

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: P882728

Luminaire Tested: **NAV-SB2D-727-U-T3-HSS**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P882728  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB2D-727-U-T3-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(2) 70 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III  
OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

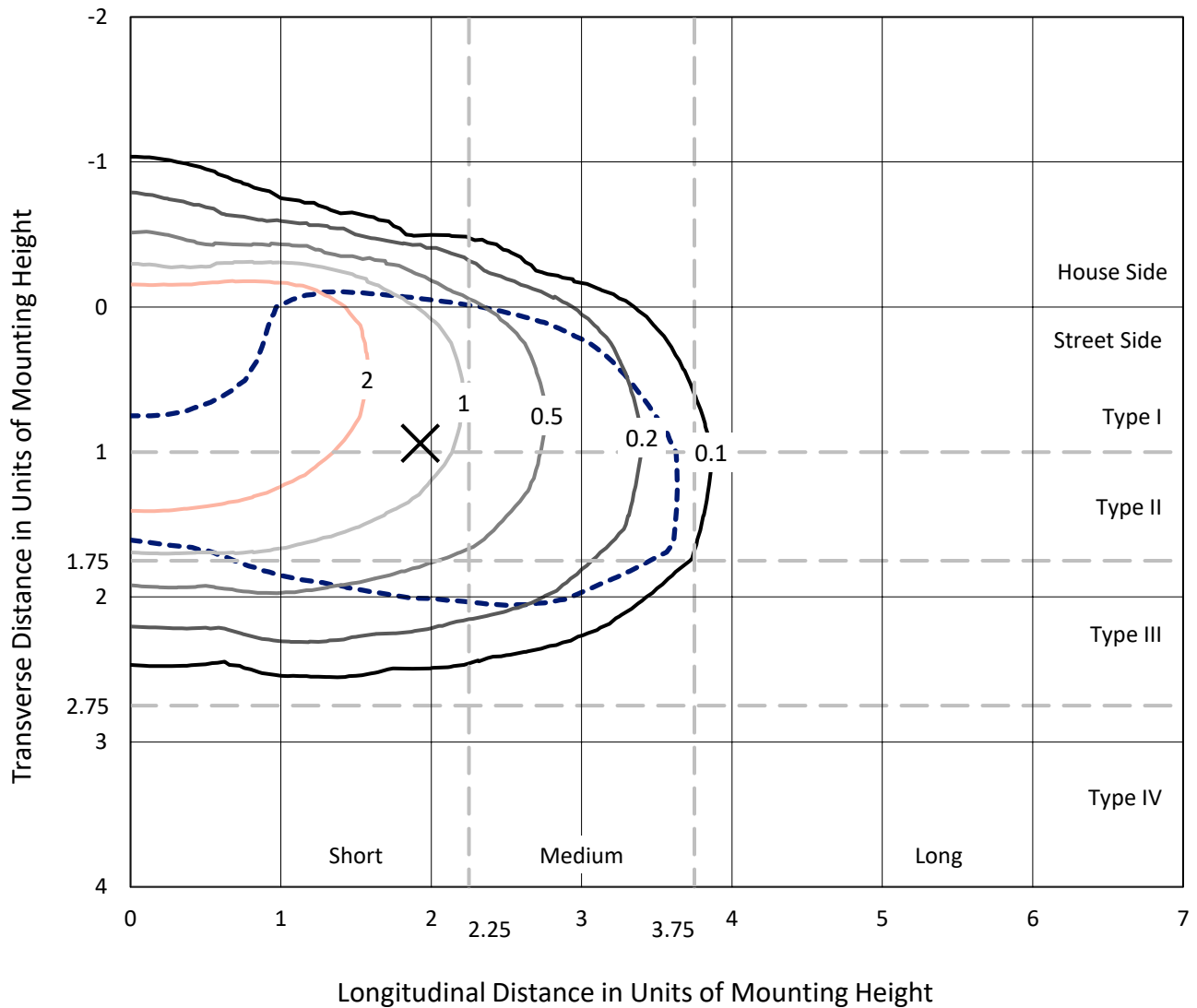
Lumens per Lamp: N/A  
Luminaire Lumens: 14741 lumens  
Efficiency: N/A  
Efficacy: 99.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 147.6  
Input Voltage (V): 120.0  
Input Current (Ain): 1.234  
Voltage Rise (V): NR  
Power Factor: 0.999  
Total Harmonic Distortion (THDi): 3.108  
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

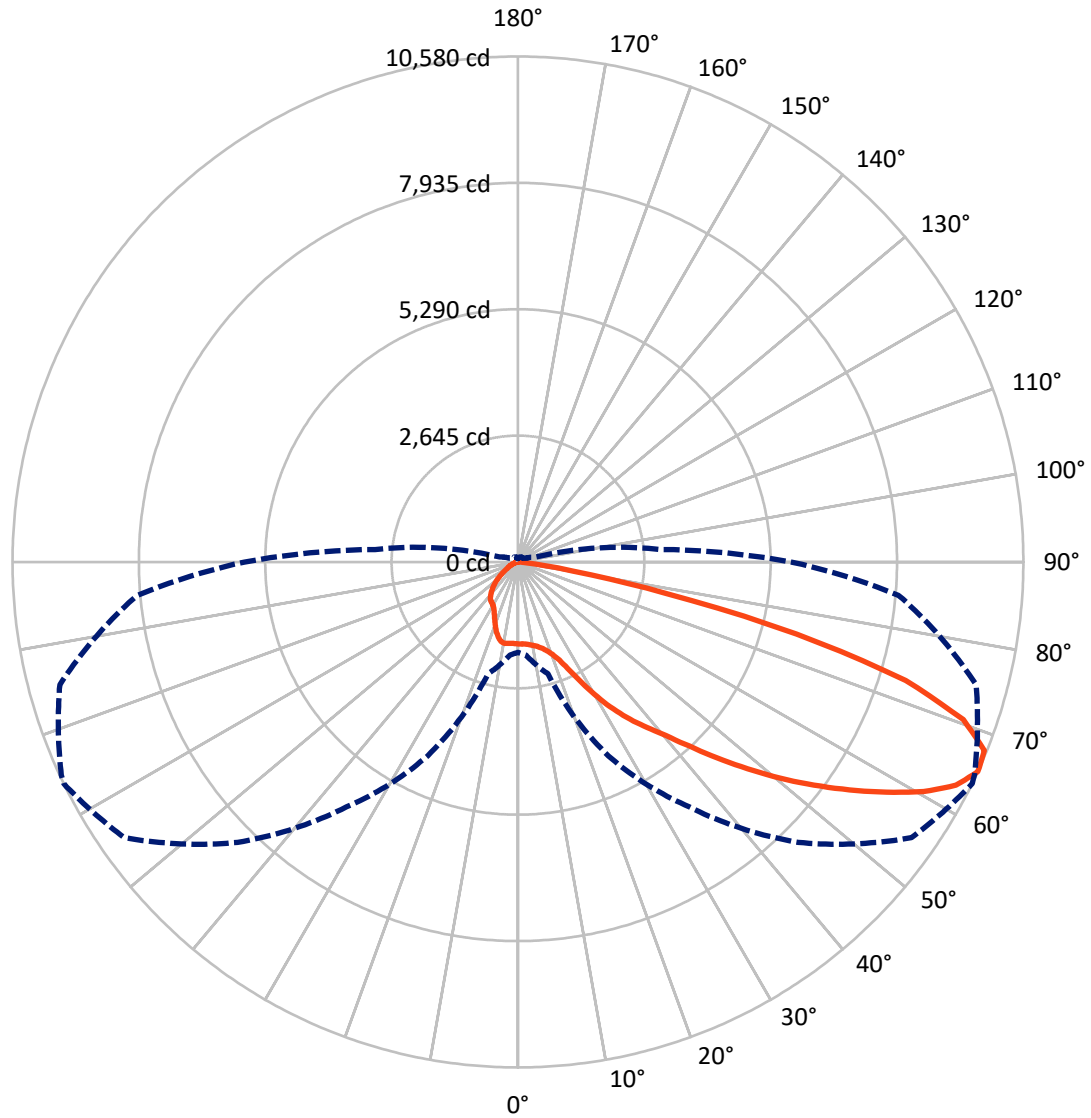
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.3 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 64-Deg Lateral    - - - Horizontal Cone Through 65-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 1971.3   | 0.0    | 1971.3  |
|                    | % Fixture | 13.4     | 0.0    | 13.4    |
| <b>Street Side</b> | Lumens    | 12769.7  | 0.0    | 12769.7 |
|                    | % Fixture | 86.6     | 0.0    | 86.6    |
| <b>Total</b>       | Lumens    | 14741.0  | 0.0    | 14741.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 158.2   | 1.1       |
| 10°-20°   | 429.0   | 2.9       |
| 20°-30°   | 813.0   | 5.5       |
| 30°-40°   | 1645.1  | 11.2      |
| 40°-50°   | 2802.4  | 19.0      |
| 50°-60°   | 3811.1  | 25.9      |
| 60°-70°   | 3578.8  | 24.3      |
| 70°-80°   | 1433.8  | 9.7       |
| 80°-90°   | 69.5    | 0.5       |
| 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°    | 14741.0 | 100.0     |
| 0°-180°   | 14741.0 | 100.0     |

**Coefficient of Utilization**



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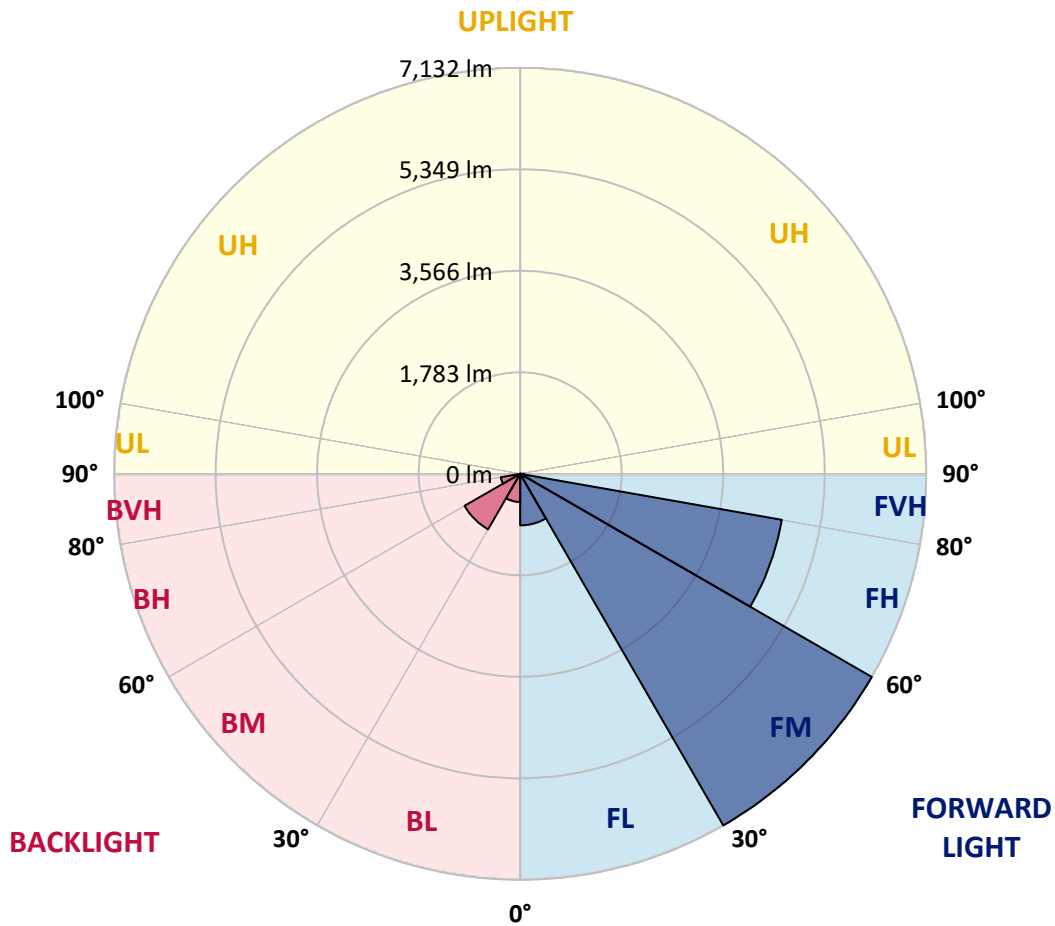
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 905.3  | 6.1       |                         |      |         |
| FM (30°-60°)   | 7131.7 | 48.4      |                         |      |         |
| FH (60°-80°)   | 4666.7 | 31.7      |                         |      | G2/5000 |
| FVH (80°-90°)  | 66.1   | 0.4       |                         |      | G1/100  |
| BL (0°-30°)    | 494.9  | 3.4       | B1/500                  |      |         |
| BM (30°-60°)   | 1127.0 | 7.6       | B2/2500                 |      |         |
| BH (60°-80°)   | 346.0  | 2.3       | B1/500                  |      | G1/500  |
| BVH (80°-90°)  | 3.4    | 0.0       |                         |      | G0/10   |
| 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 Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°     | 64°     | 65°     | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|--------|--------|
| 0°    | 1714.5 | 1714.5 | 1714.5 | 1714.5 | 1714.5 | 1714.5 | 1714.5  | 1714.5  | 1714.5  | 1714.5 | 1714.5 |
| 2.5°  | 1708.6 | 1720.5 | 1717.5 | 1714.5 | 1713.5 | 1715.5 | 1716.5  | 1715.5  | 1715.5  | 1715.5 | 1716.5 |
| 5°    | 1676.0 | 1685.9 | 1685.9 | 1692.8 | 1702.7 | 1714.5 | 1723.4  | 1725.4  | 1727.4  | 1730.3 | 1729.4 |
| 7.5°  | 1613.7 | 1621.6 | 1627.6 | 1650.3 | 1675.0 | 1706.6 | 1733.3  | 1747.1  | 1749.1  | 1760.0 | 1763.9 |
| 10°   | 1571.2 | 1581.1 | 1591.0 | 1614.7 | 1650.3 | 1697.7 | 1743.2  | 1776.8  | 1781.7  | 1807.4 | 1819.3 |
| 12.5° | 1569.3 | 1579.1 | 1592.0 | 1617.7 | 1659.2 | 1709.6 | 1764.9  | 1813.4  | 1822.2  | 1859.8 | 1884.5 |
| 15°   | 1590.0 | 1601.9 | 1613.7 | 1645.4 | 1689.8 | 1751.1 | 1810.4  | 1870.7  | 1879.6  | 1932.9 | 1959.6 |
| 17.5° | 1632.5 | 1648.3 | 1657.2 | 1688.8 | 1736.3 | 1804.5 | 1882.5  | 1951.7  | 1959.6  | 2021.9 | 2055.5 |
| 20°   | 1716.5 | 1735.3 | 1738.2 | 1763.9 | 1810.4 | 1883.5 | 1976.4  | 2062.4  | 2072.3  | 2143.4 | 2181.0 |
| 22.5° | 1890.4 | 1917.1 | 1893.4 | 1906.2 | 1947.7 | 2020.9 | 2121.7  | 2230.4  | 2244.2  | 2325.2 | 2358.8 |
| 25°   | 2196.8 | 2234.3 | 2173.1 | 2151.3 | 2169.1 | 2245.2 | 2371.7  | 2509.0  | 2524.9  | 2590.1 | 2606.9 |
| 27.5° | 2798.6 | 2750.2 | 2657.3 | 2566.4 | 2513.0 | 2556.5 | 2698.8  | 2868.8  | 2888.5  | 2951.8 | 2932.0 |
| 30°   | 3459.7 | 3417.2 | 3291.7 | 3090.1 | 2963.6 | 2956.7 | 3088.1  | 3277.9  | 3300.6  | 3360.9 | 3300.6 |
| 32.5° | 4121.8 | 4081.3 | 3944.9 | 3696.9 | 3477.5 | 3368.8 | 3459.7  | 3670.2  | 3682.0  | 3720.6 | 3631.6 |
| 35°   | 4773.0 | 4731.5 | 4595.1 | 4341.2 | 4071.4 | 3824.3 | 3806.6  | 4043.7  | 4047.7  | 4088.2 | 3955.8 |
| 37.5° | 5428.2 | 5393.6 | 5248.3 | 4999.3 | 4733.5 | 4392.6 | 4227.5  | 4397.5  | 4402.4  | 4442.0 | 4304.6 |
| 40°   | 5895.6 | 5910.4 | 5810.6 | 5617.9 | 5389.7 | 5017.1 | 4699.9  | 4774.0  | 4744.4  | 4810.6 | 4728.5 |
| 42.5° | 6296.8 | 6326.5 | 6239.5 | 6142.7 | 6010.2 | 5682.2 | 5284.9  | 5272.1  | 5224.6  | 5260.2 | 5175.2 |
| 45°   | 6643.7 | 6668.4 | 6590.3 | 6567.6 | 6564.6 | 6334.4 | 5924.3  | 5847.2  | 5781.0  | 5774.1 | 5672.3 |
| 47.5° | 6771.2 | 6818.6 | 6852.2 | 6928.3 | 7076.5 | 6979.7 | 6585.4  | 6465.8  | 6391.7  | 6337.3 | 6176.3 |
| 50°   | 6819.6 | 6870.0 | 6984.6 | 7206.0 | 7556.8 | 7598.3 | 7243.5  | 7109.1  | 7018.2  | 6919.4 | 6682.2 |
| 52.5° | 6754.4 | 6844.3 | 6998.5 | 7371.0 | 7879.9 | 8094.4 | 7875.0  | 7757.4  | 7653.6  | 7492.6 | 7140.8 |
| 55°   | 6370.0 | 6459.9 | 6775.1 | 7369.0 | 8041.0 | 8442.2 | 8471.9  | 8419.5  | 8302.9  | 8048.9 | 7511.3 |
| 57.5° | 5559.6 | 5693.0 | 6192.1 | 7118.0 | 8038.0 | 8741.6 | 9056.9  | 9094.4  | 8964.0  | 8600.3 | 7802.8 |
| 60°   | 4437.0 | 4617.9 | 5226.6 | 6561.7 | 7790.0 | 8903.7 | 9569.8  | 9757.5  | 9619.2  | 9143.8 | 8039.0 |
| 62.5° | 3096.0 | 3305.5 | 3881.7 | 5690.1 | 7222.8 | 8787.1 | 9944.3  | 10291.1 | 10186.4 | 9630.0 | 8129.9 |
| 65°   | 1888.5 | 1955.7 | 2420.1 | 4477.5 | 6258.3 | 8298.9 | 10059.9 | 10579.7 | 10545.1 | 9927.5 | 7995.5 |
| 67.5° | 1258.0 | 1314.3 | 1447.7 | 3070.3 | 4858.0 | 7323.6 | 9783.2  | 10529.3 | 10539.2 | 9879.1 | 7503.4 |
| 70°   | 758.0  | 806.4  | 893.3  | 1785.7 | 3148.4 | 5796.8 | 8926.4  | 9887.0  | 9944.3  | 9231.8 | 6570.6 |
| 72.5° | 312.3  | 344.9  | 423.9  | 809.3  | 1630.5 | 3679.1 | 7108.1  | 8488.7  | 8622.1  | 7762.3 | 5042.8 |
| 75°   | 176.9  | 193.7  | 249.0  | 406.2  | 707.6  | 1714.5 | 4305.6  | 6026.1  | 6222.7  | 5350.1 | 3033.8 |
| 77.5° | 117.6  | 125.5  | 161.1  | 262.9  | 398.2  | 585.0  | 1840.0  | 3139.5  | 3515.0  | 2922.1 | 1313.3 |
| 80°   | 79.1   | 86.0   | 110.7  | 175.9  | 258.9  | 251.0  | 586.0   | 1163.1  | 1430.9  | 1004.0 | 320.2  |
| 82.5° | 53.4   | 54.4   | 79.1   | 115.6  | 164.0  | 121.5  | 172.9   | 361.7   | 454.6   | 290.5  | 121.5  |
| 85°   | 30.6   | 29.6   | 58.3   | 67.2   | 73.1   | 50.4   | 52.4    | 108.7   | 142.3   | 122.5  | 69.2   |
| 87.5° | 4.0    | 5.9    | 22.7   | 17.8   | 9.9    | 10.9   | 10.9    | 18.8    | 27.7    | 29.6   | 14.8   |
| 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°    | 1714.5 | 1714.5 | 1714.5 | 1714.5 | 1714.5 | 1714.5 | 1714.5 | 1714.5 | 1714.5 | 1714.5 | 1714.5 |
| 2.5°  | 1716.5 | 1715.5 | 1712.6 | 1709.6 | 1702.7 | 1698.7 | 1700.7 | 1698.7 | 1697.7 | 1698.7 | 1702.7 |
| 5°    | 1729.4 | 1726.4 | 1718.5 | 1708.6 | 1694.8 | 1678.0 | 1667.1 | 1651.3 | 1636.5 | 1627.6 | 1629.5 |
| 7.5°  | 1763.9 | 1761.0 | 1750.1 | 1722.4 | 1678.0 | 1607.8 | 1543.6 | 1487.2 | 1444.8 | 1420.0 | 1421.0 |
| 10°   | 1819.3 | 1814.3 | 1797.5 | 1736.3 | 1619.7 | 1466.5 | 1339.0 | 1233.3 | 1164.1 | 1131.5 | 1128.5 |
| 12.5° | 1884.5 | 1878.6 | 1848.9 | 1723.4 | 1509.0 | 1269.8 | 1093.9 | 976.3  | 912.1  | 883.5  | 880.5  |
| 15°   | 1961.6 | 1953.7 | 1895.4 | 1662.2 | 1347.9 | 1052.4 | 891.4  | 803.4  | 761.9  | 736.2  | 737.2  |
| 17.5° | 2057.4 | 2043.6 | 1930.0 | 1570.3 | 1173.0 | 886.4  | 766.8  | 700.6  | 664.1  | 639.4  | 637.4  |
| 20°   | 2182.0 | 2159.2 | 1957.6 | 1460.6 | 1011.9 | 781.7  | 682.8  | 627.5  | 599.8  | 578.1  | 574.1  |
| 22.5° | 2355.9 | 2323.3 | 1991.2 | 1342.0 | 898.3  | 709.5  | 620.6  | 580.1  | 557.3  | 532.6  | 528.7  |
| 25°   | 2571.3 | 2532.8 | 2032.7 | 1232.3 | 820.2  | 647.3  | 575.1  | 541.5  | 514.9  | 486.2  | 483.2  |
| 27.5° | 2872.7 | 2803.5 | 2082.1 | 1142.4 | 753.0  | 593.9  | 533.6  | 496.1  | 465.4  | 441.7  | 436.8  |
| 30°   | 3208.7 | 3095.1 | 2125.6 | 1088.0 | 691.7  | 544.5  | 479.3  | 441.7  | 413.1  | 396.3  | 393.3  |
| 32.5° | 3526.9 | 3372.7 | 2154.3 | 1064.3 | 636.4  | 488.2  | 420.0  | 379.5  | 357.7  | 352.8  | 355.8  |
| 35°   | 3827.3 | 3623.7 | 2151.3 | 1041.6 | 587.0  | 431.8  | 361.7  | 320.2  | 303.4  | 306.3  | 306.3  |
| 37.5° | 4173.2 | 3891.5 | 2130.6 | 1006.0 | 546.5  | 380.5  | 311.3  | 274.7  | 259.9  | 260.9  | 264.8  |
| 40°   | 4575.4 | 4200.8 | 2117.7 | 938.8  | 502.0  | 333.0  | 269.8  | 240.1  | 229.3  | 225.3  | 224.3  |
| 42.5° | 5004.3 | 4500.3 | 2119.7 | 862.7  | 446.7  | 290.5  | 241.1  | 216.4  | 206.5  | 203.6  | 202.6  |
| 45°   | 5435.1 | 4785.9 | 2122.7 | 783.6  | 388.4  | 257.9  | 220.4  | 199.6  | 193.7  | 189.7  | 189.7  |
| 47.5° | 5840.3 | 5029.0 | 2067.3 | 698.7  | 331.0  | 233.2  | 203.6  | 189.7  | 184.8  | 179.9  | 179.9  |
| 50°   | 6217.8 | 5191.0 | 1933.9 | 599.8  | 285.6  | 213.5  | 190.7  | 180.8  | 175.9  | 171.0  | 171.0  |
| 52.5° | 6511.3 | 5216.7 | 1713.5 | 498.1  | 254.0  | 198.6  | 182.8  | 173.9  | 168.0  | 163.1  | 162.1  |
| 55°   | 6641.7 | 5055.6 | 1400.3 | 403.2  | 229.3  | 185.8  | 174.9  | 166.0  | 159.1  | 154.2  | 153.2  |
| 57.5° | 6608.1 | 4716.7 | 1092.0 | 324.1  | 205.5  | 172.9  | 165.0  | 159.1  | 151.2  | 143.3  | 142.3  |
| 60°   | 6443.1 | 4263.1 | 823.2  | 269.8  | 183.8  | 159.1  | 154.2  | 149.2  | 138.3  | 126.5  | 124.5  |
| 62.5° | 6157.5 | 3692.9 | 587.0  | 223.3  | 160.1  | 143.3  | 141.3  | 137.4  | 121.5  | 99.8   | 97.8   |
| 65°   | 5720.7 | 3000.2 | 395.3  | 185.8  | 137.4  | 125.5  | 126.5  | 119.6  | 98.8   | 74.1   | 72.1   |
| 67.5° | 5082.3 | 2193.8 | 253.0  | 152.2  | 114.6  | 104.7  | 105.7  | 101.8  | 84.0   | 63.2   | 60.3   |
| 70°   | 4269.0 | 1452.7 | 165.0  | 115.6  | 91.9   | 81.0   | 87.0   | 88.0   | 71.2   | 51.4   | 49.4   |
| 72.5° | 3129.6 | 857.8  | 115.6  | 86.0   | 67.2   | 56.3   | 71.2   | 73.1   | 57.3   | 38.5   | 36.6   |
| 75°   | 1783.7 | 407.1  | 87.0   | 62.3   | 41.5   | 39.5   | 55.3   | 55.3   | 39.5   | 25.7   | 23.7   |
| 77.5° | 749.1  | 170.0  | 61.3   | 40.5   | 23.7   | 22.7   | 37.6   | 34.6   | 19.8   | 11.9   | 11.9   |
| 80°   | 216.4  | 76.1   | 32.6   | 19.8   | 9.9    | 8.9    | 14.8   | 10.9   | 4.9    | 2.0    | 2.0    |
| 82.5° | 85.0   | 33.6   | 12.8   | 7.9    | 4.0    | 4.0    | 2.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 50.4   | 13.8   | 5.9    | 3.0    | 1.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 12.8   | 3.0    | 2.0    | 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)