

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: STREETWORKS

Report Number: P509928

Luminaire Tested: **VERD-M-CA3-170-727-U-T4-HSS**

Issue Date: 4/6/2021

Test Information

Test Method: LM-79-08
Report Number: P509928
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2103-181-7)
Test Lab: INNOVATION CENTER
Issue Date: 4/6/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VERD-M-CA3-170-727-U-T4-HSS
Description: VERDEON-M ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 1060mA LEDS AND TYPE IV OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18607 lumens
Efficiency: N/A
Efficacy: 107.7 lumens/watt
Luminous Opening: Rectangular (W 1.35' x L: 1.58' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

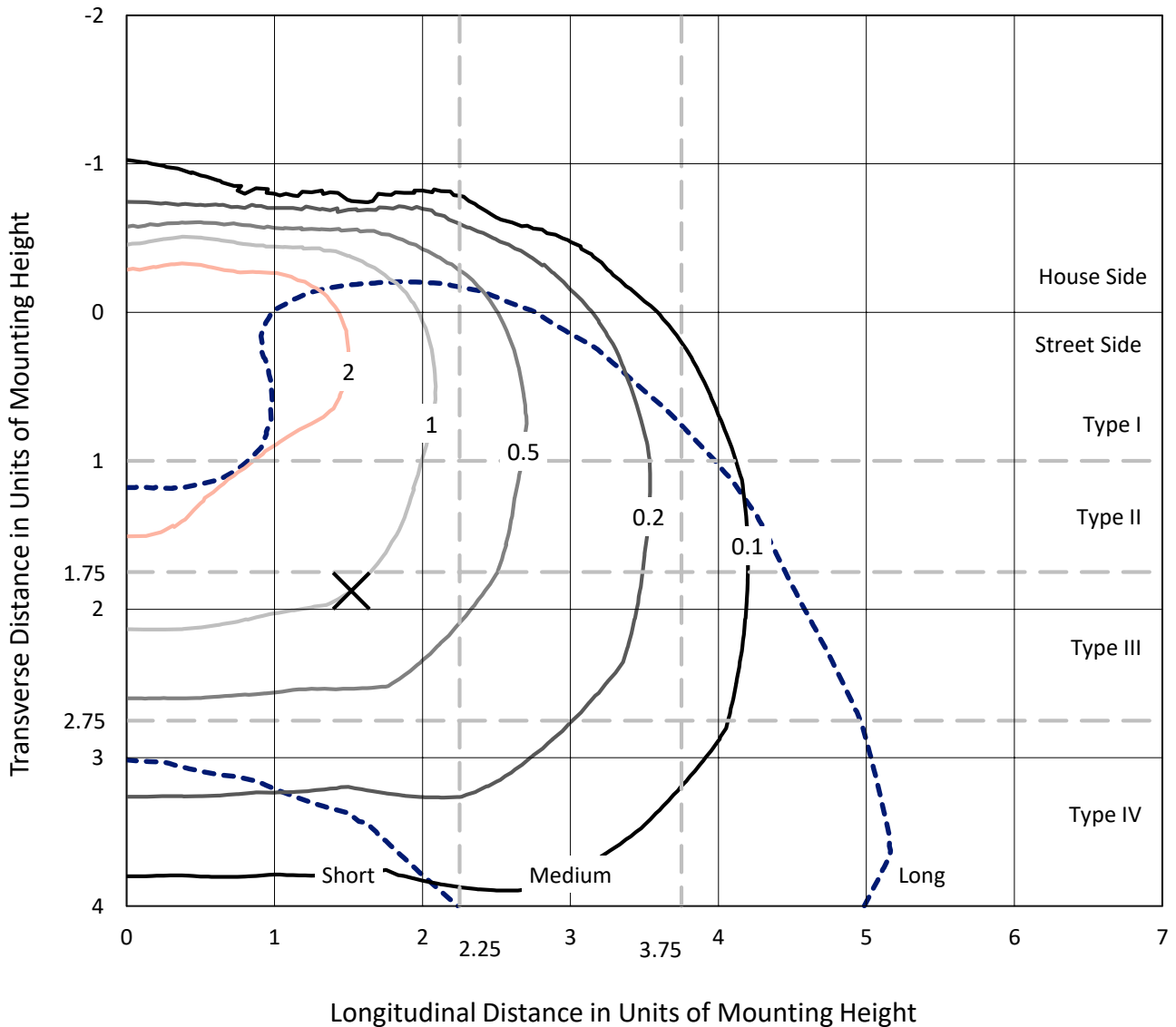
Input Watts (W): 172.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

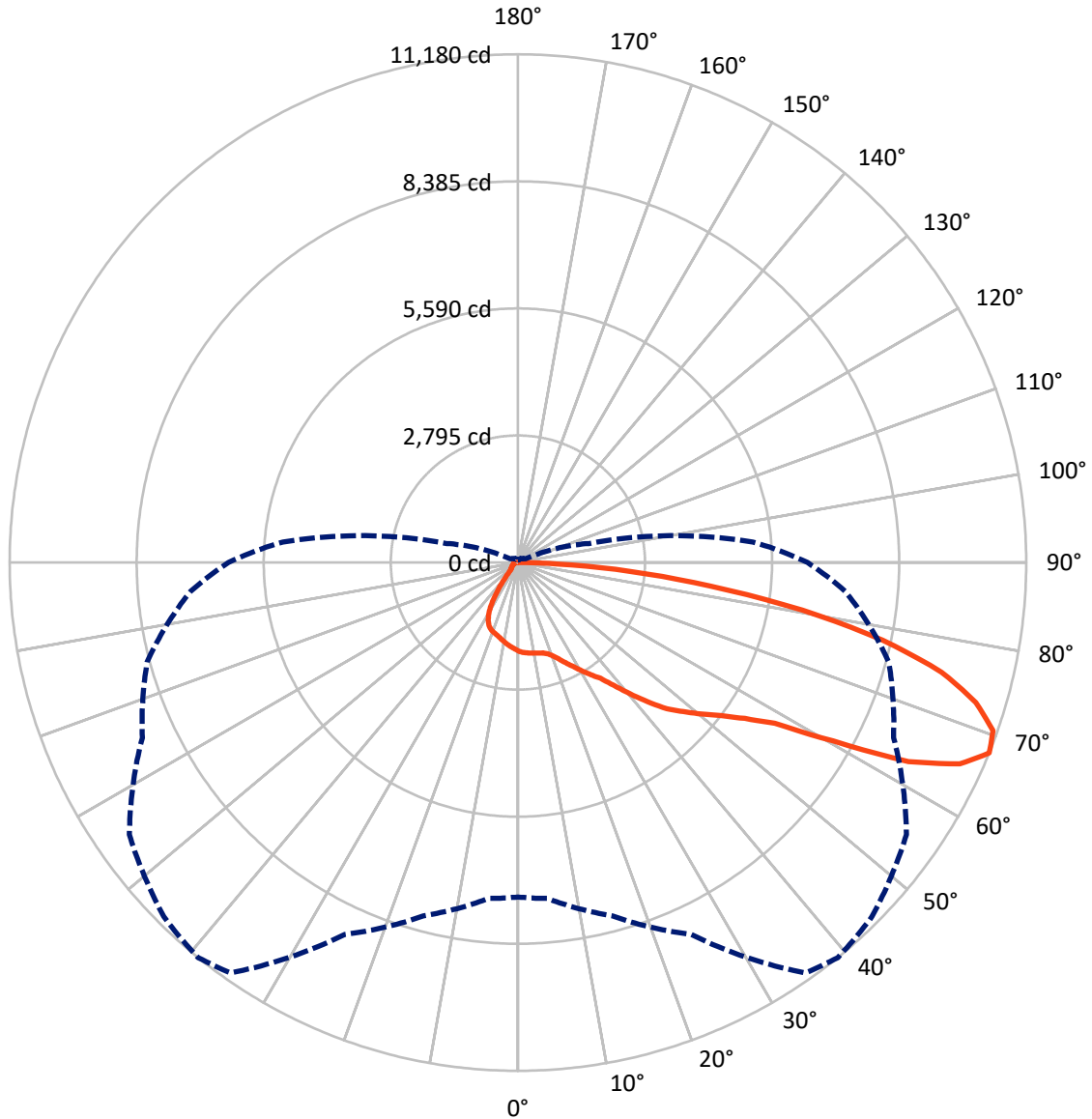
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.6 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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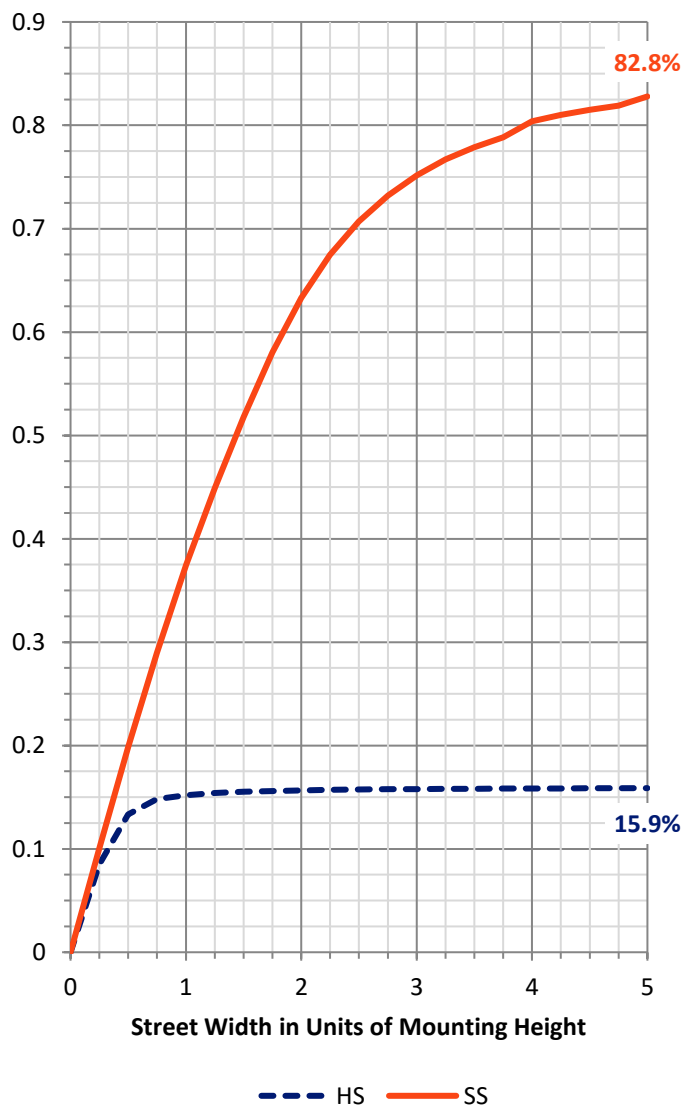
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2987.8 | 0.0 | 2987.8 |
| | % Fixture | 16.1 | 0.0 | 16.1 |
| Street Side | Lumens | 15619.2 | 0.0 | 15619.2 |
| | % Fixture | 83.9 | 0.0 | 83.9 |
| Total | Lumens | 18607.0 | 0.0 | 18607.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 183.9 | 1.0 |
| 10°-20° | 547.4 | 2.9 |
| 20°-30° | 969.9 | 5.2 |
| 30°-40° | 1553.5 | 8.3 |
| 40°-50° | 2492.1 | 13.4 |
| 50°-60° | 3642.7 | 19.6 |
| 60°-70° | 4854.1 | 26.1 |
| 70°-80° | 3642.6 | 19.6 |
| 80°-90° | 720.7 | 3.9 |
| 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° | 18607.0 | 100.0 |
| 0°-180° | 18607.0 | 100.0 |

Coefficient of Utilization



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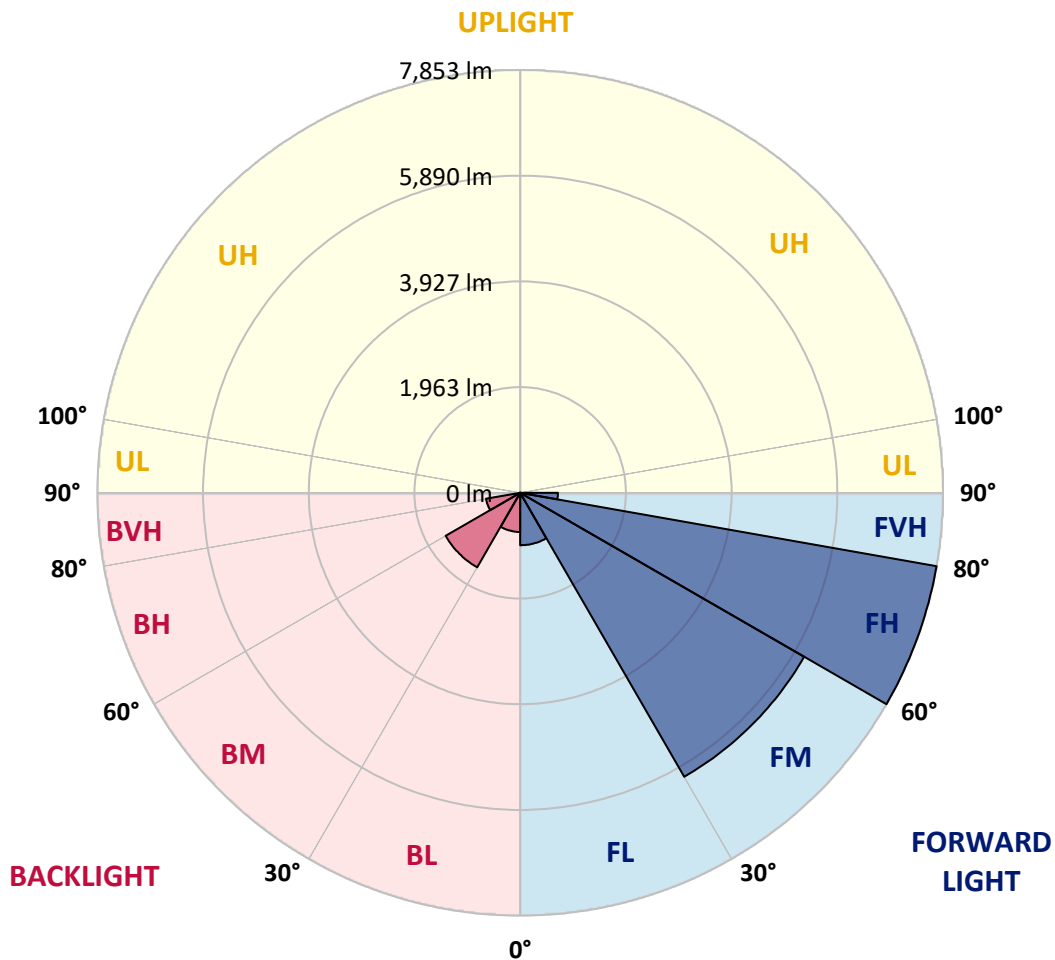
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 973.7 | 5.2 | | | |
| FM | (30°-60°) | 6090.2 | 32.7 | | | |
| FH | (60°-80°) | 7853.4 | 42.2 | | | G4/12000 |
| FVH | (80°-90°) | 701.8 | 3.8 | | | G4/750 |
| BL | (0°-30°) | 727.6 | 3.9 | B2/1000 | | |
| BM | (30°-60°) | 1598.0 | 8.6 | B2/2500 | | |
| BH | (60°-80°) | 643.3 | 3.5 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 18.9 | 0.1 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 39° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|---------|---------|---------|---------|--------|--------|--------|
| 0° | 1948.4 | 1948.4 | 1948.4 | 1948.4 | 1948.4 | 1948.4 | 1948.4 | 1948.4 | 1948.4 | 1948.4 | 1948.4 |
| 2.5° | 1950.2 | 1976.4 | 1976.4 | 1968.9 | 1973.6 | 1977.3 | 1949.3 | 1956.8 | 1954.0 | 1953.0 | 1958.6 |
| 5° | 1965.2 | 1994.2 | 1992.3 | 1982.9 | 1986.7 | 1994.2 | 1968.0 | 1979.2 | 1975.5 | 1966.1 | 1968.0 |
| 7.5° | 1965.2 | 1989.5 | 1995.1 | 1984.8 | 2002.6 | 2011.9 | 1983.9 | 1994.2 | 1998.8 | 1992.3 | 1985.7 |
| 10° | 1957.7 | 1979.2 | 1986.7 | 1984.8 | 2008.2 | 2023.1 | 1996.0 | 2025.0 | 2028.8 | 2028.8 | 2018.5 |
| 12.5° | 1954.9 | 1979.2 | 1989.5 | 1997.9 | 2025.0 | 2040.9 | 2025.0 | 2053.1 | 2071.8 | 2070.8 | 2064.3 |
| 15° | 1956.8 | 1983.9 | 1999.8 | 2013.8 | 2042.8 | 2062.4 | 2055.9 | 2098.9 | 2121.3 | 2127.9 | 2127.9 |
| 17.5° | 2003.5 | 2036.2 | 2043.7 | 2058.7 | 2078.3 | 2108.2 | 2099.8 | 2155.0 | 2190.5 | 2201.7 | 2217.6 |
| 20° | 2134.4 | 2159.6 | 2169.0 | 2161.5 | 2169.9 | 2188.6 | 2171.8 | 2225.1 | 2278.4 | 2308.3 | 2334.5 |
| 22.5° | 2301.7 | 2320.4 | 2312.0 | 2304.6 | 2299.9 | 2304.6 | 2284.0 | 2319.5 | 2379.3 | 2422.4 | 2467.2 |
| 25° | 2428.9 | 2470.0 | 2463.5 | 2442.9 | 2436.4 | 2442.0 | 2415.8 | 2459.7 | 2514.9 | 2559.8 | 2627.1 |
| 27.5° | 2583.2 | 2608.4 | 2590.6 | 2583.2 | 2587.8 | 2586.9 | 2571.0 | 2613.1 | 2663.6 | 2719.7 | 2818.8 |
| 30° | 2750.5 | 2772.0 | 2754.2 | 2746.8 | 2755.2 | 2760.8 | 2743.0 | 2816.9 | 2870.2 | 2930.9 | 3059.0 |
| 32.5° | 3025.4 | 3076.8 | 3028.2 | 2930.9 | 2932.8 | 2941.2 | 2943.1 | 3042.2 | 3139.4 | 3187.1 | 3356.3 |
| 35° | 3417.1 | 3458.2 | 3393.7 | 3275.9 | 3129.1 | 3123.5 | 3138.5 | 3286.2 | 3481.6 | 3698.5 | 3896.7 |
| 37.5° | 3782.6 | 3842.5 | 3784.5 | 3647.1 | 3468.5 | 3425.5 | 3347.9 | 3523.7 | 3831.3 | 4297.8 | 4544.6 |
| 40° | 4221.1 | 4266.0 | 4151.0 | 4031.3 | 3852.8 | 3792.0 | 3667.7 | 3779.8 | 4201.5 | 4923.2 | 5093.4 |
| 42.5° | 4573.6 | 4600.7 | 4505.3 | 4380.1 | 4224.9 | 4179.0 | 4051.0 | 4061.2 | 4597.0 | 5471.1 | 5580.5 |
| 45° | 4899.9 | 4928.8 | 4850.3 | 4743.7 | 4645.6 | 4590.4 | 4496.9 | 4547.4 | 5060.7 | 6048.9 | 5982.5 |
| 47.5° | 5147.6 | 5176.6 | 5114.0 | 5038.2 | 4936.3 | 4898.9 | 4900.8 | 5082.2 | 5628.2 | 6510.7 | 6343.4 |
| 50° | 5553.4 | 5542.1 | 5378.5 | 5296.3 | 5216.8 | 5236.4 | 5257.0 | 5515.0 | 6200.3 | 6907.1 | 6677.1 |
| 52.5° | 6261.1 | 6205.9 | 5868.4 | 5653.4 | 5555.2 | 5588.9 | 5622.5 | 5965.7 | 6850.1 | 7268.9 | 6933.3 |
| 55° | 7061.4 | 7005.3 | 6718.3 | 6258.3 | 5998.4 | 6052.6 | 6023.6 | 6411.6 | 7396.1 | 7616.7 | 7144.6 |
| 57.5° | 7656.0 | 7748.5 | 7639.1 | 7388.6 | 6737.9 | 6666.8 | 6602.3 | 6862.2 | 7837.3 | 7964.5 | 7347.5 |
| 60° | 8173.0 | 8302.0 | 8497.4 | 8429.1 | 8152.4 | 7967.3 | 7375.5 | 7388.6 | 8261.8 | 8205.7 | 7427.9 |
| 62.5° | 8677.8 | 8753.6 | 9088.3 | 9162.1 | 9505.2 | 9638.0 | 9036.8 | 8069.2 | 8672.2 | 8373.0 | 7482.1 |
| 65° | 8173.0 | 8270.2 | 8852.7 | 9390.2 | 10499.0 | 10676.7 | 10465.4 | 9301.4 | 8974.2 | 8472.2 | 7419.4 |
| 67.5° | 7356.8 | 7415.7 | 8044.9 | 9022.8 | 11018.8 | 11179.6 | 11015.1 | 10432.7 | 9115.4 | 8442.2 | 7225.0 |
| 70° | 6290.1 | 6382.6 | 7000.6 | 8311.3 | 11000.1 | 11086.2 | 10943.1 | 10569.2 | 9062.1 | 8270.2 | 6734.2 |
| 72.5° | 5201.8 | 5254.2 | 5777.7 | 7085.7 | 10462.6 | 10534.6 | 10458.8 | 10359.7 | 8882.6 | 7790.6 | 5790.8 |
| 75° | 3909.8 | 3921.0 | 4457.6 | 5595.4 | 9250.9 | 9626.8 | 9719.3 | 9998.9 | 8195.4 | 6678.1 | 4282.8 |
| 77.5° | 2621.5 | 2732.7 | 3247.9 | 4276.3 | 7594.3 | 8195.4 | 8633.9 | 8837.7 | 6847.3 | 4984.0 | 2277.4 |
| 80° | 1407.0 | 1435.1 | 1990.4 | 3034.7 | 5771.2 | 6346.2 | 6762.2 | 6765.9 | 4788.6 | 2469.1 | 508.6 |
| 82.5° | 651.6 | 624.5 | 1002.2 | 1920.3 | 3997.7 | 4253.8 | 4532.4 | 3796.7 | 1917.5 | 421.6 | 130.0 |
| 85° | 288.9 | 304.8 | 453.4 | 935.8 | 2218.5 | 2475.6 | 2440.1 | 1681.0 | 336.6 | 114.1 | 79.5 |
| 87.5° | 107.5 | 113.1 | 175.8 | 377.7 | 791.9 | 863.9 | 776.9 | 323.5 | 43.9 | 40.2 | 24.3 |
| 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° | 1948.4 | 1948.4 | 1948.4 | 1948.4 | 1948.4 | 1948.4 | 1948.4 | 1948.4 | 1948.4 | 1948.4 | 1948.4 |
| 2.5° | 1952.1 | 1952.1 | 1950.2 | 1925.0 | 1919.4 | 1907.2 | 1896.9 | 1904.4 | 1896.0 | 1901.6 | 1896.0 |
| 5° | 1960.5 | 1955.8 | 1944.6 | 1914.7 | 1900.7 | 1873.6 | 1853.0 | 1857.7 | 1846.4 | 1846.4 | 1845.5 |
| 7.5° | 1980.1 | 1970.8 | 1951.2 | 1903.5 | 1877.3 | 1838.0 | 1806.2 | 1796.0 | 1784.7 | 1771.7 | 1769.8 |
| 10° | 2011.9 | 1998.8 | 1972.7 | 1907.2 | 1856.7 | 1804.4 | 1749.2 | 1727.7 | 1699.7 | 1679.1 | 1675.4 |
| 12.5° | 2055.9 | 2036.2 | 2000.7 | 1921.2 | 1854.9 | 1771.7 | 1697.8 | 1655.7 | 1622.1 | 1592.2 | 1585.6 |
| 15° | 2119.4 | 2099.8 | 2057.7 | 1949.3 | 1855.8 | 1740.8 | 1643.6 | 1573.5 | 1515.5 | 1487.4 | 1488.4 |
| 17.5° | 2212.0 | 2198.0 | 2133.5 | 2008.2 | 1873.6 | 1724.9 | 1598.7 | 1487.4 | 1397.7 | 1350.9 | 1344.4 |
| 20° | 2330.7 | 2321.4 | 2242.8 | 2085.8 | 1914.7 | 1727.7 | 1550.1 | 1395.8 | 1264.0 | 1162.1 | 1139.7 |
| 22.5° | 2469.1 | 2455.1 | 2358.8 | 2153.1 | 1946.5 | 1720.2 | 1496.8 | 1294.8 | 1096.6 | 963.9 | 937.7 |
| 25° | 2623.4 | 2615.9 | 2465.4 | 2212.0 | 1950.2 | 1688.4 | 1420.1 | 1164.0 | 915.3 | 773.2 | 750.7 |
| 27.5° | 2820.6 | 2776.7 | 2561.7 | 2243.8 | 1941.8 | 1625.8 | 1310.7 | 984.5 | 727.4 | 629.2 | 604.9 |
| 30° | 3036.6 | 2947.8 | 2655.1 | 2268.1 | 1900.7 | 1525.8 | 1154.6 | 776.9 | 541.3 | 454.4 | 442.2 |
| 32.5° | 3275.9 | 3143.2 | 2743.0 | 2266.2 | 1827.7 | 1371.5 | 951.7 | 539.4 | 365.5 | 330.0 | 317.9 |
| 35° | 3708.8 | 3483.5 | 2848.7 | 2235.4 | 1705.3 | 1188.3 | 672.2 | 351.5 | 271.1 | 249.6 | 246.8 |
| 37.5° | 4309.9 | 3927.6 | 2990.8 | 2176.5 | 1547.3 | 975.1 | 438.5 | 240.3 | 231.9 | 232.8 | 231.9 |
| 40° | 4802.6 | 4423.1 | 3188.0 | 2087.7 | 1348.1 | 696.5 | 262.7 | 214.1 | 218.8 | 221.6 | 222.5 |
| 42.5° | 5285.0 | 4826.9 | 3432.1 | 1976.4 | 1139.7 | 452.5 | 213.2 | 204.7 | 201.0 | 205.7 | 207.5 |
| 45° | 5673.0 | 5179.4 | 3662.0 | 1846.4 | 895.6 | 267.4 | 206.6 | 189.8 | 183.2 | 185.1 | 187.9 |
| 47.5° | 5983.4 | 5459.9 | 3800.4 | 1695.0 | 654.4 | 201.9 | 201.0 | 176.7 | 167.3 | 165.5 | 164.5 |
| 50° | 6276.0 | 5700.1 | 3889.2 | 1511.7 | 417.0 | 194.5 | 186.0 | 161.7 | 150.5 | 148.7 | 148.7 |
| 52.5° | 6475.2 | 5857.2 | 3919.1 | 1294.8 | 248.7 | 189.8 | 175.8 | 149.6 | 134.6 | 137.4 | 139.3 |
| 55° | 6669.6 | 6016.1 | 3857.4 | 1012.5 | 190.7 | 177.6 | 164.5 | 134.6 | 122.5 | 133.7 | 137.4 |
| 57.5° | 6762.2 | 6039.5 | 3718.1 | 704.0 | 185.1 | 160.8 | 148.7 | 120.6 | 111.3 | 117.8 | 117.8 |
| 60° | 6837.0 | 6023.6 | 3523.7 | 446.0 | 180.4 | 149.6 | 135.6 | 109.4 | 98.2 | 94.4 | 91.6 |
| 62.5° | 6787.4 | 5960.0 | 3132.9 | 290.8 | 167.3 | 136.5 | 123.4 | 101.0 | 85.1 | 74.8 | 73.9 |
| 65° | 6681.8 | 5735.7 | 2500.9 | 229.1 | 155.2 | 130.0 | 112.2 | 90.7 | 74.8 | 62.6 | 61.7 |
| 67.5° | 6370.5 | 5189.7 | 1618.3 | 189.8 | 148.7 | 125.3 | 103.8 | 84.1 | 66.4 | 54.2 | 53.3 |
| 70° | 5624.4 | 4192.1 | 496.4 | 170.2 | 154.3 | 120.6 | 101.9 | 76.7 | 58.9 | 47.7 | 45.8 |
| 72.5° | 4447.4 | 2801.0 | 184.2 | 141.2 | 132.8 | 115.9 | 99.1 | 69.2 | 50.5 | 40.2 | 38.3 |
| 75° | 2864.6 | 915.3 | 156.1 | 109.4 | 113.1 | 110.3 | 91.6 | 63.6 | 43.0 | 32.7 | 31.8 |
| 77.5° | 811.5 | 191.7 | 142.1 | 80.4 | 100.0 | 106.6 | 80.4 | 53.3 | 38.3 | 28.0 | 27.1 |
| 80° | 170.2 | 136.5 | 130.0 | 57.0 | 74.8 | 69.2 | 54.2 | 41.1 | 36.5 | 24.3 | 24.3 |
| 82.5° | 111.3 | 108.4 | 111.3 | 39.3 | 49.6 | 50.5 | 43.0 | 35.5 | 31.8 | 22.4 | 22.4 |
| 85° | 78.5 | 99.1 | 53.3 | 28.0 | 23.4 | 21.5 | 25.2 | 30.9 | 28.0 | 18.7 | 18.7 |
| 87.5° | 27.1 | 15.9 | 11.2 | 11.2 | 10.3 | 10.3 | 12.2 | 14.0 | 15.0 | 15.0 | 14.0 |
| 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)