

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: P962408

Luminaire Tested: **NAV-SB2C-727-U-T4FT**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P962408
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-24)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2C-727-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14073.2 lumens
Efficiency: N/A
Efficacy: 139.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

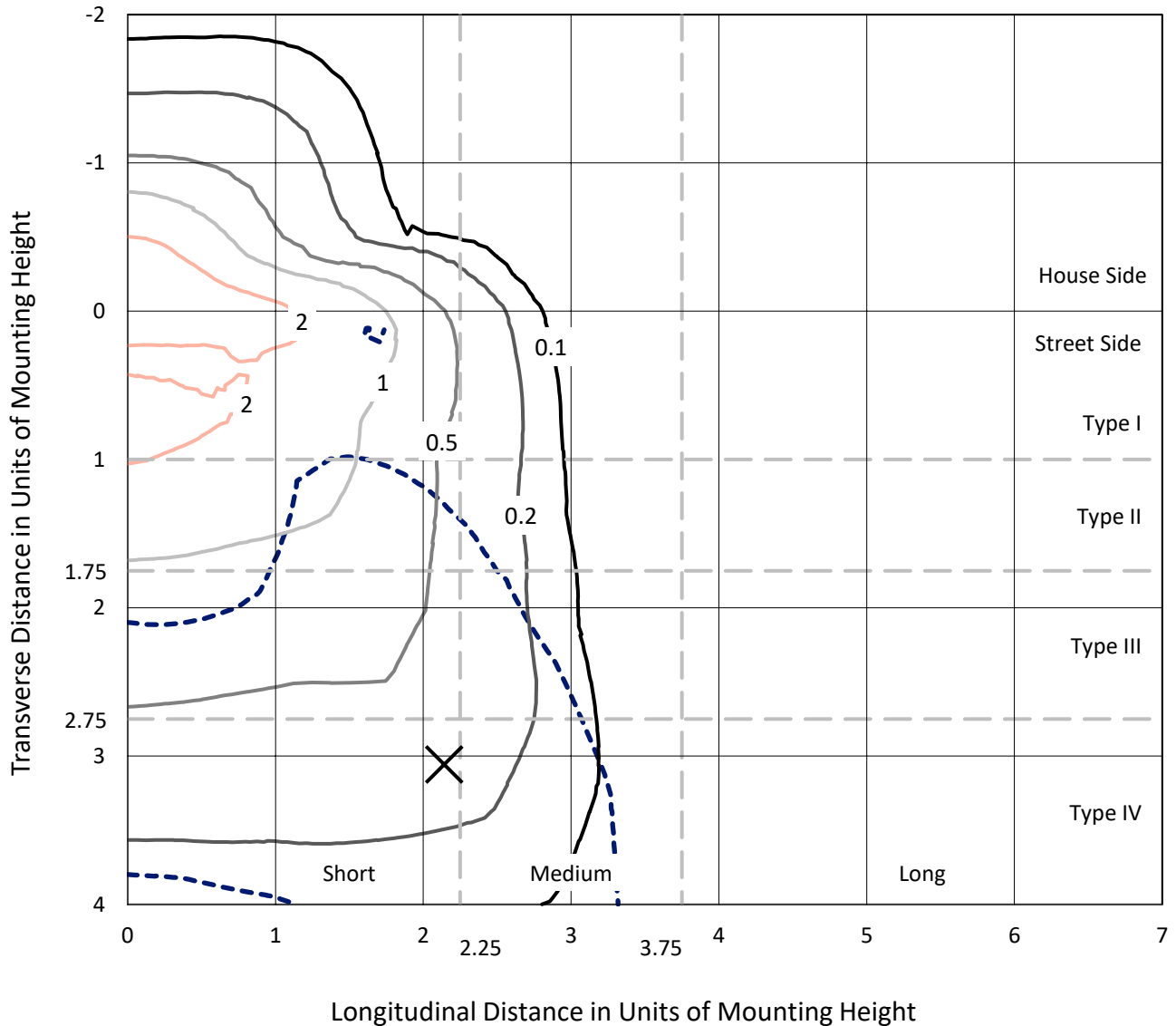
Input Watts (W): 100.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

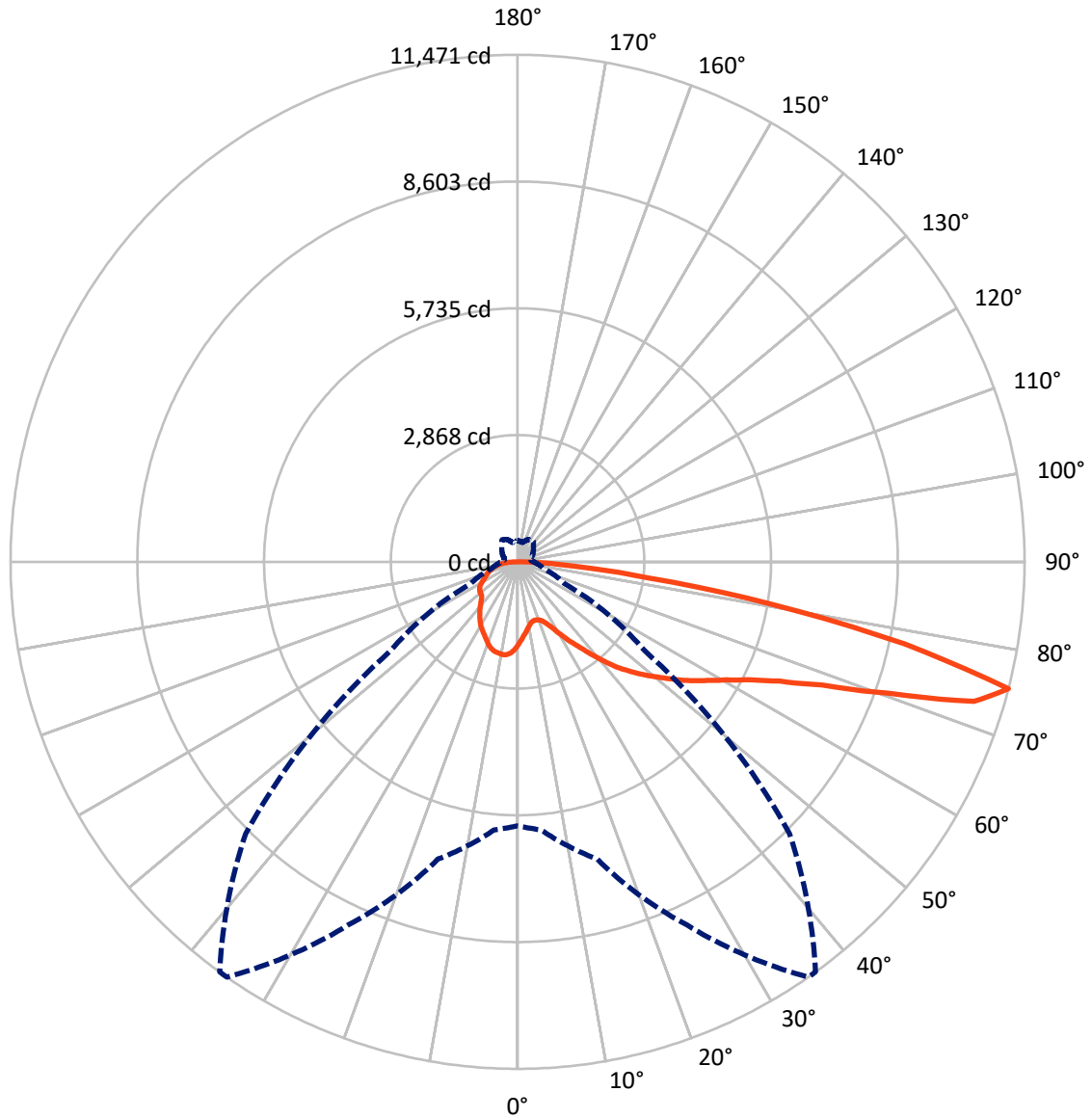
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.3 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3349.1 | 0.0 | 3349.1 |
| | % Fixture | 23.8 | 0.0 | 23.8 |
| Street Side | Lumens | 10724.2 | 0.0 | 10724.2 |
| | % Fixture | 76.2 | 0.0 | 76.2 |
| Total | Lumens | 14073.2 | 0.0 | 14073.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 177.6 | 1.3 |
| 10°-20° | 512.2 | 3.6 |
| 20°-30° | 860.0 | 6.1 |
| 30°-40° | 1336.6 | 9.5 |
| 40°-50° | 1983.9 | 14.1 |
| 50°-60° | 2738.9 | 19.5 |
| 60°-70° | 3322.9 | 23.6 |
| 70°-80° | 2746.1 | 19.5 |
| 80°-90° | 395.0 | 2.8 |
| 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° | 14073.2 | 100.0 |
| 0°-180° | 14073.2 | 100.0 |

Coefficient of Utilization



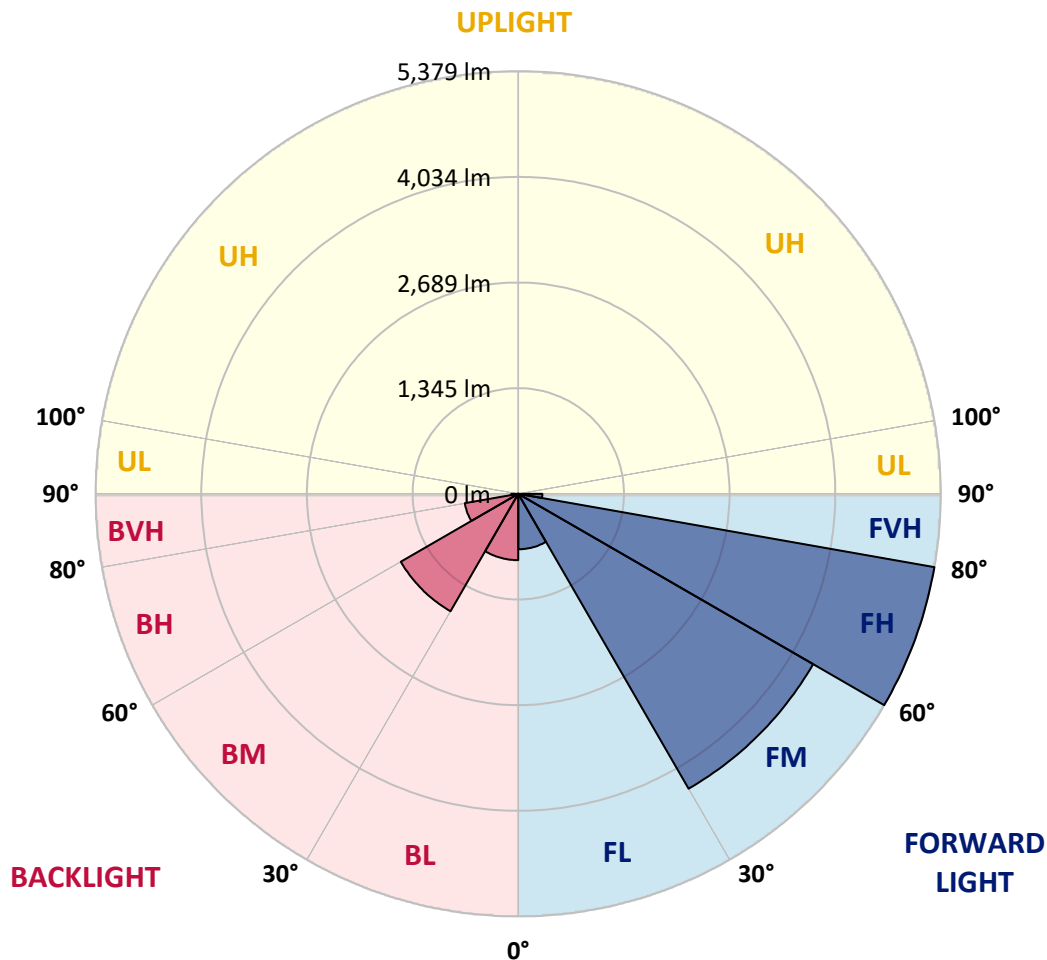
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 705.7 | 5.0 | | | |
| FM (30°-60°) | 4333.8 | 30.8 | | | |
| FH (60°-80°) | 5378.6 | 38.2 | | | G3/7500 |
| FVH (80°-90°) | 306.0 | 2.2 | | | G3/500 |
| BL (0°-30°) | 844.0 | 6.0 | B2/1000 | | |
| BM (30°-60°) | 1725.7 | 12.3 | B2/2500 | | |
| BH (60°-80°) | 690.5 | 4.9 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 88.9 | 0.6 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G3

Type IV Short



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 36° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|---------|---------|--------|--------|--------|--------|--------|
| 0° | 1875.3 | 1875.3 | 1875.3 | 1875.3 | 1875.3 | 1875.3 | 1875.3 | 1875.3 | 1875.3 | 1875.3 | 1875.3 |
| 2.5° | 1729.3 | 1739.9 | 1744.6 | 1742.2 | 1753.7 | 1752.1 | 1768.1 | 1787.9 | 1815.3 | 1841.9 | 1880.7 |
| 5° | 1596.1 | 1607.5 | 1617.4 | 1626.6 | 1648.6 | 1655.5 | 1680.6 | 1718.6 | 1768.8 | 1819.8 | 1883.7 |
| 7.5° | 1472.1 | 1482.0 | 1497.2 | 1514.0 | 1551.2 | 1558.1 | 1599.9 | 1659.3 | 1729.3 | 1803.8 | 1892.0 |
| 10° | 1370.9 | 1380.9 | 1396.8 | 1415.8 | 1462.3 | 1470.6 | 1523.9 | 1603.0 | 1694.3 | 1788.6 | 1901.3 |
| 12.5° | 1327.6 | 1330.7 | 1339.8 | 1358.7 | 1399.1 | 1404.5 | 1463.0 | 1553.5 | 1660.1 | 1777.2 | 1914.9 |
| 15° | 1325.3 | 1331.4 | 1332.2 | 1342.0 | 1375.6 | 1377.8 | 1431.8 | 1521.6 | 1638.8 | 1774.9 | 1935.5 |
| 17.5° | 1348.1 | 1352.7 | 1345.8 | 1352.0 | 1380.1 | 1383.9 | 1426.5 | 1506.3 | 1631.9 | 1784.8 | 1970.5 |
| 20° | 1409.0 | 1412.8 | 1392.3 | 1383.9 | 1404.5 | 1407.4 | 1449.4 | 1516.3 | 1638.8 | 1805.3 | 2018.4 |
| 22.5° | 1538.3 | 1540.6 | 1490.4 | 1456.1 | 1457.7 | 1459.2 | 1495.7 | 1556.6 | 1665.4 | 1842.6 | 2079.2 |
| 25° | 1739.9 | 1738.4 | 1658.6 | 1592.3 | 1554.3 | 1545.9 | 1570.3 | 1622.1 | 1710.2 | 1892.0 | 2157.6 |
| 27.5° | 1975.8 | 1964.4 | 1884.5 | 1785.6 | 1702.6 | 1690.5 | 1685.2 | 1707.2 | 1774.2 | 1957.5 | 2253.5 |
| 30° | 2242.1 | 2231.4 | 2145.4 | 2016.1 | 1901.3 | 1881.5 | 1831.3 | 1819.8 | 1869.3 | 2046.5 | 2386.6 |
| 32.5° | 2534.2 | 2527.3 | 2424.6 | 2267.9 | 2114.3 | 2091.4 | 2007.0 | 1976.5 | 2015.4 | 2181.2 | 2572.2 |
| 35° | 2779.2 | 2773.1 | 2687.9 | 2526.6 | 2338.6 | 2310.6 | 2224.6 | 2190.3 | 2210.1 | 2353.9 | 2815.0 |
| 37.5° | 3000.6 | 2997.5 | 2924.5 | 2797.4 | 2603.4 | 2569.2 | 2472.6 | 2461.1 | 2457.3 | 2581.4 | 3109.3 |
| 40° | 3206.0 | 3198.4 | 3122.3 | 3055.3 | 2911.5 | 2880.4 | 2795.2 | 2785.2 | 2756.3 | 2861.4 | 3442.6 |
| 42.5° | 3433.4 | 3413.7 | 3303.4 | 3272.2 | 3233.4 | 3207.5 | 3156.5 | 3158.0 | 3094.2 | 3177.1 | 3795.6 |
| 45° | 3619.1 | 3607.7 | 3494.3 | 3476.1 | 3517.9 | 3507.2 | 3551.4 | 3562.8 | 3438.8 | 3508.1 | 4162.3 |
| 47.5° | 3818.4 | 3807.8 | 3711.9 | 3699.0 | 3812.4 | 3815.4 | 3971.4 | 3975.2 | 3775.1 | 3851.8 | 4529.8 |
| 50° | 4064.1 | 4049.0 | 3953.8 | 3969.8 | 4096.8 | 4108.3 | 4393.6 | 4367.7 | 4084.7 | 4201.1 | 4894.2 |
| 52.5° | 4226.2 | 4235.3 | 4214.8 | 4240.6 | 4414.2 | 4424.8 | 4809.0 | 4742.8 | 4391.3 | 4545.8 | 5251.8 |
| 55° | 4345.7 | 4363.9 | 4427.8 | 4487.1 | 4748.8 | 4759.5 | 5200.7 | 5099.6 | 4645.4 | 4865.3 | 5588.0 |
| 57.5° | 4499.3 | 4473.5 | 4592.9 | 4708.5 | 5066.9 | 5095.1 | 5581.9 | 5443.5 | 4870.6 | 5140.7 | 5818.5 |
| 60° | 4719.9 | 4701.7 | 4794.5 | 4965.7 | 5423.0 | 5467.9 | 5985.2 | 5753.1 | 5035.7 | 5359.0 | 5863.4 |
| 62.5° | 5167.3 | 5121.6 | 5136.1 | 5287.6 | 5871.8 | 5931.2 | 6440.1 | 6023.2 | 5117.8 | 5444.3 | 5623.0 |
| 65° | 5836.0 | 5757.7 | 5684.6 | 5789.6 | 6504.0 | 6562.6 | 6953.7 | 6235.5 | 5087.4 | 5279.2 | 4984.7 |
| 67.5° | 6678.3 | 6600.7 | 6510.9 | 6609.8 | 7435.2 | 7481.7 | 7587.4 | 6354.9 | 4847.7 | 4643.1 | 3856.5 |
| 70° | 7372.8 | 7343.9 | 7451.2 | 7858.3 | 8922.6 | 8924.1 | 8399.9 | 6256.0 | 4191.2 | 3292.0 | 2231.4 |
| 72.5° | 7280.8 | 7263.3 | 7828.5 | 9086.9 | 10797.1 | 10756.9 | 9169.0 | 5507.4 | 2823.3 | 1485.0 | 836.1 |
| 75° | 5973.0 | 6086.3 | 6962.0 | 9064.9 | 11470.5 | 11465.1 | 8698.2 | 3501.2 | 1167.8 | 615.5 | 432.1 |
| 77.5° | 3202.9 | 3382.5 | 4519.8 | 6692.7 | 8954.5 | 9089.2 | 6115.3 | 1224.9 | 501.3 | 394.1 | 299.0 |
| 80° | 1044.6 | 1201.3 | 1801.5 | 3407.6 | 5818.5 | 5793.4 | 2620.9 | 480.8 | 343.1 | 279.2 | 206.9 |
| 82.5° | 443.5 | 461.8 | 804.9 | 1609.0 | 2986.1 | 2939.7 | 834.6 | 276.1 | 241.2 | 191.0 | 127.8 |
| 85° | 173.4 | 194.0 | 355.3 | 744.0 | 1293.3 | 1265.2 | 301.2 | 136.9 | 154.5 | 124.7 | 76.1 |
| 87.5° | 57.1 | 69.2 | 127.1 | 254.8 | 402.4 | 388.0 | 73.8 | 47.2 | 66.9 | 57.1 | 27.4 |
| 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° | 1875.3 | 1875.3 | 1875.3 | 1875.3 | 1875.3 | 1875.3 | 1875.3 | 1875.3 | 1875.3 | 1875.3 | 1875.3 |
| 2.5° | 1891.3 | 1903.5 | 1918.0 | 1939.3 | 1957.5 | 1972.7 | 1988.7 | 1998.6 | 2002.4 | 2013.8 | 2013.1 |
| 5° | 1905.1 | 1931.6 | 1967.4 | 2002.4 | 2036.7 | 2057.2 | 2075.4 | 2084.5 | 2092.9 | 2099.0 | 2100.5 |
| 7.5° | 1927.8 | 1962.1 | 2018.4 | 2064.0 | 2092.9 | 2109.7 | 2121.9 | 2118.8 | 2121.9 | 2123.4 | 2125.6 |
| 10° | 1947.6 | 1995.6 | 2062.5 | 2105.9 | 2127.9 | 2128.7 | 2125.6 | 2115.0 | 2109.7 | 2110.5 | 2112.0 |
| 12.5° | 1971.2 | 2024.5 | 2096.7 | 2133.2 | 2139.4 | 2122.6 | 2109.7 | 2091.4 | 2084.5 | 2081.6 | 2080.0 |
| 15° | 2003.2 | 2064.0 | 2134.0 | 2147.7 | 2132.5 | 2111.2 | 2089.2 | 2059.4 | 2044.3 | 2032.1 | 2035.9 |
| 17.5° | 2042.0 | 2108.9 | 2163.0 | 2153.0 | 2120.3 | 2085.4 | 2049.6 | 2004.7 | 1973.5 | 1960.5 | 1961.3 |
| 20° | 2096.0 | 2156.1 | 2185.0 | 2141.6 | 2092.2 | 2038.9 | 1978.0 | 1923.3 | 1894.4 | 1881.5 | 1880.0 |
| 22.5° | 2161.4 | 2219.2 | 2206.3 | 2121.9 | 2051.8 | 1966.7 | 1890.6 | 1850.2 | 1835.8 | 1826.7 | 1828.2 |
| 25° | 2239.7 | 2289.2 | 2221.5 | 2092.9 | 1985.6 | 1870.8 | 1812.2 | 1799.3 | 1792.4 | 1785.6 | 1785.6 |
| 27.5° | 2341.7 | 2368.4 | 2233.0 | 2050.3 | 1882.2 | 1768.8 | 1747.5 | 1749.8 | 1747.5 | 1736.1 | 1738.4 |
| 30° | 2476.4 | 2471.1 | 2243.6 | 1981.1 | 1763.5 | 1676.8 | 1678.3 | 1688.2 | 1689.7 | 1682.1 | 1685.9 |
| 32.5° | 2653.6 | 2599.6 | 2249.0 | 1891.3 | 1650.1 | 1596.1 | 1597.7 | 1608.3 | 1615.9 | 1603.0 | 1609.0 |
| 35° | 2868.2 | 2749.5 | 2240.5 | 1778.8 | 1562.7 | 1519.3 | 1507.9 | 1511.0 | 1513.2 | 1501.0 | 1509.4 |
| 37.5° | 3118.5 | 2917.7 | 2203.2 | 1653.9 | 1490.4 | 1444.0 | 1419.6 | 1399.1 | 1386.9 | 1375.6 | 1383.1 |
| 40° | 3393.2 | 3101.0 | 2134.8 | 1532.3 | 1409.8 | 1364.1 | 1327.6 | 1288.8 | 1247.7 | 1232.5 | 1239.3 |
| 42.5° | 3680.7 | 3289.6 | 2051.8 | 1415.8 | 1316.9 | 1279.6 | 1240.9 | 1184.6 | 1122.9 | 1091.7 | 1095.5 |
| 45° | 3978.9 | 3483.0 | 1970.5 | 1300.9 | 1221.8 | 1205.8 | 1161.0 | 1093.3 | 1026.3 | 986.8 | 983.7 |
| 47.5° | 4271.1 | 3665.5 | 1851.0 | 1185.3 | 1132.8 | 1150.4 | 1115.3 | 1053.0 | 978.4 | 916.0 | 909.2 |
| 50° | 4550.3 | 3836.7 | 1655.5 | 1068.2 | 1060.6 | 1133.5 | 1100.1 | 1010.3 | 925.2 | 845.2 | 838.3 |
| 52.5° | 4827.2 | 3975.2 | 1405.2 | 961.7 | 1021.7 | 1129.0 | 1080.4 | 981.4 | 877.2 | 793.6 | 784.3 |
| 55° | 5062.3 | 4046.7 | 1164.0 | 870.3 | 965.4 | 1090.2 | 1056.8 | 947.2 | 809.4 | 720.5 | 712.9 |
| 57.5° | 5196.2 | 3988.9 | 963.2 | 780.5 | 887.9 | 1026.3 | 1016.4 | 874.1 | 728.9 | 660.4 | 651.3 |
| 60° | 5138.4 | 3754.5 | 798.8 | 702.2 | 814.1 | 957.0 | 946.4 | 801.9 | 667.2 | 602.6 | 593.4 |
| 62.5° | 4819.7 | 3307.9 | 668.7 | 633.8 | 747.1 | 886.3 | 876.5 | 746.3 | 620.0 | 557.7 | 547.8 |
| 65° | 4177.5 | 2690.9 | 567.5 | 576.7 | 679.4 | 801.1 | 815.6 | 700.0 | 582.8 | 521.9 | 512.0 |
| 67.5° | 3186.2 | 1949.1 | 488.4 | 527.3 | 613.2 | 717.4 | 759.3 | 666.5 | 551.6 | 493.7 | 484.6 |
| 70° | 1816.0 | 1107.0 | 421.5 | 479.3 | 554.6 | 639.8 | 715.9 | 639.8 | 518.1 | 470.2 | 464.1 |
| 72.5° | 688.5 | 508.2 | 364.4 | 431.3 | 498.4 | 574.4 | 668.0 | 598.0 | 479.3 | 443.5 | 437.5 |
| 75° | 367.5 | 309.7 | 306.6 | 375.0 | 433.7 | 510.4 | 607.8 | 556.9 | 450.4 | 468.6 | 483.9 |
| 77.5° | 250.3 | 219.1 | 256.4 | 321.0 | 362.8 | 439.7 | 544.0 | 494.6 | 390.3 | 388.8 | 358.3 |
| 80° | 173.4 | 155.2 | 208.5 | 258.7 | 280.7 | 369.7 | 474.8 | 424.6 | 318.1 | 296.7 | 283.8 |
| 82.5° | 104.2 | 101.2 | 156.0 | 193.2 | 198.5 | 285.3 | 393.3 | 356.1 | 260.1 | 226.7 | 228.3 |
| 85° | 57.1 | 60.1 | 99.6 | 113.4 | 115.6 | 199.4 | 308.1 | 275.4 | 200.1 | 168.1 | 169.6 |
| 87.5° | 16.0 | 20.5 | 36.5 | 44.9 | 55.6 | 103.4 | 183.4 | 163.6 | 100.4 | 70.0 | 70.0 |
| 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)