

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: P199057

Luminaire Tested: **XNV2-AF-02-LED-U-SL4-7060-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199057
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: XNV2-AF-02-LED-U-SL4-7060-1200
Description: XNV2 ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 5700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12620 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G3

Input Watts (W): 128
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: 28.75 FT

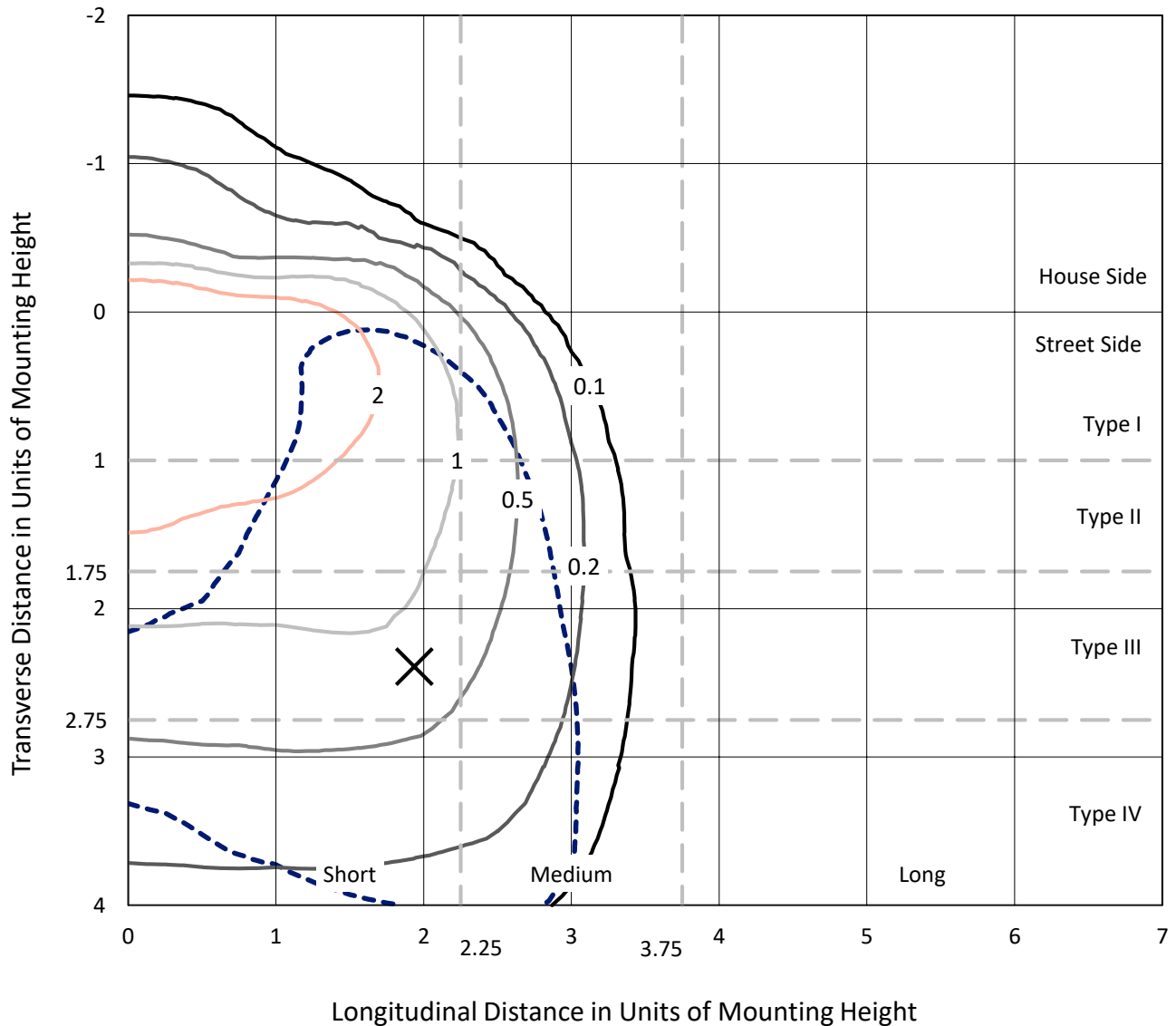


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

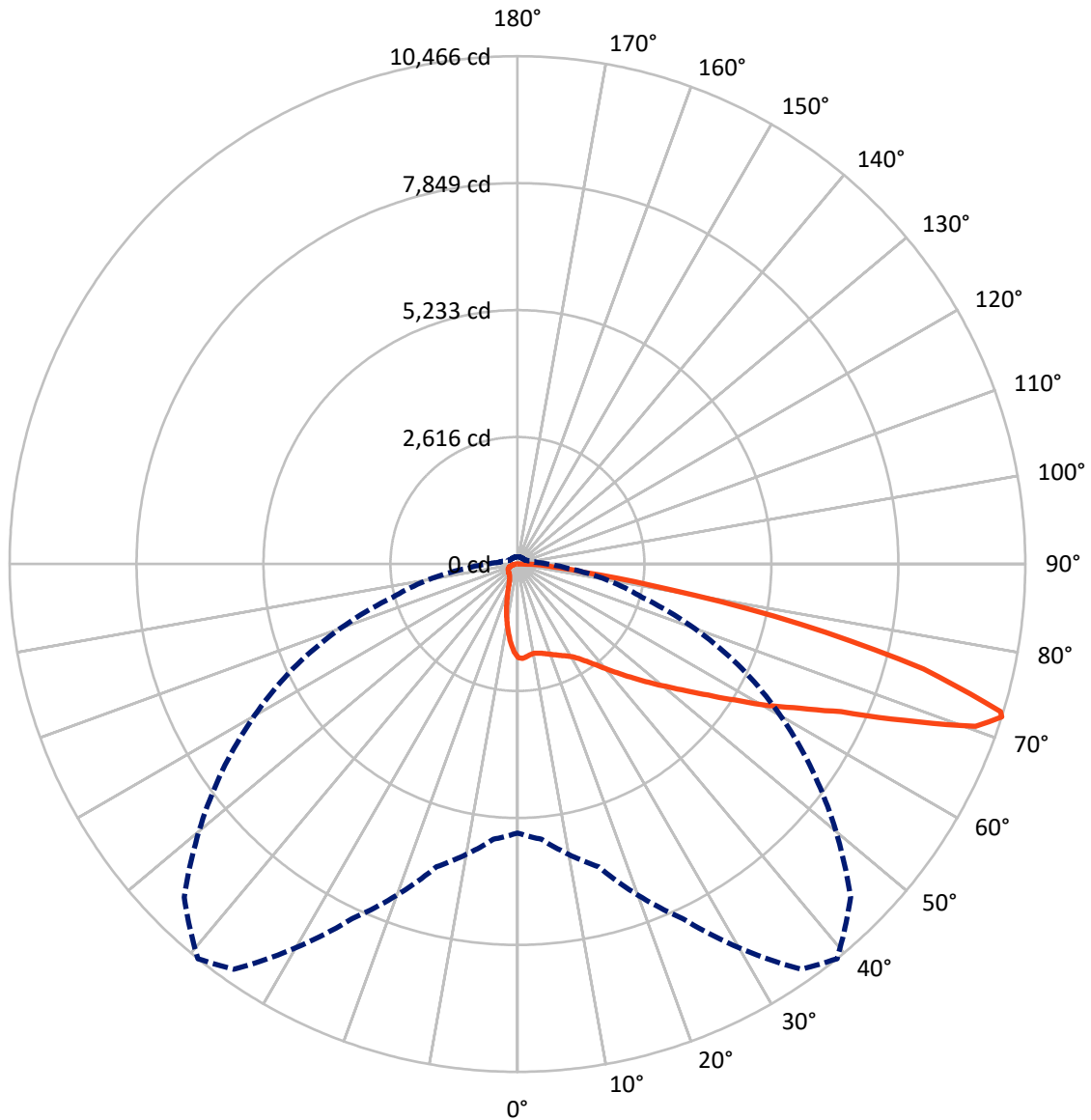


Based on 20 foot mounting height. Maximum calculated value = 4.8 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

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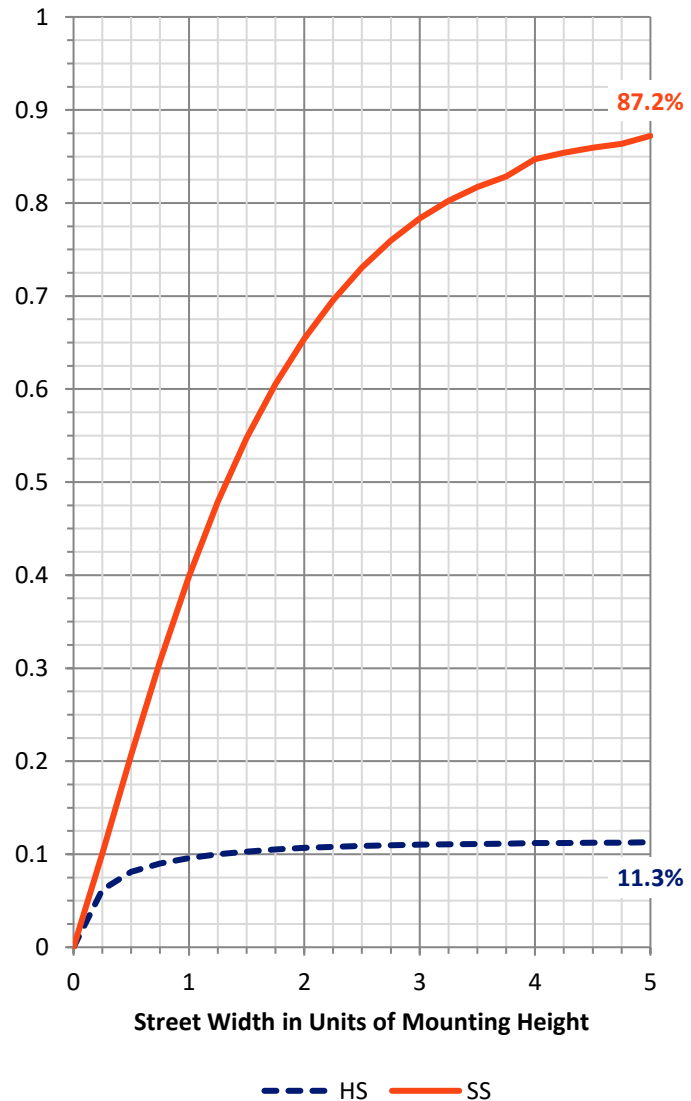
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1447.0 | 0.0 | 1447.0 |
| | % Fixture | 11.5 | 0.0 | 11.5 |
| Street Side | Lumens | 11172.9 | 0.0 | 11172.9 |
| | % Fixture | 88.5 | 0.0 | 88.5 |
| Total | Lumens | 12620.0 | 0.0 | 12620.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 165.6 | 1.3 |
| 10°-20° | 416.2 | 3.3 |
| 20°-30° | 648.6 | 5.1 |
| 30°-40° | 998.6 | 7.9 |
| 40°-50° | 1627.9 | 12.9 |
| 50°-60° | 2529.6 | 20.0 |
| 60°-70° | 3385.8 | 26.8 |
| 70°-80° | 2434.9 | 19.3 |
| 80°-90° | 412.8 | 3.3 |
| 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° | 12620.0 | 100.0 |
| 0°-180° | 12620.0 | 100.0 |

Coefficient of Utilization



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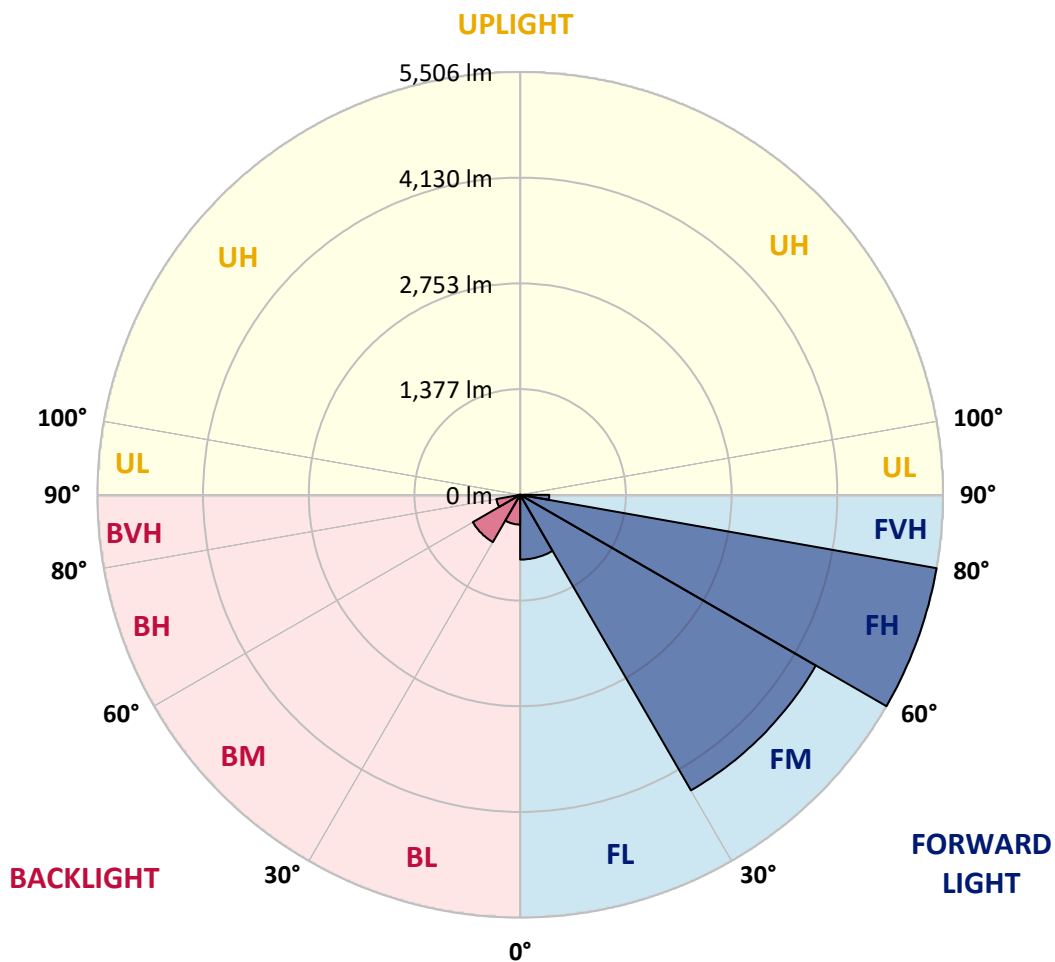
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 843.0 | 6.7 | | | |
| FM | (30°-60°) | 4445.0 | 35.2 | | | |
| FH | (60°-80°) | 5506.3 | 43.6 | | | G3/7500 |
| FVH | (80°-90°) | 378.6 | 3.0 | | | G3/500 |
| BL | (0°-30°) | 387.4 | 3.1 | B1/500 | | |
| BM | (30°-60°) | 711.2 | 5.6 | B1/1000 | | |
| BH | (60°-80°) | 314.4 | 2.5 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 34.1 | 0.3 | | | G1/100 |
| 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° | 35° | 39° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|---------|---------|--------|--------|--------|--------|--------|
| 0° | 1927.3 | 1927.3 | 1927.3 | 1927.3 | 1927.3 | 1927.3 | 1927.3 | 1927.3 | 1927.3 | 1927.3 | 1927.3 |
| 2.5° | 1968.8 | 1969.7 | 1967.1 | 1959.5 | 1952.7 | 1949.3 | 1943.4 | 1933.2 | 1919.7 | 1910.4 | 1902.7 |
| 5° | 1950.2 | 1952.7 | 1951.0 | 1938.3 | 1926.5 | 1919.7 | 1910.4 | 1896.0 | 1878.2 | 1870.5 | 1852.8 |
| 7.5° | 1935.8 | 1937.5 | 1932.4 | 1918.0 | 1895.1 | 1886.6 | 1869.7 | 1851.1 | 1835.0 | 1823.9 | 1802.8 |
| 10° | 1925.6 | 1927.3 | 1923.1 | 1908.7 | 1883.2 | 1873.1 | 1852.8 | 1832.4 | 1811.2 | 1797.7 | 1774.0 |
| 12.5° | 1911.2 | 1914.6 | 1914.6 | 1907.8 | 1890.9 | 1884.1 | 1863.8 | 1841.7 | 1822.3 | 1807.9 | 1778.2 |
| 15° | 1908.7 | 1912.9 | 1920.5 | 1919.7 | 1914.6 | 1909.5 | 1893.4 | 1871.4 | 1854.4 | 1837.5 | 1801.1 |
| 17.5° | 1929.8 | 1939.2 | 1954.4 | 1959.5 | 1956.1 | 1945.1 | 1926.5 | 1906.1 | 1887.5 | 1871.4 | 1826.5 |
| 20° | 1983.2 | 1988.3 | 2011.2 | 2021.3 | 2004.4 | 1988.3 | 1963.7 | 1937.5 | 1920.5 | 1907.8 | 1850.2 |
| 22.5° | 2063.7 | 2070.5 | 2089.1 | 2090.0 | 2054.4 | 2034.9 | 2003.5 | 1971.4 | 1955.3 | 1950.2 | 1882.4 |
| 25° | 2192.5 | 2190.8 | 2195.9 | 2174.7 | 2110.3 | 2087.4 | 2049.3 | 2012.0 | 2001.0 | 2011.2 | 1929.8 |
| 27.5° | 2346.6 | 2342.4 | 2326.3 | 2271.2 | 2173.8 | 2144.2 | 2098.4 | 2065.4 | 2065.4 | 2089.1 | 1994.2 |
| 30° | 2524.6 | 2520.3 | 2467.8 | 2375.5 | 2249.2 | 2215.3 | 2167.0 | 2132.3 | 2150.1 | 2195.9 | 2081.5 |
| 32.5° | 2712.6 | 2697.4 | 2623.7 | 2500.0 | 2356.8 | 2319.5 | 2272.9 | 2237.4 | 2271.2 | 2349.2 | 2206.9 |
| 35° | 2889.7 | 2881.2 | 2790.6 | 2644.0 | 2495.7 | 2464.4 | 2432.2 | 2388.2 | 2442.4 | 2563.5 | 2383.9 |
| 37.5° | 3072.7 | 3065.9 | 2954.9 | 2799.0 | 2665.2 | 2644.0 | 2616.9 | 2586.4 | 2673.7 | 2832.9 | 2623.7 |
| 40° | 3276.8 | 3263.3 | 3123.5 | 2967.6 | 2862.6 | 2852.4 | 2838.0 | 2829.5 | 2970.2 | 3207.4 | 2927.0 |
| 42.5° | 3508.1 | 3481.8 | 3301.4 | 3153.1 | 3077.8 | 3086.2 | 3078.6 | 3112.5 | 3327.7 | 3639.4 | 3287.8 |
| 45° | 3772.4 | 3719.9 | 3478.5 | 3350.5 | 3315.8 | 3349.7 | 3365.8 | 3452.2 | 3750.4 | 4138.4 | 3691.1 |
| 47.5° | 4019.8 | 3952.0 | 3672.5 | 3564.9 | 3584.4 | 3642.8 | 3688.6 | 3841.0 | 4213.8 | 4631.5 | 4102.8 |
| 50° | 4247.7 | 4171.4 | 3880.0 | 3786.8 | 3881.7 | 3964.7 | 4059.6 | 4274.8 | 4706.8 | 5138.9 | 4480.7 |
| 52.5° | 4416.3 | 4361.2 | 4087.6 | 4029.1 | 4223.1 | 4333.2 | 4484.9 | 4756.8 | 5205.0 | 5622.6 | 4817.8 |
| 55° | 4546.7 | 4517.1 | 4290.0 | 4307.0 | 4609.4 | 4767.0 | 4950.8 | 5263.4 | 5731.9 | 6056.4 | 5088.9 |
| 57.5° | 4697.5 | 4675.5 | 4521.3 | 4642.5 | 5088.9 | 5287.2 | 5504.0 | 5851.4 | 6233.4 | 6438.5 | 5301.6 |
| 60° | 4856.8 | 4856.8 | 4778.9 | 5046.6 | 5688.7 | 5915.8 | 6131.8 | 6402.0 | 6733.3 | 6782.4 | 5388.0 |
| 62.5° | 4977.1 | 5008.4 | 5036.4 | 5476.9 | 6258.0 | 6540.1 | 6777.3 | 7036.6 | 7250.9 | 6951.8 | 5184.7 |
| 65° | 5151.6 | 5218.5 | 5376.1 | 5974.2 | 6962.8 | 7332.2 | 7652.4 | 7870.2 | 7670.2 | 6817.1 | 4521.3 |
| 67.5° | 5451.5 | 5550.6 | 5886.1 | 6714.6 | 8042.1 | 8595.3 | 8906.2 | 8530.1 | 7588.1 | 5969.1 | 3463.2 |
| 70° | 5721.8 | 5861.5 | 6435.1 | 7654.1 | 9445.0 | 10019.4 | 9876.3 | 8376.8 | 6608.7 | 4375.6 | 2130.6 |
| 72° | 5542.2 | 5694.6 | 6460.5 | 8063.3 | 10194.8 | 10465.9 | 9711.1 | 7423.7 | 5106.7 | 2670.3 | 1050.5 |
| 72.5° | 5424.4 | 5582.8 | 6378.3 | 8053.2 | 10215.1 | 10409.1 | 9481.5 | 7045.0 | 4635.7 | 2336.5 | 849.7 |
| 75° | 4531.5 | 4667.0 | 5484.5 | 7137.4 | 9002.0 | 8646.2 | 7399.1 | 4559.4 | 2130.6 | 754.8 | 437.1 |
| 77.5° | 2959.1 | 3062.5 | 3781.7 | 4944.9 | 6305.4 | 5963.2 | 4503.5 | 2134.9 | 798.9 | 458.3 | 328.7 |
| 80° | 1486.8 | 1560.5 | 2023.9 | 2599.9 | 3403.1 | 3131.1 | 2078.9 | 1032.7 | 534.6 | 331.2 | 258.4 |
| 82.5° | 1034.4 | 1102.2 | 1393.6 | 1327.5 | 1422.4 | 1376.6 | 977.6 | 861.6 | 399.9 | 209.2 | 135.5 |
| 85° | 867.5 | 937.8 | 1153.0 | 946.3 | 774.3 | 705.7 | 700.6 | 814.1 | 264.3 | 103.4 | 114.4 |
| 87.5° | 756.5 | 863.3 | 951.4 | 691.3 | 531.2 | 468.5 | 515.9 | 746.4 | 83.9 | 56.8 | 34.7 |
| 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° | 1927.3 | 1927.3 | 1927.3 | 1927.3 | 1927.3 | 1927.3 | 1927.3 | 1927.3 | 1927.3 | 1927.3 | 1927.3 |
| 2.5° | 1890.0 | 1887.5 | 1874.8 | 1855.3 | 1840.9 | 1831.6 | 1813.8 | 1812.9 | 1814.6 | 1799.4 | 1805.3 |
| 5° | 1836.7 | 1826.5 | 1793.4 | 1748.5 | 1712.1 | 1677.4 | 1639.3 | 1626.6 | 1615.5 | 1592.7 | 1595.2 |
| 7.5° | 1780.7 | 1763.0 | 1705.3 | 1631.6 | 1561.3 | 1496.9 | 1433.4 | 1402.1 | 1378.3 | 1348.7 | 1348.7 |
| 10° | 1747.7 | 1719.7 | 1631.6 | 1524.1 | 1412.2 | 1318.2 | 1223.3 | 1166.5 | 1125.0 | 1086.9 | 1084.4 |
| 12.5° | 1746.0 | 1703.6 | 1580.8 | 1432.6 | 1279.2 | 1147.1 | 1017.4 | 930.2 | 868.3 | 823.4 | 819.2 |
| 15° | 1759.6 | 1700.3 | 1538.5 | 1347.0 | 1153.8 | 981.9 | 821.8 | 710.8 | 632.0 | 582.0 | 576.9 |
| 17.5° | 1771.4 | 1696.0 | 1492.7 | 1257.2 | 1031.8 | 822.6 | 644.7 | 529.5 | 454.9 | 414.3 | 410.0 |
| 20° | 1782.4 | 1686.7 | 1434.3 | 1162.3 | 897.1 | 673.5 | 504.1 | 410.9 | 361.7 | 338.9 | 336.3 |
| 22.5° | 1798.5 | 1678.2 | 1373.3 | 1055.6 | 765.0 | 548.1 | 416.0 | 349.0 | 322.8 | 311.8 | 310.1 |
| 25° | 1824.8 | 1679.1 | 1314.0 | 946.3 | 643.8 | 456.6 | 360.0 | 318.5 | 304.1 | 296.5 | 296.5 |
| 27.5° | 1862.9 | 1689.2 | 1255.5 | 835.3 | 541.3 | 393.9 | 327.0 | 302.4 | 293.1 | 287.2 | 285.5 |
| 30° | 1918.8 | 1707.9 | 1193.7 | 730.3 | 460.0 | 350.7 | 307.5 | 292.3 | 284.6 | 279.6 | 278.7 |
| 32.5° | 2000.2 | 1740.9 | 1128.4 | 634.5 | 398.2 | 320.2 | 293.1 | 283.8 | 277.9 | 273.6 | 272.8 |
| 35° | 2121.3 | 1799.4 | 1064.9 | 553.2 | 354.1 | 298.2 | 281.3 | 273.6 | 270.2 | 268.6 | 267.7 |
| 37.5° | 2299.2 | 1893.4 | 1004.7 | 489.7 | 325.3 | 283.8 | 269.4 | 265.2 | 263.5 | 263.5 | 263.5 |
| 40° | 2522.9 | 2017.1 | 950.5 | 444.8 | 309.2 | 272.8 | 260.9 | 257.5 | 257.5 | 258.4 | 258.4 |
| 42.5° | 2794.8 | 2172.1 | 903.9 | 414.3 | 299.9 | 265.2 | 255.0 | 253.3 | 252.5 | 252.5 | 253.3 |
| 45° | 3110.8 | 2355.1 | 875.1 | 390.5 | 293.1 | 260.9 | 250.8 | 249.9 | 246.5 | 244.8 | 244.8 |
| 47.5° | 3428.5 | 2550.8 | 873.4 | 377.0 | 284.6 | 255.8 | 246.5 | 246.5 | 239.7 | 236.4 | 237.2 |
| 50° | 3725.0 | 2726.2 | 892.1 | 373.6 | 279.6 | 248.2 | 242.3 | 243.1 | 233.8 | 229.6 | 228.7 |
| 52.5° | 3963.9 | 2860.0 | 914.9 | 377.8 | 279.6 | 241.4 | 234.7 | 238.9 | 228.7 | 223.7 | 222.8 |
| 55° | 4148.6 | 2953.2 | 923.4 | 387.2 | 283.0 | 235.5 | 227.9 | 234.7 | 227.0 | 220.3 | 220.3 |
| 57.5° | 4280.7 | 2982.9 | 887.0 | 391.4 | 288.0 | 234.7 | 221.1 | 233.8 | 229.6 | 221.1 | 221.1 |
| 60° | 4232.4 | 2810.9 | 751.4 | 375.3 | 287.2 | 233.0 | 216.0 | 235.5 | 238.1 | 228.7 | 228.7 |
| 62.5° | 3855.4 | 2351.7 | 603.2 | 338.9 | 272.8 | 227.0 | 210.1 | 233.8 | 244.0 | 240.6 | 238.9 |
| 65° | 3138.7 | 1724.8 | 467.6 | 295.7 | 248.2 | 214.3 | 197.4 | 218.6 | 230.4 | 233.8 | 234.7 |
| 67.5° | 2211.9 | 1092.0 | 363.4 | 251.6 | 217.7 | 195.7 | 183.0 | 193.2 | 197.4 | 199.1 | 202.5 |
| 70° | 1209.8 | 591.3 | 288.9 | 211.8 | 186.4 | 177.1 | 167.7 | 168.6 | 166.9 | 165.2 | 166.9 |
| 72° | 607.4 | 386.3 | 244.0 | 183.8 | 165.2 | 159.3 | 155.0 | 152.5 | 152.5 | 149.9 | 150.8 |
| 72.5° | 522.7 | 359.2 | 235.5 | 177.1 | 160.1 | 155.0 | 151.6 | 149.1 | 148.3 | 146.6 | 147.4 |
| 75° | 348.2 | 284.6 | 196.5 | 148.3 | 136.4 | 133.0 | 134.7 | 132.2 | 133.0 | 131.3 | 132.2 |
| 77.5° | 281.3 | 244.8 | 166.9 | 125.4 | 116.9 | 111.8 | 115.2 | 116.1 | 117.8 | 116.1 | 115.2 |
| 80° | 235.5 | 208.4 | 139.8 | 103.4 | 97.4 | 93.2 | 94.9 | 100.8 | 101.7 | 96.6 | 95.7 |
| 82.5° | 152.5 | 167.7 | 110.1 | 80.5 | 74.6 | 72.9 | 77.1 | 83.0 | 84.7 | 77.9 | 76.2 |
| 85° | 127.9 | 134.7 | 79.6 | 55.1 | 49.1 | 47.4 | 55.9 | 61.8 | 66.1 | 59.3 | 57.6 |
| 87.5° | 35.6 | 66.1 | 39.0 | 26.3 | 22.0 | 22.0 | 27.1 | 32.2 | 38.1 | 39.0 | 39.0 |
| 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)