

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: P883590

Luminaire Tested: **NAV-SB4A-730-U-T4FT-HSS**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P883590  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-25)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB4A-730-U-T4FT-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 70 CRI, 3000K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV  
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

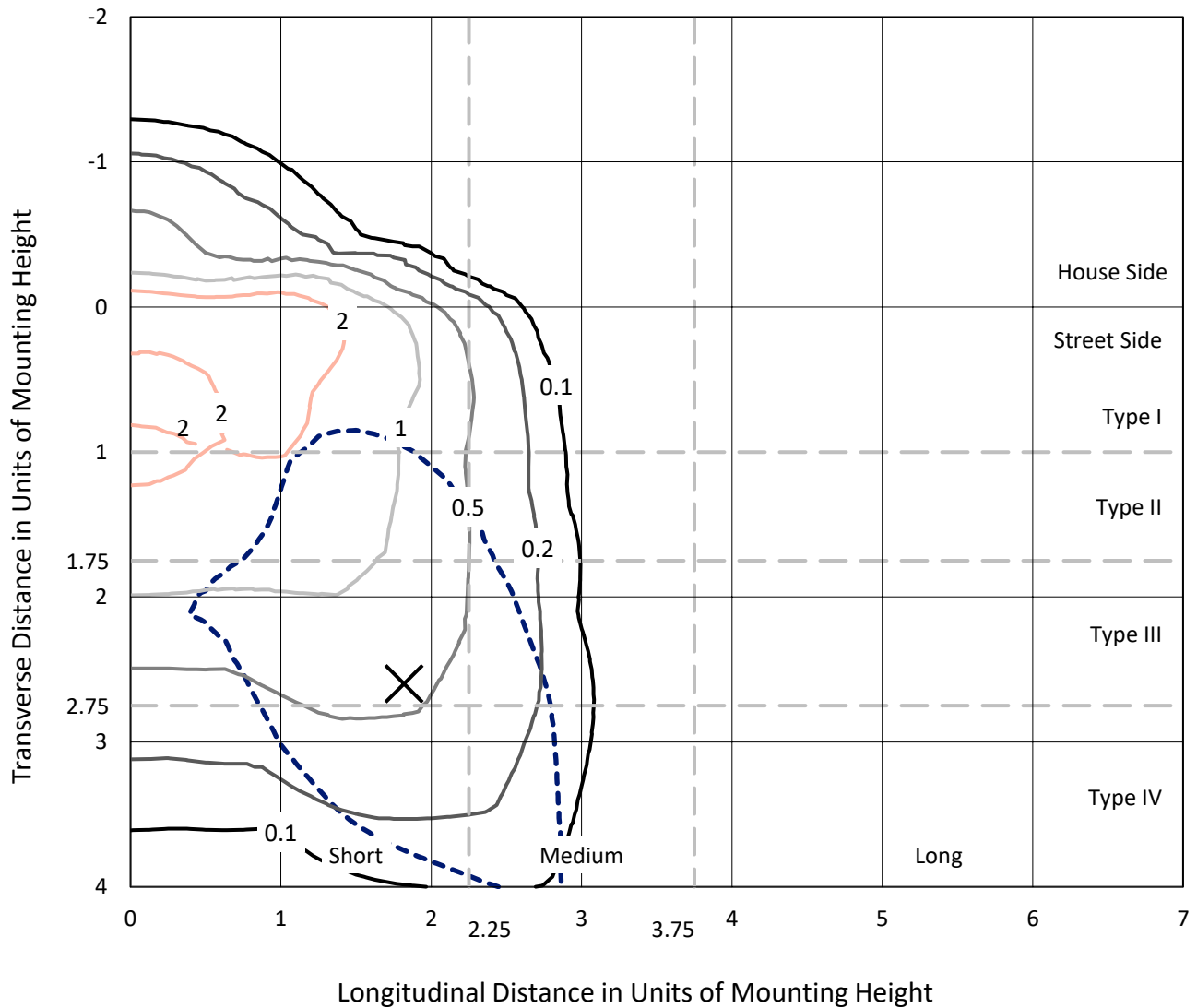
Lumens per Lamp: N/A  
Luminaire Lumens: 13549 lumens  
Efficiency: N/A  
Efficacy: 118.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G3  
  
Input Watts (W): 114  
Input Voltage (V): 120.0  
Input Current (Ain): 0.952  
Voltage Rise (V): NR  
Power Factor: 0.995  
Total Harmonic Distortion (THDi): 8.206  
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

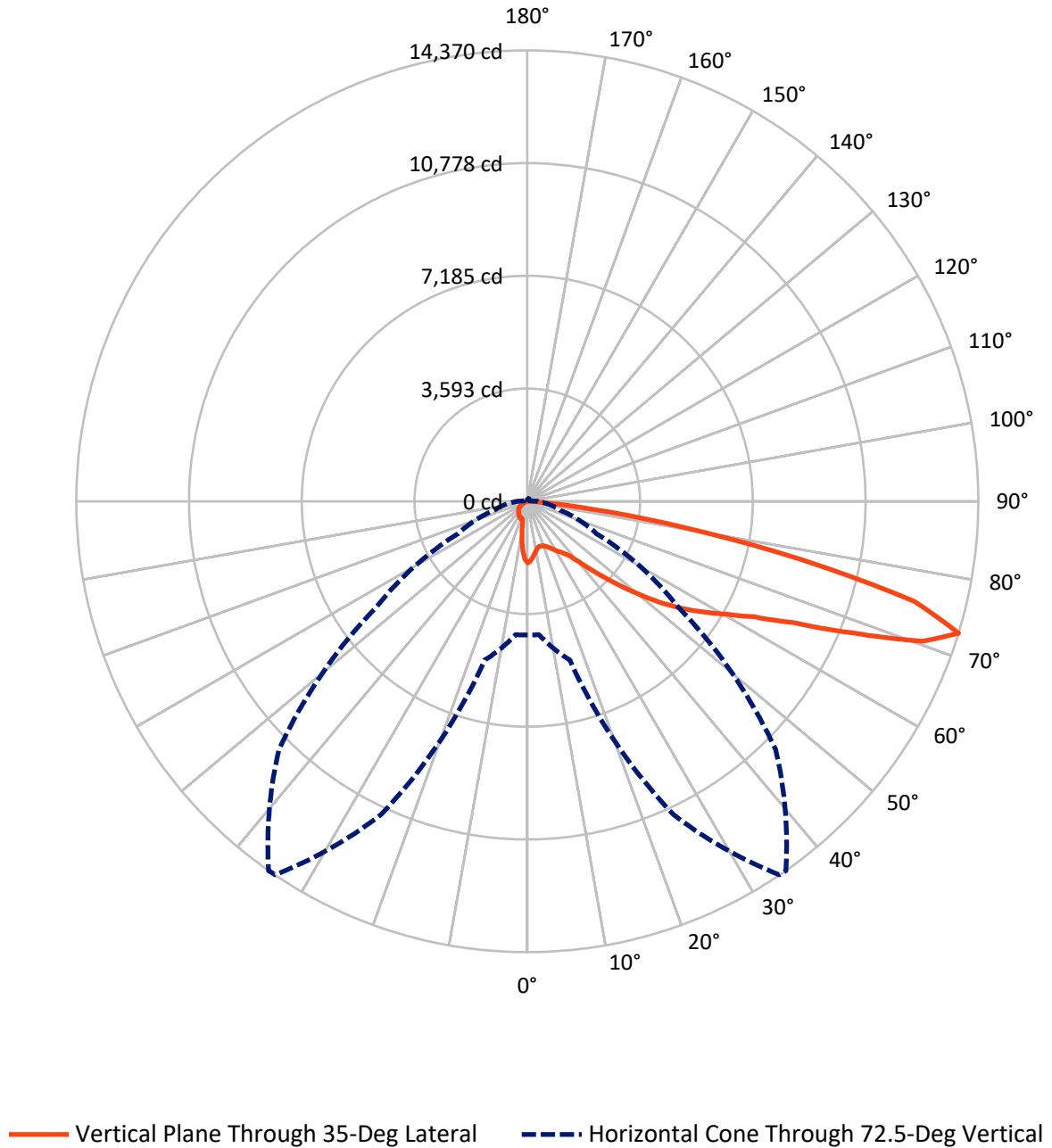
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 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    | 1524.9   | 0.0    | 1524.9  |
|                    | % Fixture | 11.3     | 0.0    | 11.3    |
| <b>Street Side</b> | Lumens    | 12024.1  | 0.0    | 12024.1 |
|                    | % Fixture | 88.7     | 0.0    | 88.7    |
| <b>Total</b>       | Lumens    | 13549.0  | 0.0    | 13549.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 161.4   | 1.2       |
| 10°-20°   | 377.5   | 2.8       |
| 20°-30°   | 613.2   | 4.5       |
| 30°-40°   | 1023.2  | 7.6       |
| 40°-50°   | 1935.9  | 14.3      |
| 50°-60°   | 3076.1  | 22.7      |
| 60°-70°   | 3805.3  | 28.1      |
| 70°-80°   | 2365.4  | 17.5      |
| 80°-90°   | 191.2   | 1.4       |
| 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°    | 13549.0 | 100.0     |
| 0°-180°   | 13549.0 | 100.0     |

**Coefficient of Utilization**



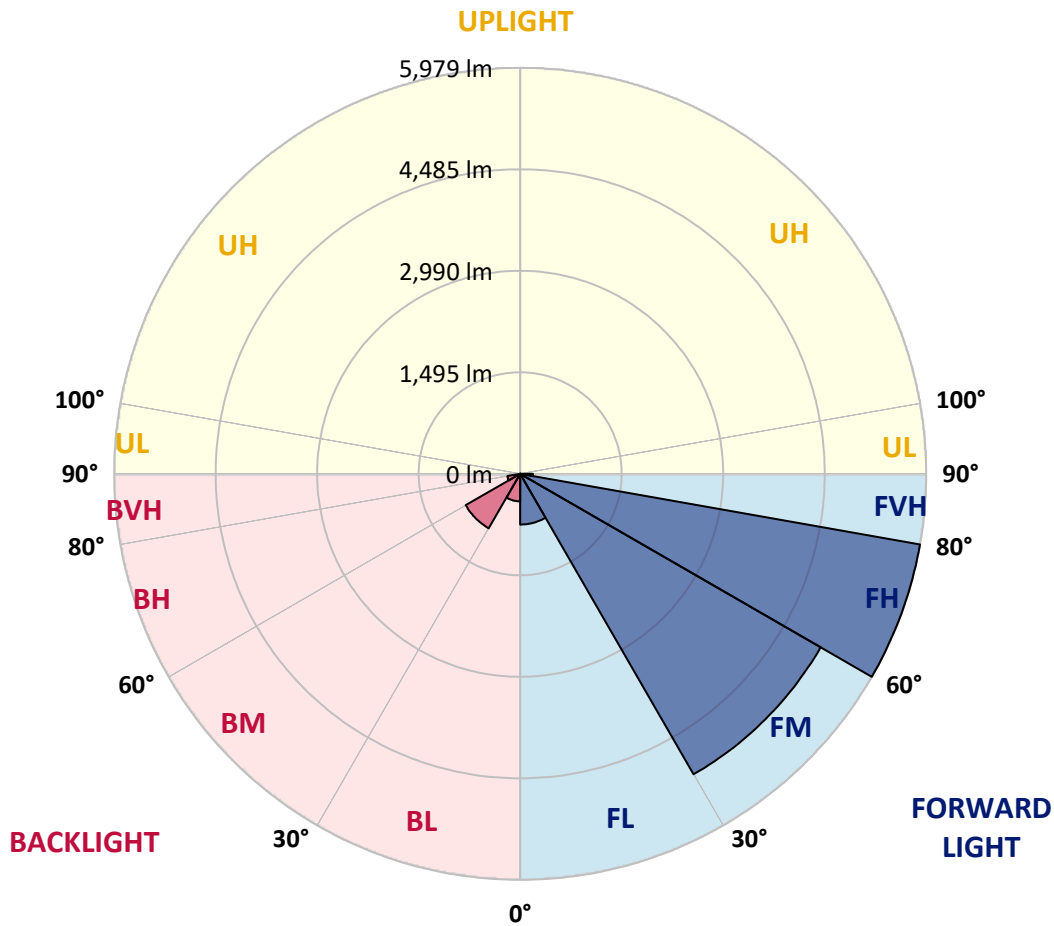
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 746.9  | 5.5       |                         |      |         |
| FM (30°-60°)   | 5109.3 | 37.7      |                         |      |         |
| FH (60°-80°)   | 5979.3 | 44.1      |                         |      | G3/7500 |
| FVH (80°-90°)  | 188.6  | 1.4       |                         |      | G2/225  |
| BL (0°-30°)    | 405.2  | 3.0       | B1/500                  |      |         |
| BM (30°-60°)   | 925.7  | 6.8       | B1/1000                 |      |         |
| BH (60°-80°)   | 191.4  | 1.4       | B1/500                  |      | G1/500  |
| BVH (80°-90°)  | 2.6    | 0.0       |                         |      | G0/10   |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G3**

Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°     | 34°     | 35°     | 45°     | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|---------|---------|---------|---------|--------|--------|--------|--------|
| 0°    | 1963.7 | 1963.7 | 1963.7 | 1963.7  | 1963.7  | 1963.7  | 1963.7  | 1963.7 | 1963.7 | 1963.7 | 1963.7 |
| 2.5°  | 1876.3 | 1892.2 | 1895.2 | 1900.2  | 1900.2  | 1906.1  | 1916.1  | 1930.0 | 1952.8 | 1964.7 | 1972.6 |
| 5°    | 1729.4 | 1741.3 | 1756.2 | 1768.1  | 1791.0  | 1793.9  | 1832.7  | 1870.4 | 1923.0 | 1962.7 | 1990.5 |
| 7.5°  | 1581.5 | 1595.4 | 1615.2 | 1644.0  | 1673.8  | 1682.7  | 1741.3  | 1804.9 | 1888.3 | 1962.7 | 2009.4 |
| 10°   | 1477.2 | 1478.2 | 1496.1 | 1524.9  | 1572.6  | 1583.5  | 1655.0  | 1745.3 | 1849.5 | 1950.8 | 2027.2 |
| 12.5° | 1418.7 | 1425.6 | 1433.6 | 1455.4  | 1501.1  | 1508.0  | 1584.5  | 1690.7 | 1810.8 | 1943.8 | 2048.1 |
| 15°   | 1418.7 | 1423.6 | 1428.6 | 1439.5  | 1476.3  | 1482.2  | 1549.7  | 1655.9 | 1791.0 | 1946.8 | 2081.8 |
| 17.5° | 1433.6 | 1441.5 | 1437.5 | 1450.4  | 1489.2  | 1493.1  | 1552.7  | 1646.0 | 1790.0 | 1965.7 | 2133.5 |
| 20°   | 1469.3 | 1475.3 | 1467.3 | 1475.3  | 1514.0  | 1521.9  | 1583.5  | 1664.9 | 1806.8 | 1998.5 | 2198.0 |
| 22.5° | 1525.9 | 1528.9 | 1510.0 | 1516.0  | 1555.7  | 1565.6  | 1637.1  | 1718.5 | 1847.5 | 2051.1 | 2284.4 |
| 25°   | 1597.4 | 1603.3 | 1574.5 | 1581.5  | 1619.2  | 1631.1  | 1713.5  | 1798.9 | 1912.1 | 2123.5 | 2394.6 |
| 27.5° | 1679.8 | 1682.7 | 1657.9 | 1656.9  | 1705.6  | 1722.5  | 1805.9  | 1898.2 | 1998.5 | 2214.9 | 2533.6 |
| 30°   | 1774.1 | 1783.0 | 1759.2 | 1755.2  | 1816.8  | 1830.7  | 1913.1  | 2020.3 | 2125.5 | 2351.9 | 2731.1 |
| 32.5° | 1848.5 | 1855.5 | 1841.6 | 1851.5  | 1914.1  | 1925.0  | 2043.1  | 2193.0 | 2325.1 | 2546.5 | 3000.2 |
| 35°   | 1955.8 | 1959.7 | 1928.0 | 1945.8  | 2017.3  | 2045.1  | 2220.8  | 2435.3 | 2576.2 | 2790.7 | 3351.6 |
| 37.5° | 2343.9 | 2343.9 | 2208.9 | 2120.6  | 2189.1  | 2213.9  | 2464.1  | 2740.1 | 2886.0 | 3118.3 | 3794.4 |
| 40°   | 2881.0 | 2872.1 | 2674.5 | 2493.8  | 2484.9  | 2533.6  | 2810.5  | 3124.3 | 3286.1 | 3511.4 | 4292.7 |
| 42.5° | 3453.9 | 3440.0 | 3170.9 | 2992.2  | 2962.4  | 2979.3  | 3210.6  | 3597.8 | 3762.6 | 3990.9 | 4828.8 |
| 45°   | 3962.2 | 3958.2 | 3712.0 | 3471.7  | 3418.1  | 3471.7  | 3710.0  | 4151.8 | 4269.9 | 4510.2 | 5364.0 |
| 47.5° | 4388.1 | 4388.1 | 4208.4 | 4051.5  | 4023.7  | 4055.5  | 4386.1  | 4766.3 | 4755.4 | 5063.1 | 5885.2 |
| 50°   | 4878.5 | 4874.5 | 4703.8 | 4636.2  | 4665.0  | 4709.7  | 5164.4  | 5413.6 | 5257.7 | 5606.2 | 6350.8 |
| 52.5° | 5222.0 | 5245.8 | 5187.2 | 5176.3  | 5323.2  | 5400.7  | 5954.7  | 6047.0 | 5707.5 | 6121.4 | 6699.2 |
| 55°   | 5494.0 | 5521.8 | 5589.3 | 5665.8  | 5948.7  | 6050.0  | 6720.1  | 6647.6 | 6083.7 | 6568.2 | 6899.8 |
| 57.5° | 5879.2 | 5839.5 | 5943.7 | 6094.6  | 6552.3  | 6674.4  | 7461.7  | 7214.5 | 6386.5 | 6930.5 | 6921.6 |
| 60°   | 6346.8 | 6352.8 | 6370.6 | 6561.2  | 7154.9  | 7311.8  | 8192.4  | 7750.6 | 6581.1 | 7152.9 | 6679.4 |
| 62.5° | 6908.7 | 6917.6 | 6954.4 | 7247.2  | 7964.0  | 8111.9  | 8970.7  | 8189.4 | 6670.4 | 7090.4 | 6053.9 |
| 65°   | 6870.0 | 6907.7 | 7317.7 | 8319.4  | 9194.1  | 9340.0  | 9879.1  | 8497.1 | 6535.4 | 6518.5 | 4929.1 |
| 67.5° | 6258.4 | 6320.0 | 7006.0 | 9600.1  | 11048.6 | 11211.4 | 10977.1 | 8557.7 | 5952.7 | 5069.1 | 3215.6 |
| 70°   | 5456.3 | 5478.1 | 6303.1 | 10751.7 | 13195.9 | 13360.7 | 11959.9 | 7891.6 | 4517.1 | 2827.4 | 1440.5 |
| 72.5° | 4261.0 | 4265.9 | 5233.9 | 11018.8 | 14361.4 | 14370.4 | 11188.5 | 5858.4 | 2429.3 | 1086.1 | 500.4  |
| 75°   | 3043.8 | 3014.1 | 3505.5 | 8935.9  | 12635.0 | 12736.3 | 8387.9  | 2748.0 | 928.2  | 513.3  | 249.2  |
| 77.5° | 1632.1 | 1664.9 | 1983.6 | 5299.4  | 8728.5  | 8901.2  | 4576.7  | 792.2  | 472.6  | 349.5  | 164.8  |
| 80°   | 504.3  | 532.1  | 813.1  | 2426.3  | 4944.0  | 5048.2  | 1696.6  | 352.4  | 329.6  | 249.2  | 108.2  |
| 82.5° | 158.8  | 164.8  | 379.2  | 1019.6  | 2052.1  | 2099.7  | 491.4   | 199.5  | 225.4  | 164.8  | 63.5   |
| 85°   | 45.7   | 46.7   | 168.8  | 380.2   | 507.3   | 517.2   | 138.0   | 77.4   | 129.1  | 102.3  | 32.8   |
| 87.5° | 5.0    | 15.9   | 63.5   | 63.5    | 44.7    | 43.7    | 14.9    | 16.9   | 36.7   | 12.9   | 6.0    |
| 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°    | 1963.7 | 1963.7 | 1963.7 | 1963.7 | 1963.7 | 1963.7 | 1963.7 | 1963.7 | 1963.7 | 1963.7 | 1963.7 |
| 2.5°  | 1967.7 | 1968.7 | 1955.8 | 1933.9 | 1910.1 | 1890.2 | 1865.4 | 1845.6 | 1831.7 | 1827.7 | 1834.6 |
| 5°    | 1981.6 | 1974.6 | 1937.9 | 1871.4 | 1792.0 | 1723.5 | 1647.0 | 1586.5 | 1546.7 | 1529.9 | 1535.8 |
| 7.5°  | 2002.4 | 1982.6 | 1902.2 | 1771.1 | 1619.2 | 1484.2 | 1347.2 | 1241.0 | 1173.5 | 1139.7 | 1144.7 |
| 10°   | 2020.3 | 1980.6 | 1842.6 | 1626.2 | 1393.9 | 1189.3 | 1004.7 | 876.6  | 805.1  | 771.4  | 772.4  |
| 12.5° | 2037.2 | 1979.6 | 1765.1 | 1454.4 | 1139.7 | 889.5  | 717.8  | 654.2  | 634.4  | 627.4  | 625.4  |
| 15°   | 2068.9 | 1982.6 | 1667.9 | 1257.8 | 886.5  | 672.1  | 609.6  | 608.6  | 612.5  | 610.6  | 609.6  |
| 17.5° | 2112.6 | 1985.5 | 1557.7 | 1049.4 | 684.0  | 592.7  | 589.7  | 598.6  | 604.6  | 601.6  | 600.6  |
| 20°   | 2169.2 | 1997.5 | 1440.5 | 842.9  | 587.7  | 572.8  | 579.8  | 587.7  | 592.7  | 587.7  | 586.7  |
| 22.5° | 2248.6 | 2018.3 | 1312.4 | 677.1  | 556.9  | 560.9  | 566.9  | 575.8  | 580.8  | 573.8  | 572.8  |
| 25°   | 2345.9 | 2051.1 | 1186.4 | 588.7  | 542.1  | 547.0  | 556.0  | 565.9  | 571.8  | 564.9  | 563.9  |
| 27.5° | 2472.0 | 2103.7 | 1070.2 | 568.9  | 527.2  | 530.1  | 543.0  | 557.9  | 565.9  | 556.9  | 556.9  |
| 30°   | 2654.7 | 2190.1 | 969.9  | 577.8  | 518.2  | 511.3  | 529.1  | 550.0  | 558.9  | 551.0  | 550.0  |
| 32.5° | 2896.9 | 2312.2 | 908.4  | 591.7  | 514.3  | 489.4  | 506.3  | 533.1  | 548.0  | 543.0  | 543.0  |
| 35°   | 3214.6 | 2497.8 | 884.6  | 607.6  | 511.3  | 466.6  | 478.5  | 507.3  | 533.1  | 538.1  | 538.1  |
| 37.5° | 3599.8 | 2755.9 | 891.5  | 614.5  | 502.3  | 447.7  | 453.7  | 478.5  | 512.3  | 528.2  | 532.1  |
| 40°   | 4037.6 | 3056.7 | 931.2  | 607.6  | 492.4  | 431.9  | 432.8  | 451.7  | 481.5  | 505.3  | 513.3  |
| 42.5° | 4489.3 | 3408.2 | 1004.7 | 581.8  | 483.5  | 418.0  | 415.0  | 427.9  | 447.7  | 464.6  | 471.6  |
| 45°   | 4919.2 | 3769.6 | 1077.2 | 546.0  | 472.6  | 404.1  | 397.1  | 402.1  | 406.0  | 413.0  | 417.0  |
| 47.5° | 5294.5 | 4023.7 | 1056.3 | 513.3  | 457.7  | 388.2  | 376.3  | 374.3  | 362.4  | 361.4  | 360.4  |
| 50°   | 5553.6 | 4079.3 | 938.2  | 480.5  | 435.8  | 370.3  | 351.4  | 339.5  | 318.7  | 308.8  | 309.7  |
| 52.5° | 5636.0 | 3859.9 | 766.4  | 447.7  | 400.1  | 346.5  | 319.7  | 300.8  | 275.0  | 266.1  | 265.1  |
| 55°   | 5526.8 | 3430.0 | 612.5  | 408.0  | 350.4  | 314.7  | 284.9  | 260.1  | 239.3  | 228.3  | 228.3  |
| 57.5° | 5259.7 | 2883.0 | 484.5  | 361.4  | 297.8  | 279.0  | 249.2  | 224.4  | 206.5  | 195.6  | 193.6  |
| 60°   | 4816.9 | 2289.3 | 383.2  | 305.8  | 254.1  | 240.3  | 209.5  | 193.6  | 177.7  | 164.8  | 161.8  |
| 62.5° | 4144.8 | 1634.1 | 300.8  | 242.2  | 212.5  | 196.6  | 178.7  | 166.8  | 147.9  | 130.1  | 127.1  |
| 65°   | 3234.5 | 999.7  | 232.3  | 177.7  | 170.8  | 162.8  | 151.9  | 141.0  | 118.1  | 100.3  | 97.3   |
| 67.5° | 2040.1 | 473.6  | 165.8  | 134.0  | 135.0  | 131.0  | 126.1  | 117.1  | 100.3  | 84.4   | 82.4   |
| 70°   | 898.5  | 229.3  | 109.2  | 102.3  | 100.3  | 100.3  | 104.2  | 101.3  | 85.4   | 70.5   | 67.5   |
| 72.5° | 305.8  | 123.1  | 81.4   | 77.4   | 72.5   | 71.5   | 87.4   | 84.4   | 68.5   | 54.6   | 51.6   |
| 75°   | 159.8  | 82.4   | 59.6   | 55.6   | 43.7   | 52.6   | 69.5   | 65.5   | 48.6   | 35.7   | 32.8   |
| 77.5° | 104.2  | 58.6   | 40.7   | 35.7   | 24.8   | 34.7   | 51.6   | 45.7   | 28.8   | 17.9   | 15.9   |
| 80°   | 65.5   | 38.7   | 23.8   | 16.9   | 11.9   | 18.9   | 27.8   | 19.9   | 10.9   | 4.0    | 3.0    |
| 82.5° | 34.7   | 19.9   | 8.9    | 6.0    | 5.0    | 6.0    | 6.9    | 5.0    | 2.0    | 0.0    | 0.0    |
| 85°   | 13.9   | 6.9    | 3.0    | 2.0    | 1.0    | 0.0    | 2.0    | 1.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 5.0    | 1.0    | 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)