

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: P196987

Luminaire Tested: **NVN-AF-01-LED-U-AFL-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196987
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24160)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-01-LED-U-AFL-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5603 lumens
Efficiency: N/A
Efficacy: 83.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 67
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

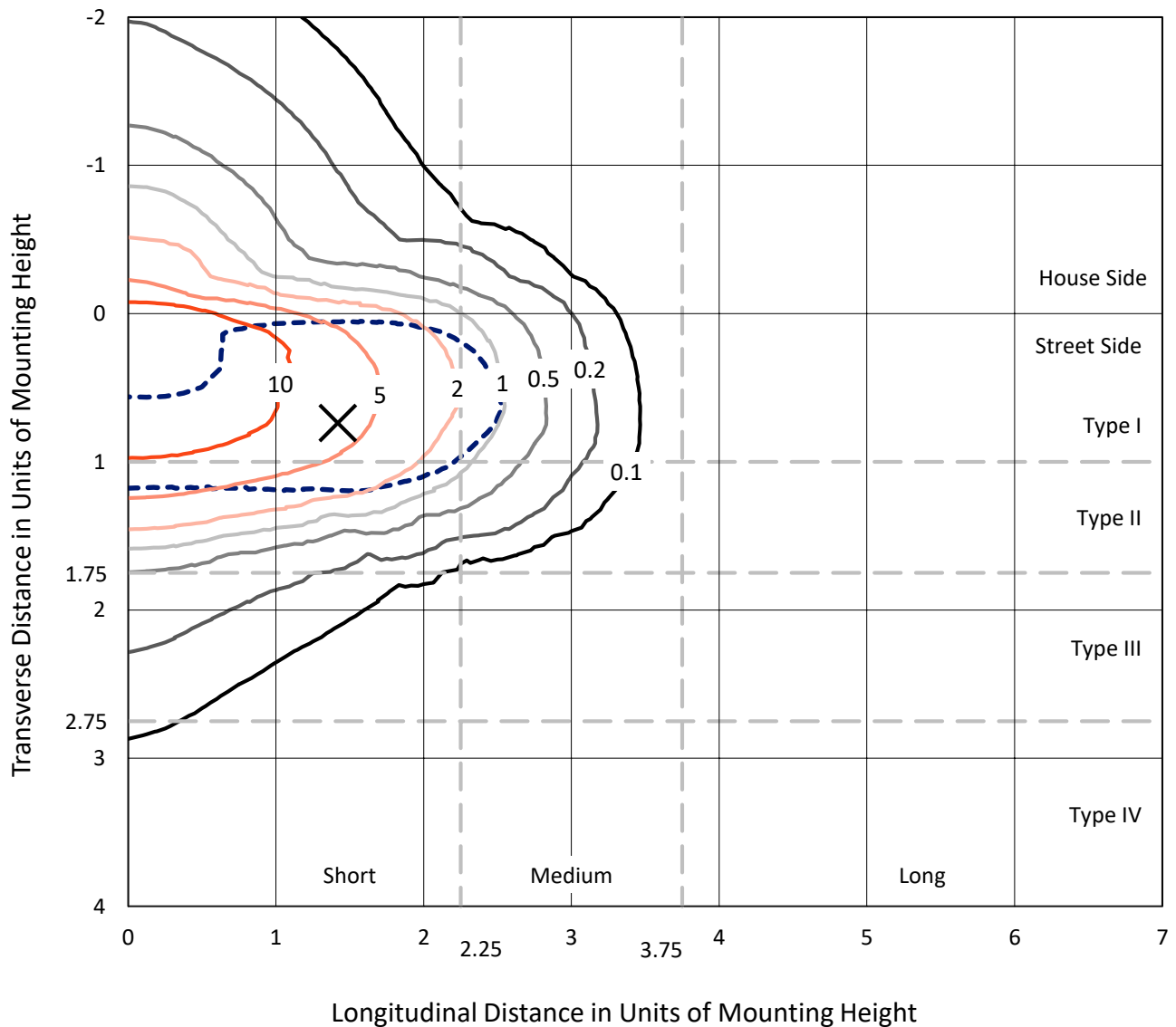


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

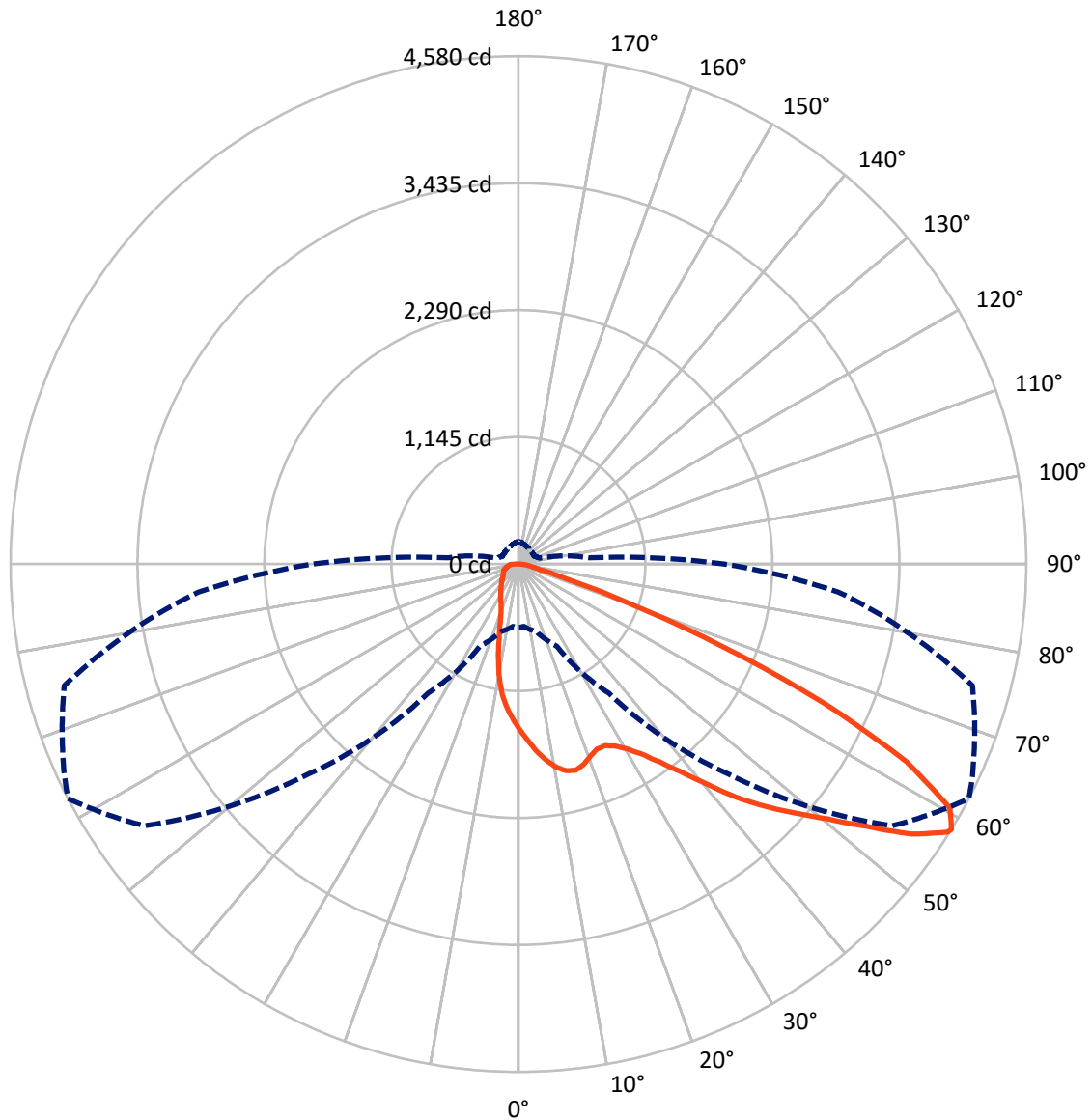


Based on 10 foot mounting height. Maximum calculated value = 17.5 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral - - - Horizontal Cone Through 58-Deg Vertical

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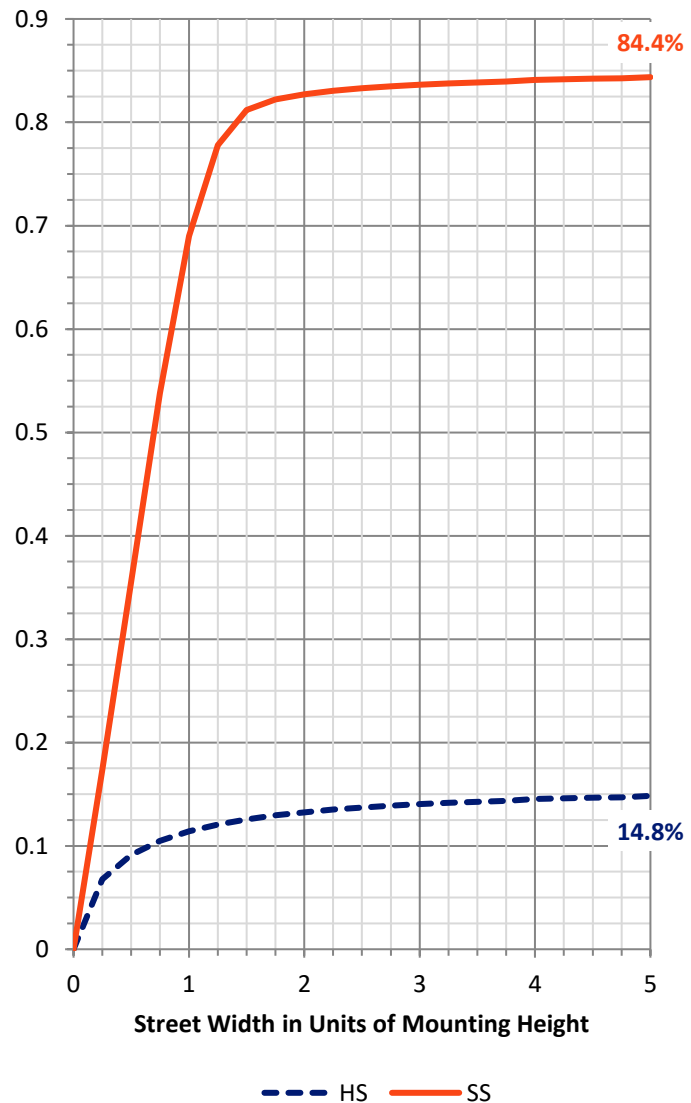
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 860.3 | 0.0 | 860.3 |
| | % Fixture | 15.4 | 0.0 | 15.4 |
| Street Side | Lumens | 4742.7 | 0.0 | 4742.7 |
| | % Fixture | 84.6 | 0.0 | 84.6 |
| Total | Lumens | 5603.0 | 0.0 | 5603.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 133.7 | 2.4 |
| 10°-20° | 337.5 | 6.0 |
| 20°-30° | 546.9 | 9.8 |
| 30°-40° | 873.2 | 15.6 |
| 40°-50° | 1270.1 | 22.7 |
| 50°-60° | 1329.0 | 23.7 |
| 60°-70° | 810.2 | 14.5 |
| 70°-80° | 226.6 | 4.0 |
| 80°-90° | 75.9 | 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° | 5603.0 | 100.0 |
| 0°-180° | 5603.0 | 100.0 |

Coefficient of Utilization



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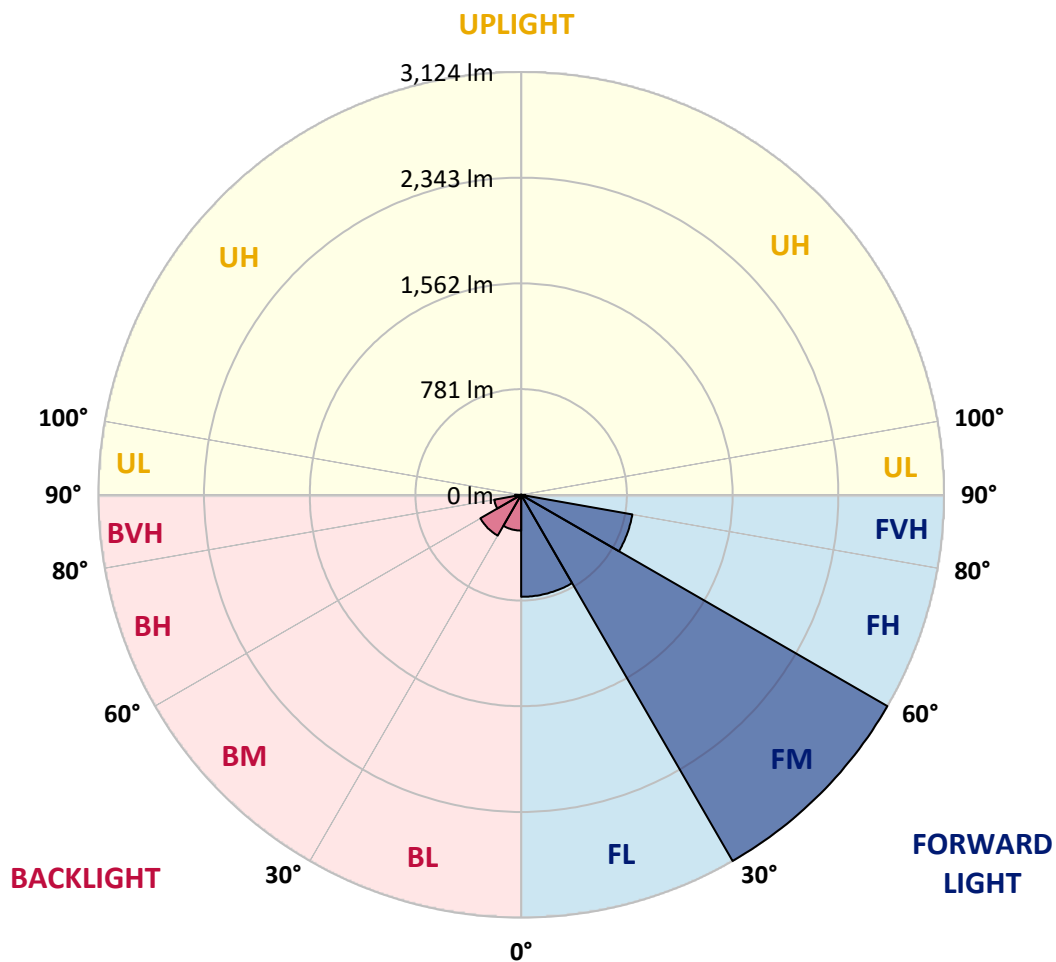
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 753.6 | 13.5 | | | |
| FM | (30°-60°) | 3124.3 | 55.8 | | | |
| FH | (60°-80°) | 834.3 | 14.9 | | | G1/1800 |
| FVH | (80°-90°) | 30.6 | 0.5 | | | G1/100 |
| BL | (0°-30°) | 264.4 | 4.7 | B1/500 | | |
| BM | (30°-60°) | 347.9 | 6.2 | B1/1000 | | |
| BH | (60°-80°) | 202.5 | 3.6 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 45.4 | 0.8 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 62.5° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1496.0 | 1496.0 | 1496.0 | 1496.0 | 1496.0 | 1496.0 | 1496.0 | 1496.0 | 1496.0 | 1496.0 | 1496.0 |
| 2.5° | 1698.0 | 1697.0 | 1682.6 | 1673.2 | 1661.9 | 1636.0 | 1610.1 | 1590.9 | 1581.1 | 1543.6 | 1507.2 |
| 5° | 1838.4 | 1834.2 | 1826.2 | 1816.0 | 1801.3 | 1768.8 | 1727.8 | 1692.4 | 1678.4 | 1611.9 | 1545.0 |
| 7.5° | 1764.2 | 1770.9 | 1795.7 | 1823.7 | 1853.1 | 1855.2 | 1826.2 | 1784.2 | 1768.8 | 1679.8 | 1581.8 |
| 10° | 1558.6 | 1555.8 | 1587.0 | 1641.6 | 1738.6 | 1834.6 | 1882.6 | 1861.9 | 1845.8 | 1744.2 | 1618.5 |
| 12.5° | 1496.3 | 1495.6 | 1500.9 | 1514.9 | 1575.8 | 1707.5 | 1868.2 | 1913.0 | 1907.4 | 1812.5 | 1657.7 |
| 15° | 1515.2 | 1515.9 | 1515.6 | 1517.3 | 1534.1 | 1596.8 | 1788.0 | 1930.2 | 1947.7 | 1880.1 | 1697.7 |
| 17.5° | 1575.8 | 1573.4 | 1565.6 | 1557.2 | 1559.7 | 1582.1 | 1701.5 | 1900.8 | 1953.3 | 1940.3 | 1731.3 |
| 20° | 1669.3 | 1669.3 | 1648.6 | 1625.2 | 1609.8 | 1614.7 | 1665.5 | 1850.3 | 1927.4 | 1991.5 | 1756.5 |
| 22.5° | 1786.6 | 1788.4 | 1757.9 | 1715.2 | 1680.2 | 1666.9 | 1686.1 | 1812.9 | 1895.9 | 2038.7 | 1778.9 |
| 25° | 1932.3 | 1931.9 | 1887.5 | 1826.2 | 1770.9 | 1739.0 | 1738.6 | 1814.6 | 1886.1 | 2094.1 | 1802.4 |
| 27.5° | 2112.6 | 2096.2 | 2044.3 | 1957.1 | 1879.1 | 1830.4 | 1808.3 | 1858.7 | 1906.7 | 2162.0 | 1833.9 |
| 30° | 2316.1 | 2299.3 | 2231.3 | 2119.3 | 2013.5 | 1942.4 | 1906.0 | 1935.1 | 1969.8 | 2248.5 | 1881.5 |
| 32.5° | 2517.4 | 2521.3 | 2441.4 | 2315.0 | 2179.2 | 2079.0 | 2025.1 | 2042.9 | 2067.1 | 2354.3 | 1945.9 |
| 35° | 2812.3 | 2811.9 | 2707.6 | 2549.7 | 2388.2 | 2249.5 | 2181.3 | 2190.7 | 2212.8 | 2503.4 | 2036.3 |
| 37.5° | 3032.2 | 3028.7 | 2961.5 | 2821.7 | 2640.0 | 2473.7 | 2374.9 | 2376.3 | 2395.2 | 2690.8 | 2155.4 |
| 40° | 3054.6 | 3053.9 | 3053.6 | 3033.6 | 2909.3 | 2752.4 | 2628.8 | 2603.2 | 2610.9 | 2889.7 | 2281.8 |
| 42.5° | 2883.4 | 2908.9 | 2982.5 | 3095.2 | 3129.9 | 3047.6 | 2930.6 | 2873.6 | 2856.8 | 3118.0 | 2415.5 |
| 45° | 2639.3 | 2652.3 | 2781.1 | 3034.7 | 3240.9 | 3324.9 | 3237.1 | 3116.6 | 3087.9 | 3340.0 | 2524.4 |
| 47.5° | 2525.8 | 2520.2 | 2594.8 | 2871.1 | 3230.1 | 3545.6 | 3551.9 | 3354.4 | 3305.7 | 3531.6 | 2617.2 |
| 50° | 2282.5 | 2275.1 | 2369.3 | 2630.5 | 3111.7 | 3655.2 | 3875.1 | 3613.5 | 3523.5 | 3713.6 | 2701.3 |
| 52.5° | 1797.5 | 1790.5 | 1916.9 | 2253.4 | 2847.0 | 3614.2 | 4147.5 | 3931.5 | 3778.1 | 3889.1 | 2779.7 |
| 55° | 1169.6 | 1170.3 | 1290.8 | 1637.8 | 2303.8 | 3375.4 | 4275.3 | 4298.8 | 4126.9 | 4064.5 | 2843.1 |
| 57.5° | 644.0 | 638.0 | 723.8 | 937.1 | 1584.9 | 2832.9 | 4168.9 | 4563.5 | 4473.9 | 4215.1 | 2889.0 |
| 58° | 572.5 | 565.5 | 631.7 | 815.6 | 1421.0 | 2679.9 | 4115.3 | 4580.3 | 4518.4 | 4240.0 | 2895.6 |
| 60° | 408.0 | 396.1 | 385.9 | 459.8 | 818.7 | 1932.3 | 3758.1 | 4471.4 | 4531.3 | 4289.7 | 2889.3 |
| 62.5° | 343.9 | 330.2 | 293.8 | 291.0 | 385.5 | 945.1 | 2972.0 | 3926.9 | 4094.6 | 4175.2 | 2787.8 |
| 65° | 319.4 | 305.7 | 257.7 | 240.6 | 261.6 | 408.0 | 1837.7 | 3032.2 | 3256.3 | 3777.0 | 2532.1 |
| 67.5° | 301.9 | 285.7 | 234.3 | 211.9 | 216.1 | 244.1 | 779.8 | 1983.1 | 2242.9 | 2945.4 | 2031.4 |
| 70° | 286.1 | 268.2 | 215.7 | 189.8 | 186.3 | 185.6 | 304.7 | 1035.5 | 1285.9 | 1927.4 | 1360.8 |
| 72.5° | 268.2 | 250.7 | 199.3 | 171.6 | 163.9 | 150.6 | 183.1 | 427.9 | 586.5 | 944.8 | 623.7 |
| 75° | 242.3 | 228.0 | 181.0 | 156.5 | 143.2 | 122.2 | 135.2 | 205.2 | 252.8 | 361.7 | 289.6 |
| 77.5° | 213.3 | 201.7 | 162.5 | 143.9 | 126.1 | 99.8 | 103.3 | 139.0 | 156.2 | 203.8 | 167.7 |
| 80° | 150.9 | 155.1 | 141.8 | 126.8 | 111.0 | 80.5 | 79.5 | 101.9 | 112.1 | 136.9 | 112.8 |
| 82.5° | 104.0 | 107.2 | 115.6 | 100.2 | 89.6 | 62.7 | 58.5 | 70.7 | 76.0 | 82.6 | 54.6 |
| 85° | 74.2 | 72.1 | 80.2 | 71.8 | 65.8 | 39.9 | 37.5 | 44.8 | 48.0 | 50.4 | 26.3 |
| 87.5° | 45.2 | 44.8 | 46.2 | 37.1 | 34.3 | 20.3 | 18.6 | 21.4 | 22.8 | 22.1 | 12.6 |
| 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° | 1496.0 | 1496.0 | 1496.0 | 1496.0 | 1496.0 | 1496.0 | 1496.0 | 1496.0 | 1496.0 | 1496.0 | 1496.0 |
| 2.5° | 1493.5 | 1476.4 | 1438.9 | 1408.8 | 1376.2 | 1351.3 | 1326.5 | 1312.5 | 1297.1 | 1288.3 | 1287.3 |
| 5° | 1510.0 | 1475.0 | 1395.1 | 1320.9 | 1244.5 | 1175.9 | 1108.7 | 1058.9 | 1018.3 | 995.2 | 993.8 |
| 7.5° | 1528.2 | 1473.2 | 1349.9 | 1221.4 | 1085.6 | 950.4 | 831.0 | 746.6 | 692.3 | 667.1 | 665.3 |
| 10° | 1542.2 | 1465.8 | 1295.0 | 1095.0 | 879.6 | 701.1 | 592.5 | 542.8 | 526.3 | 522.1 | 521.4 |
| 12.5° | 1559.0 | 1460.6 | 1225.6 | 932.9 | 672.3 | 533.7 | 500.8 | 497.6 | 501.1 | 503.2 | 503.6 |
| 15° | 1574.8 | 1450.4 | 1132.1 | 753.2 | 526.3 | 476.9 | 477.6 | 484.3 | 491.3 | 494.5 | 494.8 |
| 17.5° | 1582.1 | 1425.6 | 1009.2 | 593.6 | 460.5 | 451.4 | 459.4 | 468.2 | 474.5 | 476.9 | 476.9 |
| 20° | 1582.1 | 1385.7 | 866.7 | 480.8 | 426.2 | 427.9 | 437.7 | 444.4 | 445.8 | 443.7 | 442.6 |
| 22.5° | 1575.5 | 1336.3 | 728.0 | 419.5 | 398.2 | 404.8 | 412.5 | 408.0 | 391.5 | 378.9 | 376.4 |
| 25° | 1569.5 | 1277.8 | 594.6 | 382.0 | 373.6 | 382.4 | 379.2 | 348.1 | 322.9 | 309.9 | 307.8 |
| 27.5° | 1559.7 | 1207.1 | 483.2 | 351.2 | 349.8 | 356.8 | 325.7 | 295.6 | 282.9 | 275.9 | 274.5 |
| 30° | 1557.2 | 1130.4 | 404.5 | 323.9 | 326.4 | 316.6 | 280.8 | 271.0 | 268.2 | 264.4 | 262.6 |
| 32.5° | 1565.3 | 1053.7 | 355.1 | 301.5 | 304.0 | 271.7 | 258.1 | 259.5 | 259.1 | 254.2 | 252.5 |
| 35° | 1587.4 | 979.1 | 323.6 | 281.2 | 274.2 | 243.4 | 245.1 | 249.3 | 249.3 | 243.4 | 241.3 |
| 37.5° | 1625.9 | 909.8 | 303.6 | 264.0 | 239.9 | 228.7 | 233.2 | 238.8 | 238.8 | 234.6 | 232.9 |
| 40° | 1666.9 | 842.2 | 288.5 | 250.4 | 218.2 | 218.5 | 223.1 | 227.3 | 229.0 | 229.7 | 228.3 |
| 42.5° | 1704.0 | 772.1 | 272.4 | 235.7 | 208.4 | 210.8 | 212.9 | 216.1 | 223.4 | 228.3 | 227.6 |
| 45° | 1725.7 | 701.8 | 254.9 | 217.5 | 201.7 | 202.8 | 202.1 | 207.7 | 216.4 | 223.8 | 223.8 |
| 47.5° | 1745.6 | 644.0 | 240.6 | 199.3 | 195.0 | 195.0 | 192.9 | 198.6 | 206.6 | 215.4 | 216.1 |
| 50° | 1764.6 | 606.5 | 230.4 | 185.2 | 186.6 | 185.6 | 184.9 | 190.1 | 201.0 | 211.5 | 213.3 |
| 52.5° | 1783.8 | 593.9 | 221.3 | 175.1 | 177.9 | 176.5 | 177.2 | 184.5 | 196.8 | 207.7 | 209.4 |
| 55° | 1810.8 | 602.0 | 211.9 | 168.1 | 169.5 | 169.1 | 171.9 | 180.3 | 191.2 | 202.1 | 202.8 |
| 57.5° | 1844.0 | 631.4 | 203.8 | 162.8 | 161.4 | 163.5 | 168.1 | 176.1 | 186.6 | 199.6 | 200.7 |
| 58° | 1850.7 | 638.4 | 202.4 | 161.4 | 159.7 | 162.8 | 167.4 | 175.1 | 185.9 | 199.6 | 200.7 |
| 60° | 1860.9 | 663.2 | 198.9 | 158.6 | 153.7 | 159.3 | 164.9 | 172.6 | 184.5 | 201.4 | 203.5 |
| 62.5° | 1811.8 | 668.1 | 197.9 | 155.5 | 147.4 | 154.4 | 161.1 | 169.8 | 183.1 | 207.3 | 211.9 |
| 65° | 1642.0 | 617.7 | 190.5 | 150.2 | 142.2 | 150.6 | 157.6 | 167.7 | 187.3 | 225.2 | 227.3 |
| 67.5° | 1318.1 | 513.0 | 172.6 | 142.2 | 136.2 | 146.0 | 154.8 | 167.7 | 189.1 | 228.0 | 229.4 |
| 70° | 906.3 | 385.5 | 150.2 | 133.4 | 129.2 | 140.4 | 153.7 | 171.6 | 183.1 | 215.7 | 211.5 |
| 72.5° | 473.4 | 268.2 | 131.7 | 123.3 | 120.8 | 135.5 | 163.9 | 167.7 | 176.1 | 201.4 | 197.2 |
| 75° | 238.5 | 182.4 | 115.9 | 111.7 | 111.4 | 133.8 | 183.5 | 161.4 | 168.8 | 189.4 | 198.6 |
| 77.5° | 140.8 | 142.9 | 103.3 | 100.9 | 102.6 | 130.6 | 183.8 | 155.1 | 160.4 | 174.4 | 184.2 |
| 80° | 96.3 | 118.0 | 93.5 | 92.8 | 94.2 | 120.1 | 169.5 | 147.4 | 150.6 | 164.9 | 175.4 |
| 82.5° | 54.3 | 65.1 | 81.9 | 86.5 | 85.8 | 98.4 | 146.4 | 134.1 | 138.0 | 195.0 | 206.3 |
| 85° | 26.3 | 39.2 | 68.6 | 80.9 | 73.2 | 65.5 | 119.1 | 119.1 | 120.1 | 139.7 | 141.5 |
| 87.5° | 9.8 | 17.5 | 46.2 | 64.1 | 51.1 | 39.2 | 80.9 | 84.4 | 93.8 | 96.6 | 98.8 |
| 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)