

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: P270831

Luminaire Tested: **NVN-AF-02-LED-U-SL2-7027-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270831
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-02-LED-U-SL2-7027-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9470.3 lumens
Efficiency: N/A
Efficacy: 73.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 129
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

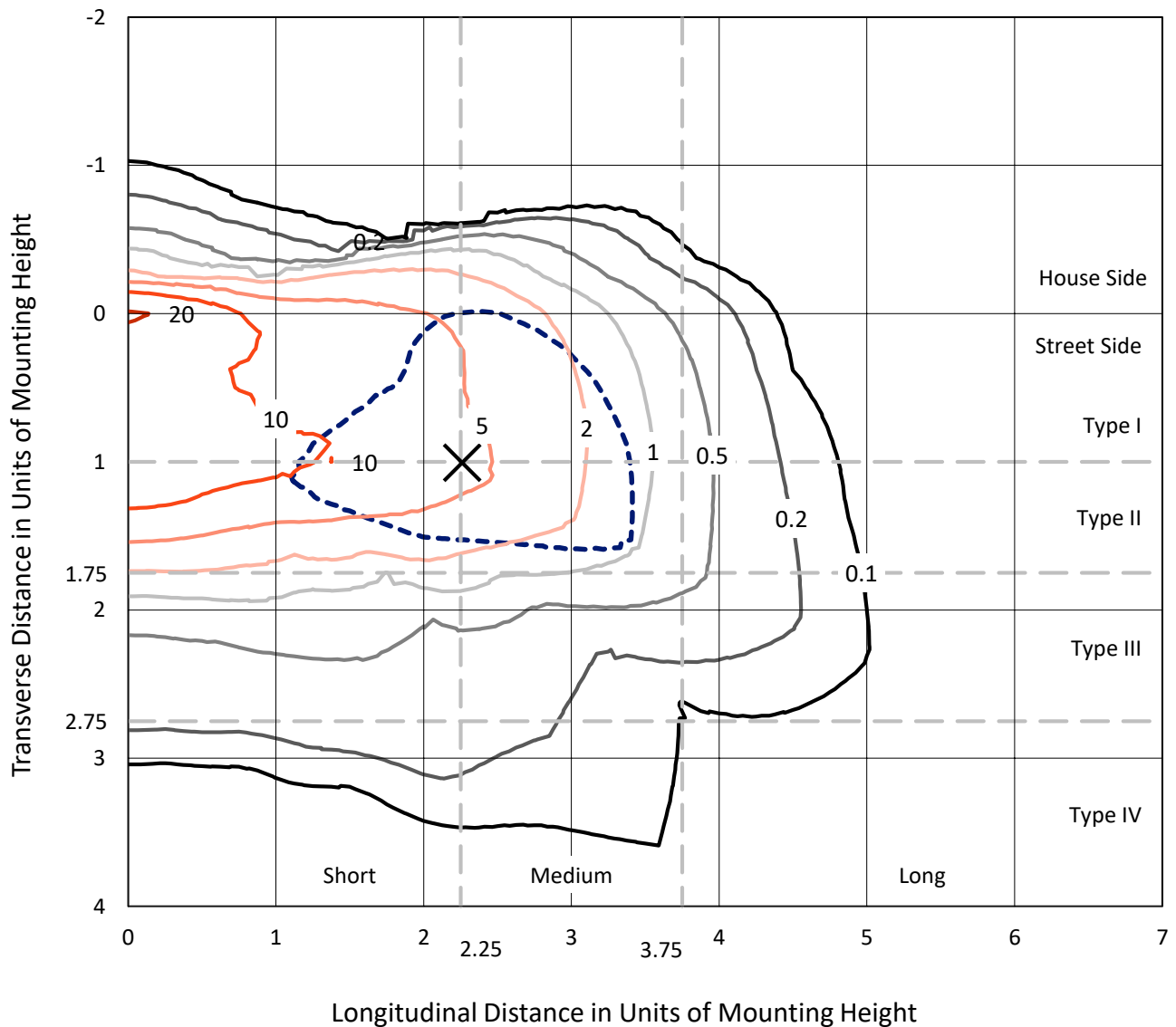


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

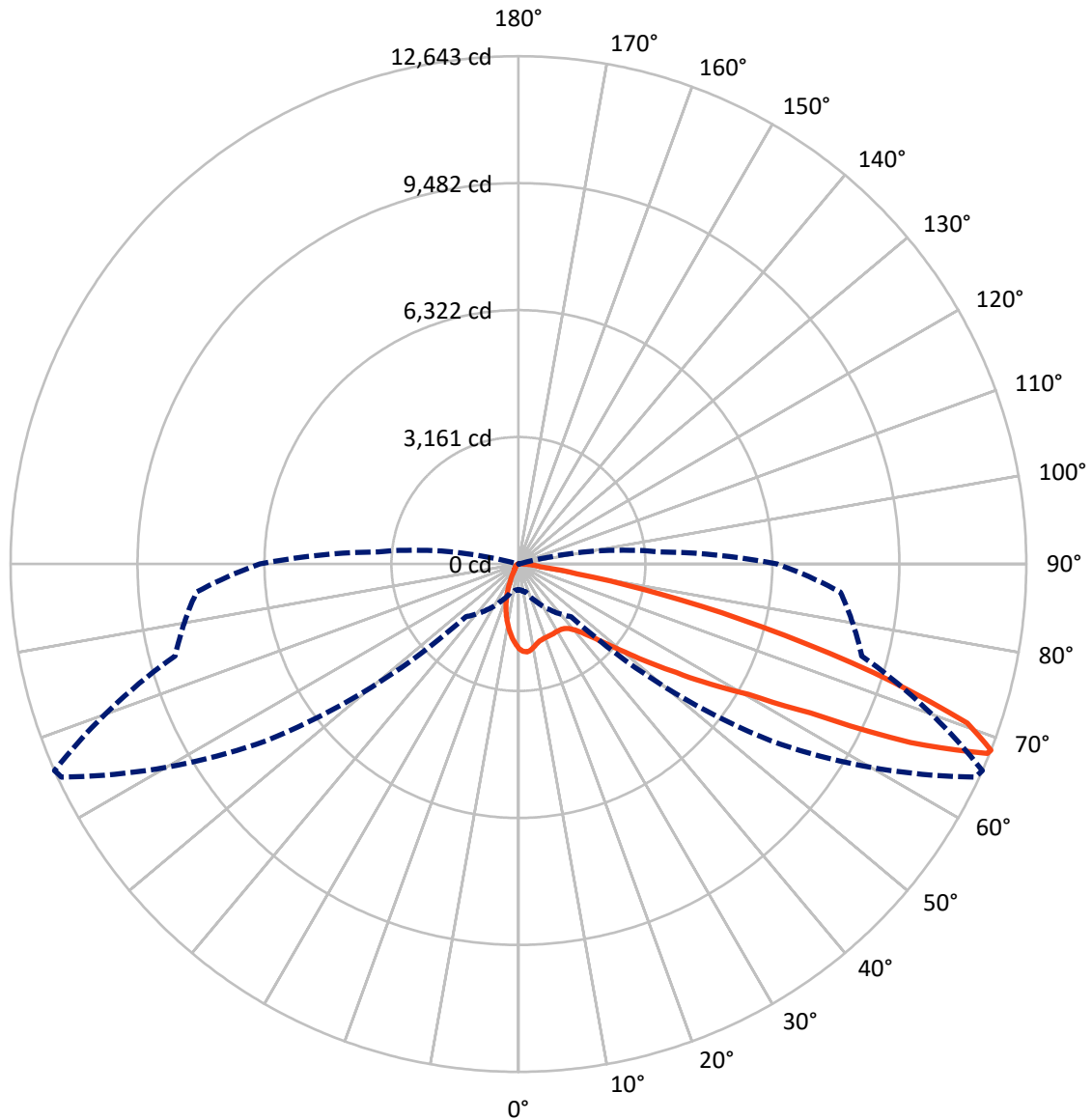


Based on 10 foot mounting height. Maximum calculated value = 21.1 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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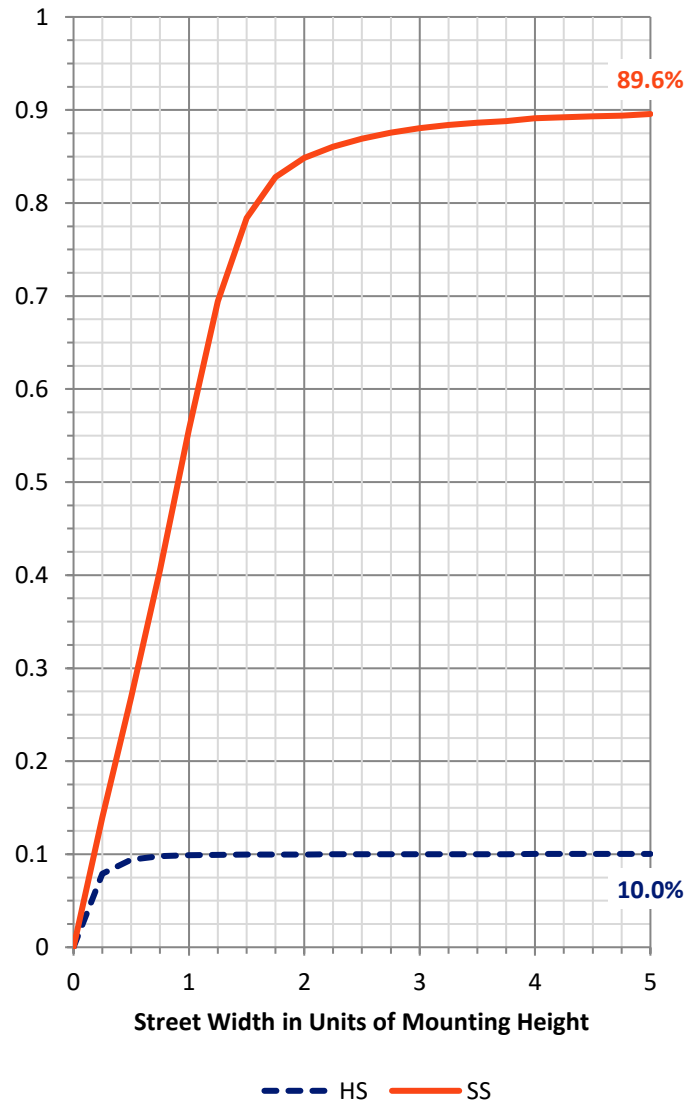
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 959.3 | 0.0 | 959.3 |
| | % Fixture | 10.1 | 0.0 | 10.1 |
| Street Side | Lumens | 8511.1 | 0.0 | 8511.1 |
| | % Fixture | 89.9 | 0.0 | 89.9 |
| Total | Lumens | 9470.3 | 0.0 | 9470.3 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 173.0 | 1.8 |
| 10°-20° | 372.2 | 3.9 |
| 20°-30° | 539.3 | 5.7 |
| 30°-40° | 825.6 | 8.7 |
| 40°-50° | 1412.0 | 14.9 |
| 50°-60° | 2208.9 | 23.3 |
| 60°-70° | 2543.4 | 26.9 |
| 70°-80° | 1272.8 | 13.4 |
| 80°-90° | 123.3 | 1.3 |
| 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° | 9470.3 | 100.0 |
| 0°-180° | 9470.3 | 100.0 |

Coefficient of Utilization



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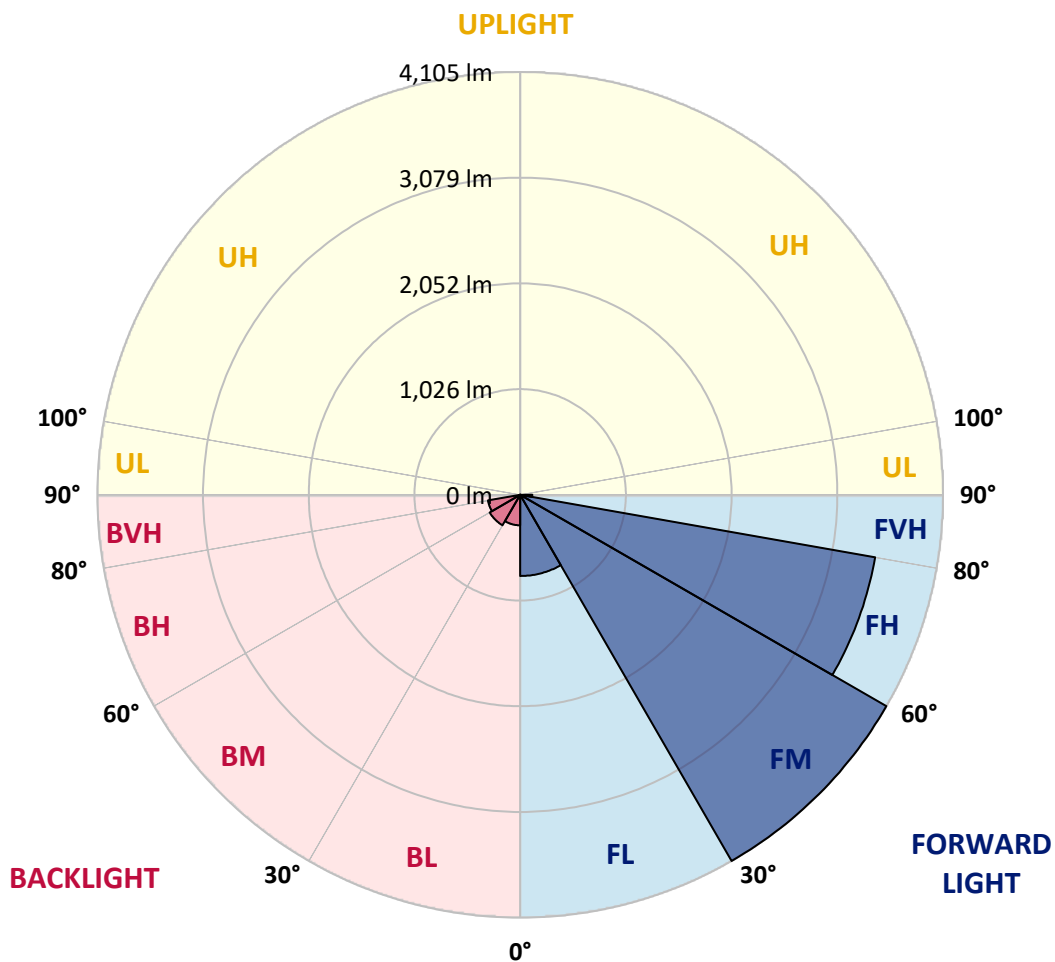
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 788.3 | 8.3 | | | |
| FM (30°-60°) | 4104.9 | 43.3 | | | |
| FH (60°-80°) | 3499.3 | 36.9 | | | G2/5000 |
| FVH (80°-90°) | 118.6 | 1.3 | | | G2/225 |
| BL (0°-30°) | 296.1 | 3.1 | B1/500 | | |
| BM (30°-60°) | 341.6 | 3.6 | B1/1000 | | |
| BH (60°-80°) | 316.9 | 3.3 | B1/500 | | G1/500 |
| BVH (80°-90°) | 4.7 | 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-G2

Type II Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 66° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|--------|--------|
| 0° | 2109.8 | 2109.8 | 2109.8 | 2109.8 | 2109.8 | 2109.8 | 2109.8 | 2109.8 | 2109.8 | 2109.8 | 2109.8 |
| 2.5° | 2219.3 | 2220.7 | 2219.9 | 2222.1 | 2220.7 | 2209.6 | 2197.7 | 2172.3 | 2174.5 | 2141.9 | 2105.4 |
| 5° | 2063.0 | 2075.8 | 2088.3 | 2101.0 | 2131.5 | 2158.2 | 2190.2 | 2197.7 | 2197.7 | 2169.3 | 2115.9 |
| 7.5° | 1904.0 | 1904.6 | 1918.8 | 1935.9 | 1976.8 | 2025.9 | 2100.2 | 2167.2 | 2168.6 | 2176.1 | 2117.3 |
| 10° | 1784.3 | 1787.9 | 1797.7 | 1816.3 | 1857.2 | 1905.5 | 1988.7 | 2093.5 | 2101.8 | 2156.7 | 2102.5 |
| 12.5° | 1691.2 | 1695.8 | 1706.2 | 1727.8 | 1764.9 | 1814.8 | 1902.5 | 2022.2 | 2033.4 | 2138.1 | 2098.0 |
| 15° | 1620.0 | 1625.9 | 1634.0 | 1655.7 | 1695.8 | 1748.6 | 1844.5 | 1974.6 | 1987.9 | 2130.7 | 2112.2 |
| 17.5° | 1590.2 | 1590.2 | 1589.6 | 1604.4 | 1644.4 | 1698.1 | 1798.3 | 1949.3 | 1966.4 | 2136.7 | 2135.9 |
| 20° | 1602.8 | 1600.6 | 1585.0 | 1581.2 | 1605.8 | 1659.3 | 1761.9 | 1933.0 | 1952.2 | 2147.8 | 2164.9 |
| 22.5° | 1669.8 | 1665.3 | 1630.3 | 1601.4 | 1594.0 | 1629.6 | 1737.4 | 1921.8 | 1944.8 | 2170.8 | 2203.5 |
| 25° | 1811.8 | 1798.3 | 1750.1 | 1684.6 | 1625.9 | 1622.2 | 1720.3 | 1915.8 | 1940.3 | 2197.7 | 2245.9 |
| 27.5° | 1996.2 | 1992.4 | 1915.0 | 1827.4 | 1714.3 | 1646.8 | 1715.1 | 1911.5 | 1935.9 | 2216.9 | 2280.2 |
| 30° | 2225.1 | 2226.5 | 2137.3 | 2023.0 | 1851.9 | 1715.9 | 1731.6 | 1909.2 | 1934.4 | 2218.5 | 2295.0 |
| 32.5° | 2461.5 | 2463.1 | 2388.8 | 2266.1 | 2040.1 | 1834.8 | 1777.6 | 1919.6 | 1942.7 | 2212.4 | 2294.4 |
| 35° | 2689.0 | 2691.2 | 2646.6 | 2547.9 | 2291.2 | 1999.8 | 1864.5 | 1955.3 | 1971.6 | 2216.2 | 2292.7 |
| 37.5° | 2976.8 | 2985.6 | 2930.7 | 2838.5 | 2606.5 | 2242.2 | 2006.5 | 2027.4 | 2040.8 | 2246.8 | 2304.0 |
| 40° | 3467.5 | 3455.5 | 3297.9 | 3141.8 | 2948.4 | 2537.4 | 2211.7 | 2151.5 | 2156.0 | 2325.5 | 2346.4 |
| 42.5° | 4039.0 | 4024.2 | 3754.3 | 3485.2 | 3300.2 | 2893.5 | 2474.2 | 2341.8 | 2341.2 | 2457.9 | 2438.4 |
| 45° | 4531.3 | 4522.3 | 4238.4 | 3879.3 | 3689.7 | 3286.8 | 2797.6 | 2616.1 | 2607.3 | 2686.8 | 2606.5 |
| 47.5° | 4880.8 | 4873.2 | 4658.4 | 4298.6 | 4140.3 | 3719.4 | 3201.3 | 2990.2 | 2971.6 | 2986.4 | 2879.3 |
| 50° | 4914.8 | 4906.7 | 4831.7 | 4600.4 | 4666.6 | 4354.4 | 3700.1 | 3480.0 | 3456.3 | 3433.2 | 3292.0 |
| 52.5° | 4595.2 | 4594.6 | 4633.8 | 4619.1 | 5035.4 | 5171.5 | 4312.0 | 4086.0 | 4057.7 | 3999.0 | 3858.5 |
| 55° | 3941.8 | 3938.0 | 4087.5 | 4304.6 | 5027.2 | 6014.4 | 5245.1 | 4807.1 | 4769.9 | 4652.5 | 4468.1 |
| 57.5° | 2880.1 | 2860.8 | 3173.1 | 3633.3 | 4674.1 | 6383.3 | 6726.7 | 5703.0 | 5641.3 | 5268.7 | 4984.9 |
| 60° | 1590.2 | 1597.6 | 1999.1 | 2544.1 | 3837.6 | 6310.4 | 8090.1 | 6747.4 | 6585.5 | 5800.4 | 5514.2 |
| 62.5° | 891.4 | 910.0 | 1208.8 | 1653.4 | 2446.7 | 5719.2 | 8821.7 | 8545.1 | 8154.9 | 6420.4 | 6183.3 |
| 65° | 674.3 | 685.4 | 835.7 | 1275.8 | 1542.7 | 3996.7 | 8938.5 | 11058.8 | 10722.0 | 7360.2 | 7248.7 |
| 67.5° | 634.9 | 643.8 | 717.4 | 1057.9 | 1405.0 | 2072.7 | 8059.8 | 12545.5 | 12587.9 | 8641.9 | 8073.7 |
| 68° | 639.4 | 650.6 | 724.2 | 1017.8 | 1402.9 | 1854.1 | 7685.0 | 12553.0 | 12643.0 | 8848.5 | 8045.6 |
| 70° | 587.3 | 590.2 | 765.7 | 998.5 | 1359.8 | 1460.9 | 5559.5 | 11692.9 | 11854.3 | 9094.6 | 7303.6 |
| 72.5° | 224.5 | 225.2 | 343.5 | 864.6 | 1424.4 | 1469.1 | 2800.6 | 9241.8 | 9249.9 | 7914.6 | 5694.0 |
| 75° | 116.7 | 98.2 | 107.7 | 270.6 | 1360.6 | 1431.9 | 1405.0 | 6310.4 | 6271.0 | 5352.8 | 3488.9 |
| 77.5° | 80.3 | 68.5 | 72.1 | 93.7 | 565.8 | 1431.1 | 1014.7 | 3628.8 | 3620.6 | 2277.2 | 995.5 |
| 80° | 45.4 | 39.3 | 43.1 | 78.8 | 198.4 | 1343.4 | 945.6 | 1559.7 | 1469.7 | 399.9 | 161.3 |
| 82.5° | 23.0 | 19.4 | 23.0 | 66.1 | 123.3 | 845.2 | 919.7 | 611.8 | 544.9 | 95.2 | 104.8 |
| 85° | 6.0 | 6.0 | 11.1 | 46.2 | 76.5 | 277.2 | 824.5 | 441.5 | 397.1 | 41.6 | 74.3 |
| 87.5° | 1.4 | 0.8 | 4.4 | 17.1 | 27.5 | 60.2 | 457.1 | 246.0 | 211.9 | 21.6 | 43.1 |
| 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° | 2109.8 | 2109.8 | 2109.8 | 2109.8 | 2109.8 | 2109.8 | 2109.8 | 2109.8 | 2109.8 | 2109.8 | 2109.8 |
| 2.5° | 2090.5 | 2069.8 | 2028.8 | 1982.7 | 1950.0 | 1914.4 | 1893.5 | 1868.3 | 1848.9 | 1831.9 | 1844.5 |
| 5° | 2083.1 | 2042.9 | 1952.2 | 1850.4 | 1764.9 | 1683.2 | 1622.2 | 1564.2 | 1520.3 | 1492.9 | 1504.0 |
| 7.5° | 2063.8 | 2004.3 | 1857.2 | 1698.1 | 1558.3 | 1426.7 | 1319.6 | 1223.8 | 1149.4 | 1109.1 | 1121.9 |
| 10° | 2031.1 | 1947.0 | 1749.3 | 1528.6 | 1332.9 | 1147.1 | 988.0 | 845.2 | 737.5 | 686.9 | 698.8 |
| 12.5° | 2007.4 | 1896.5 | 1637.8 | 1365.0 | 1107.7 | 843.8 | 632.6 | 469.2 | 385.2 | 334.6 | 339.0 |
| 15° | 1996.9 | 1857.2 | 1533.8 | 1192.5 | 861.7 | 541.9 | 342.0 | 247.6 | 218.6 | 208.1 | 208.9 |
| 17.5° | 1998.4 | 1826.0 | 1434.9 | 1013.3 | 613.4 | 311.5 | 209.7 | 188.9 | 184.4 | 182.1 | 182.1 |
| 20° | 2002.1 | 1794.6 | 1332.2 | 826.7 | 392.5 | 200.7 | 174.7 | 168.1 | 165.7 | 162.9 | 163.5 |
| 22.5° | 2013.2 | 1770.9 | 1228.9 | 639.4 | 241.6 | 163.5 | 154.7 | 148.7 | 144.9 | 140.6 | 141.3 |
| 25° | 2030.3 | 1753.0 | 1127.1 | 460.2 | 170.3 | 142.7 | 134.6 | 126.4 | 119.7 | 114.5 | 115.3 |
| 27.5° | 2040.8 | 1727.8 | 1018.5 | 313.8 | 141.3 | 125.0 | 113.7 | 102.5 | 95.2 | 90.6 | 90.0 |
| 30° | 2033.4 | 1686.8 | 895.2 | 205.9 | 125.0 | 107.7 | 94.4 | 81.7 | 74.3 | 70.6 | 70.6 |
| 32.5° | 2013.2 | 1634.0 | 759.1 | 150.1 | 110.9 | 93.0 | 76.5 | 65.4 | 60.2 | 58.0 | 58.7 |
| 35° | 1990.3 | 1579.1 | 614.1 | 127.1 | 99.6 | 78.8 | 62.4 | 53.4 | 51.4 | 50.6 | 50.6 |
| 37.5° | 1977.6 | 1531.5 | 475.1 | 115.3 | 89.2 | 65.4 | 51.4 | 46.2 | 43.8 | 43.8 | 43.8 |
| 40° | 1991.7 | 1495.0 | 351.6 | 106.3 | 78.8 | 54.3 | 43.1 | 39.3 | 38.6 | 38.6 | 38.6 |
| 42.5° | 2051.9 | 1482.5 | 257.3 | 98.9 | 68.5 | 45.4 | 37.2 | 34.1 | 33.4 | 34.1 | 34.1 |
| 45° | 2169.3 | 1510.0 | 194.8 | 91.4 | 58.7 | 37.2 | 32.0 | 29.7 | 29.7 | 30.5 | 30.5 |
| 47.5° | 2368.7 | 1580.6 | 159.9 | 84.0 | 49.0 | 31.3 | 27.5 | 26.1 | 26.1 | 26.8 | 26.8 |
| 50° | 2677.8 | 1711.5 | 143.5 | 75.8 | 41.0 | 26.8 | 23.0 | 22.3 | 22.3 | 23.0 | 23.7 |
| 52.5° | 3147.8 | 1960.6 | 135.4 | 67.6 | 33.4 | 22.3 | 19.4 | 18.5 | 19.4 | 20.1 | 20.1 |
| 55° | 3670.4 | 2279.4 | 125.7 | 59.5 | 28.2 | 18.5 | 15.6 | 15.6 | 16.3 | 17.8 | 17.8 |
| 57.5° | 4157.4 | 2587.2 | 116.7 | 49.0 | 24.6 | 14.8 | 12.7 | 12.7 | 14.2 | 15.6 | 15.6 |
| 60° | 4671.8 | 2888.9 | 104.8 | 39.3 | 20.8 | 11.9 | 10.4 | 10.4 | 12.7 | 14.2 | 14.8 |
| 62.5° | 5307.5 | 3239.9 | 89.2 | 31.3 | 16.3 | 9.0 | 7.5 | 9.6 | 11.9 | 14.2 | 14.2 |
| 65° | 6226.3 | 3676.4 | 69.9 | 24.6 | 12.7 | 6.6 | 6.0 | 9.0 | 11.1 | 13.4 | 14.2 |
| 67.5° | 6560.1 | 3620.6 | 52.8 | 20.1 | 9.6 | 5.2 | 5.2 | 8.2 | 11.1 | 13.4 | 13.4 |
| 68° | 6438.2 | 3498.7 | 50.6 | 19.4 | 9.0 | 5.2 | 5.2 | 8.2 | 11.1 | 13.4 | 13.4 |
| 70° | 5610.1 | 2860.1 | 41.6 | 14.8 | 7.5 | 4.4 | 4.4 | 7.5 | 11.1 | 12.7 | 13.4 |
| 72.5° | 4200.5 | 1900.3 | 35.8 | 9.6 | 6.6 | 4.4 | 3.8 | 7.5 | 10.4 | 12.7 | 12.7 |
| 75° | 2409.6 | 788.8 | 30.5 | 7.5 | 6.0 | 3.8 | 3.8 | 6.6 | 10.4 | 12.7 | 12.7 |
| 77.5° | 680.9 | 184.4 | 24.6 | 6.0 | 5.2 | 3.8 | 3.0 | 6.6 | 9.6 | 11.9 | 11.9 |
| 80° | 125.0 | 55.1 | 19.4 | 5.2 | 4.4 | 3.8 | 3.0 | 6.6 | 9.6 | 11.9 | 11.9 |
| 82.5° | 82.6 | 26.1 | 14.2 | 5.2 | 4.4 | 3.8 | 3.0 | 6.0 | 9.0 | 11.1 | 11.1 |
| 85° | 61.8 | 18.5 | 9.0 | 5.2 | 4.4 | 3.8 | 3.0 | 6.0 | 9.0 | 11.1 | 11.1 |
| 87.5° | 34.1 | 8.2 | 6.6 | 6.0 | 5.2 | 3.8 | 3.0 | 5.2 | 8.2 | 10.4 | 10.4 |
| 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)