | 3888.6 | 4041.3 | 3916.9 |
| 37.5° | 3024.6 | 3022.4 | 2964.3 | 2723.5 | 2429.7 | 2294.5 | 2362.8 | 3035.5 | 4252.2 | 4473.3 | 4326.4 |
| 40° | 3410.1 | 3416.6 | 3358.4 | 3143.2 | 2847.2 | 2670.4 | 2659.5 | 3287.2 | 4656.6 | 4943.8 | 4769.3 |
| 42.5° | 3743.1 | 3750.4 | 3691.5 | 3532.2 | 3259.5 | 3086.4 | 3023.9 | 3595.5 | 5051.5 | 5449.3 | 5242.7 |
| 45° | 3969.3 | 4014.4 | 4005.7 | 3878.4 | 3682.8 | 3503.1 | 3461.7 | 3982.4 | 5501.6 | 5985.2 | 5743.1 |
| 47.5° | 4033.3 | 4074.8 | 4140.2 | 4157.7 | 4038.4 | 3861.7 | 3911.1 | 4448.6 | 5956.9 | 6521.9 | 6246.3 |
| 50° | 3875.5 | 3914.0 | 4050.0 | 4231.1 | 4314.0 | 4259.5 | 4348.2 | 4948.2 | 6423.0 | 7057.2 | 6740.1 |
| 52.5° | 3564.2 | 3603.5 | 3775.1 | 4061.7 | 4399.8 | 4571.5 | 4786.7 | 5440.5 | 6874.7 | 7564.1 | 7207.7 |
| 55° | 3114.1 | 3155.5 | 3375.9 | 3700.2 | 4236.2 | 4700.2 | 5152.5 | 5932.1 | 7288.5 | 8020.1 | 7629.5 |
| 57.5° | 2501.7 | 2532.3 | 2761.4 | 3215.2 | 3824.6 | 4572.2 | 5422.3 | 6468.9 | 7678.3 | 8468.1 | 8047.7 |
| 60° | 1630.5 | 1657.4 | 1923.6 | 2429.7 | 3142.4 | 4144.6 | 5476.2 | 7067.4 | 8196.1 | 9050.6 | 8611.3 |
| 62.5° | 1084.3 | 1102.5 | 1260.3 | 1631.9 | 2213.0 | 3323.5 | 5161.3 | 7545.2 | 8955.3 | 10064.4 | 9577.8 |
| 65° | 744.0 | 762.2 | 920.0 | 1178.9 | 1429.8 | 2198.5 | 4255.8 | 7481.9 | 9643.3 | 10869.4 | 10294.2 |
| 67.5° | 530.9 | 546.2 | 680.0 | 924.3 | 1034.9 | 1277.0 | 2885.0 | 6673.2 | 9544.4 | 10900.0 | 10332.7 |
| 70° | 380.3 | 389.1 | 499.6 | 720.0 | 822.5 | 767.2 | 1604.3 | 5103.8 | 8356.8 | 10065.1 | 9545.8 |
| 72.5° | 266.2 | 269.1 | 346.9 | 548.3 | 662.5 | 560.0 | 763.6 | 3402.8 | 6320.5 | 7900.1 | 7400.5 |
| 75° | 180.4 | 184.0 | 233.4 | 402.2 | 531.6 | 427.6 | 404.3 | 1824.7 | 3710.4 | 4372.9 | 3919.9 |
| 77.5° | 110.5 | 112.0 | 150.5 | 274.9 | 397.8 | 325.8 | 260.4 | 773.1 | 1435.6 | 1409.4 | 1201.4 |
| 80° | 62.5 | 62.5 | 96.0 | 170.9 | 271.3 | 210.2 | 182.5 | 328.7 | 454.5 | 399.3 | 352.0 |
| 82.5° | 34.9 | 35.6 | 69.8 | 106.2 | 179.6 | 124.4 | 100.4 | 152.0 | 196.4 | 173.8 | 151.3 |
| 85° | 14.5 | 16.0 | 42.9 | 50.2 | 85.8 | 61.8 | 40.7 | 64.0 | 72.7 | 64.7 | 47.3 |
| 87.5° | 1.5 | 2.2 | 13.1 | 9.5 | 10.2 | 12.4 | 5.8 | 12.4 | 10.2 | 10.2 | 7.3 |
| 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° | 1673.4 | 1673.4 | 1673.4 | 1673.4 | 1673.4 | 1673.4 | 1673.4 | 1673.4 | 1673.4 | 1673.4 | 1673.4 |
| 2.5° | 1684.3 | 1673.4 | 1645.8 | 1613.8 | 1571.6 | 1551.2 | 1523.6 | 1504.7 | 1488.7 | 1490.1 | 1475.6 |
| 5° | 1717.0 | 1689.4 | 1627.6 | 1550.5 | 1454.5 | 1386.1 | 1313.4 | 1263.2 | 1222.5 | 1213.8 | 1194.1 |
| 7.5° | 1762.1 | 1718.5 | 1610.1 | 1471.2 | 1309.0 | 1186.1 | 1076.3 | 1005.8 | 955.6 | 939.6 | 923.6 |
| 10° | 1820.3 | 1757.0 | 1587.6 | 1371.6 | 1138.1 | 981.8 | 864.0 | 808.7 | 774.5 | 762.9 | 754.2 |
| 12.5° | 1887.9 | 1801.4 | 1557.8 | 1250.1 | 962.1 | 811.6 | 736.7 | 709.1 | 698.2 | 694.5 | 692.3 |
| 15° | 1973.0 | 1856.7 | 1512.7 | 1106.1 | 813.1 | 707.6 | 675.6 | 672.0 | 673.4 | 672.0 | 671.2 |
| 17.5° | 2074.1 | 1917.0 | 1439.2 | 957.8 | 712.7 | 654.5 | 642.9 | 645.8 | 649.4 | 648.7 | 647.2 |
| 20° | 2184.6 | 1976.7 | 1345.4 | 826.2 | 644.3 | 616.7 | 610.2 | 613.1 | 616.0 | 614.5 | 613.8 |
| 22.5° | 2310.5 | 2040.7 | 1241.4 | 723.6 | 598.5 | 581.8 | 574.5 | 575.3 | 575.3 | 572.3 | 570.9 |
| 25° | 2461.0 | 2111.2 | 1132.3 | 650.9 | 563.6 | 550.5 | 541.8 | 538.9 | 534.5 | 525.8 | 524.3 |
| 27.5° | 2640.6 | 2186.1 | 1027.6 | 600.0 | 536.0 | 523.6 | 513.4 | 506.2 | 495.3 | 480.7 | 479.3 |
| 30° | 2842.8 | 2277.0 | 938.9 | 568.0 | 514.2 | 501.8 | 490.2 | 479.3 | 463.3 | 445.1 | 443.6 |
| 32.5° | 3080.6 | 2374.5 | 874.2 | 546.9 | 494.5 | 481.4 | 467.6 | 454.5 | 437.1 | 418.9 | 419.6 |
| 35° | 3364.2 | 2492.3 | 836.3 | 532.3 | 479.3 | 461.8 | 446.5 | 432.0 | 418.9 | 402.9 | 401.4 |
| 37.5° | 3671.9 | 2617.4 | 824.7 | 525.1 | 469.1 | 442.2 | 424.7 | 414.5 | 413.1 | 403.6 | 402.9 |
| 40° | 4008.6 | 2765.7 | 833.4 | 520.7 | 458.2 | 423.3 | 404.3 | 402.2 | 405.8 | 389.1 | 389.8 |
| 42.5° | 4364.9 | 2941.7 | 848.0 | 515.6 | 442.9 | 404.3 | 386.2 | 386.2 | 383.3 | 360.0 | 360.0 |
| 45° | 4750.4 | 3144.6 | 862.5 | 503.3 | 424.7 | 385.4 | 371.6 | 366.5 | 354.2 | 331.6 | 330.9 |
| 47.5° | 5138.7 | 3351.2 | 873.4 | 480.7 | 402.9 | 369.4 | 357.1 | 345.4 | 327.3 | 306.9 | 306.2 |
| 50° | 5507.4 | 3536.6 | 861.8 | 447.3 | 378.2 | 354.2 | 341.1 | 325.1 | 305.4 | 291.6 | 289.4 |
| 52.5° | 5836.9 | 3697.3 | 812.3 | 408.0 | 352.0 | 338.2 | 326.5 | 309.8 | 293.8 | 279.3 | 277.8 |
| 55° | 6123.4 | 3827.5 | 725.1 | 370.9 | 328.7 | 324.4 | 312.7 | 291.6 | 269.8 | 257.4 | 256.0 |
| 57.5° | 6398.3 | 3926.4 | 616.0 | 340.4 | 307.6 | 309.1 | 291.6 | 272.7 | 252.4 | 239.3 | 237.8 |
| 60° | 6764.1 | 4058.8 | 505.4 | 312.0 | 285.1 | 289.4 | 270.5 | 256.7 | 231.3 | 214.5 | 212.4 |
| 62.5° | 7348.8 | 4264.6 | 401.4 | 277.1 | 258.9 | 260.4 | 252.4 | 235.6 | 205.1 | 185.4 | 184.0 |
| 65° | 7812.8 | 4188.9 | 316.4 | 239.3 | 229.1 | 231.3 | 231.3 | 213.1 | 180.4 | 157.8 | 155.6 |
| 67.5° | 7760.4 | 3586.8 | 252.4 | 202.2 | 200.7 | 202.2 | 207.3 | 192.0 | 160.0 | 141.8 | 138.9 |
| 70° | 7148.8 | 2853.0 | 202.2 | 168.0 | 174.5 | 170.9 | 185.4 | 175.3 | 144.0 | 125.8 | 123.6 |
| 72.5° | 5833.2 | 2055.2 | 154.2 | 138.9 | 133.8 | 139.6 | 167.3 | 157.8 | 120.0 | 99.6 | 97.5 |
| 75° | 3408.6 | 1096.7 | 114.9 | 109.8 | 96.7 | 116.4 | 148.4 | 134.5 | 91.6 | 73.5 | 71.3 |
| 77.5° | 1109.8 | 382.5 | 84.4 | 80.7 | 72.0 | 93.8 | 126.5 | 113.5 | 74.9 | 58.2 | 56.0 |
| 80° | 297.4 | 115.6 | 57.5 | 53.1 | 46.5 | 69.8 | 100.4 | 90.2 | 53.8 | 37.8 | 37.1 |
| 82.5° | 119.3 | 48.7 | 33.5 | 29.8 | 25.5 | 48.0 | 79.3 | 72.7 | 40.0 | 24.0 | 24.0 |
| 85° | 38.5 | 16.0 | 12.4 | 9.5 | 11.6 | 29.8 | 47.3 | 49.5 | 28.4 | 12.4 | 9.5 |
| 87.5° | 5.1 | 2.2 | 2.2 | 2.9 | 2.2 | 5.1 | 14.5 | 13.8 | 8.0 | 1.5 | 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)