

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: P195517

Luminaire Tested: **NVN-AF-01-LED-U-AFL-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195517
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)
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-7050-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5128 lumens
Efficiency: N/A
Efficacy: 86.9 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): 59
Input Voltage (V): NR
Input Current (A_{in}): 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

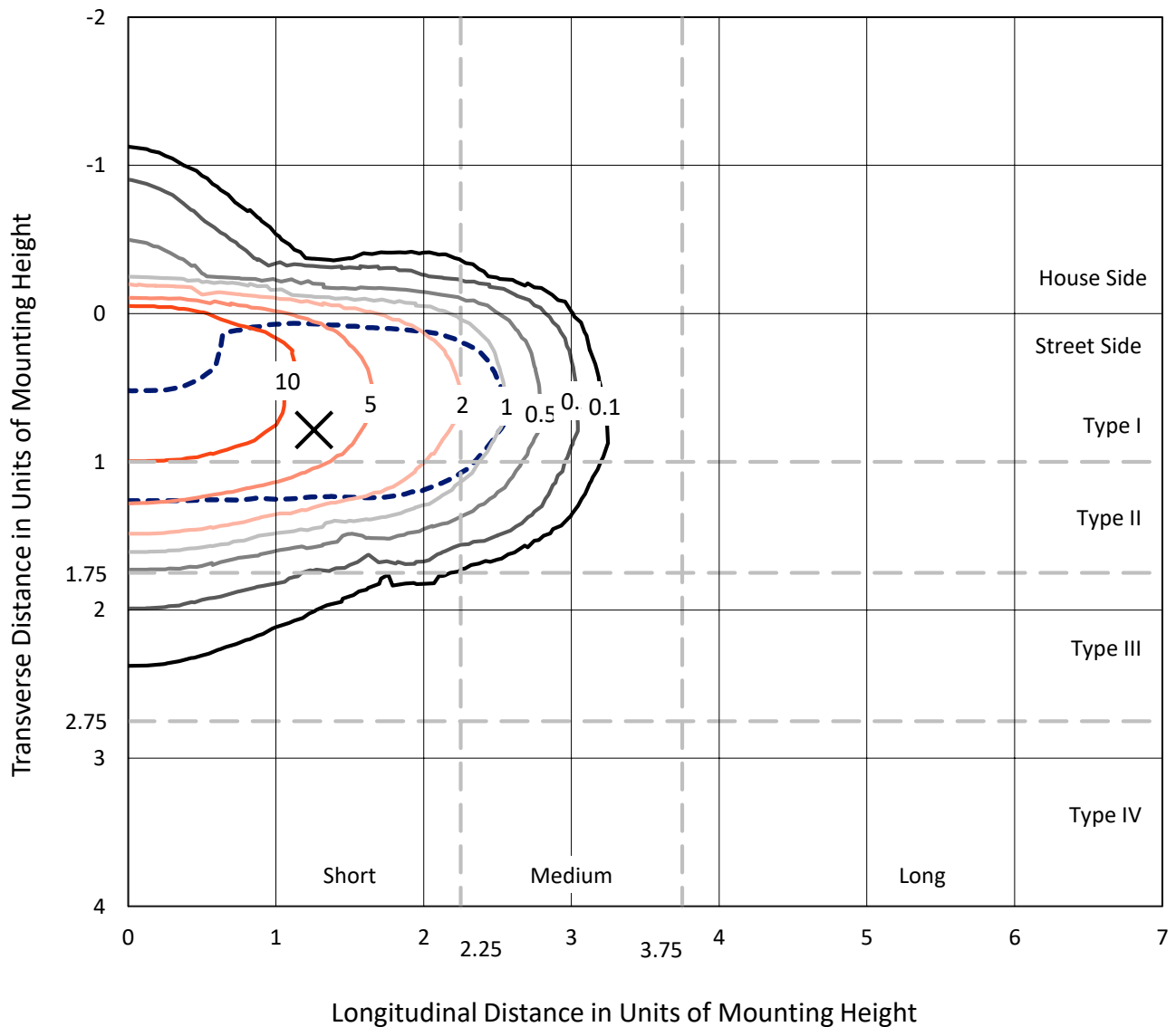


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Iso-Footcandle Lines of Horizontal Illumination

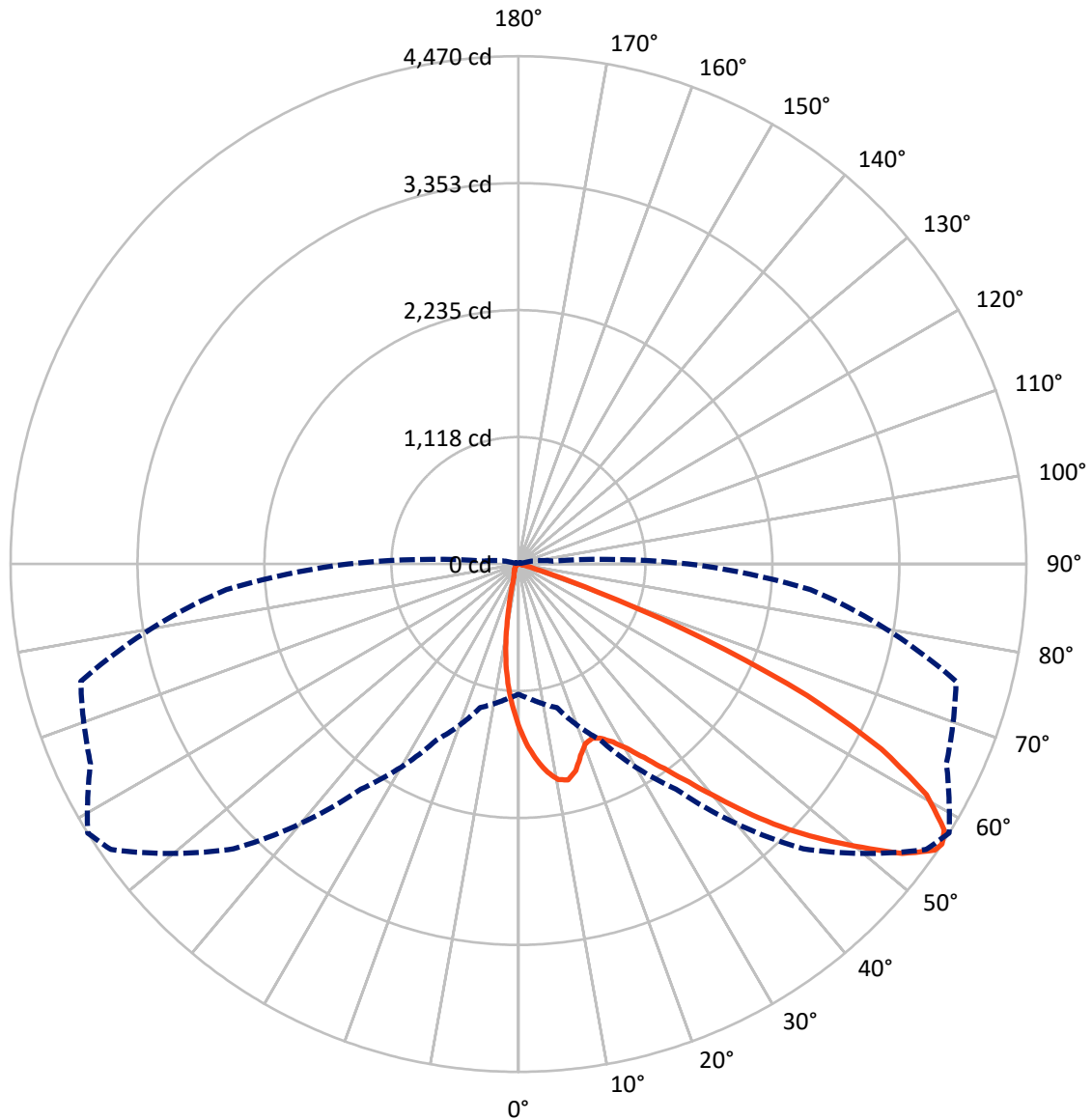
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 18 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 56-Deg Vertical



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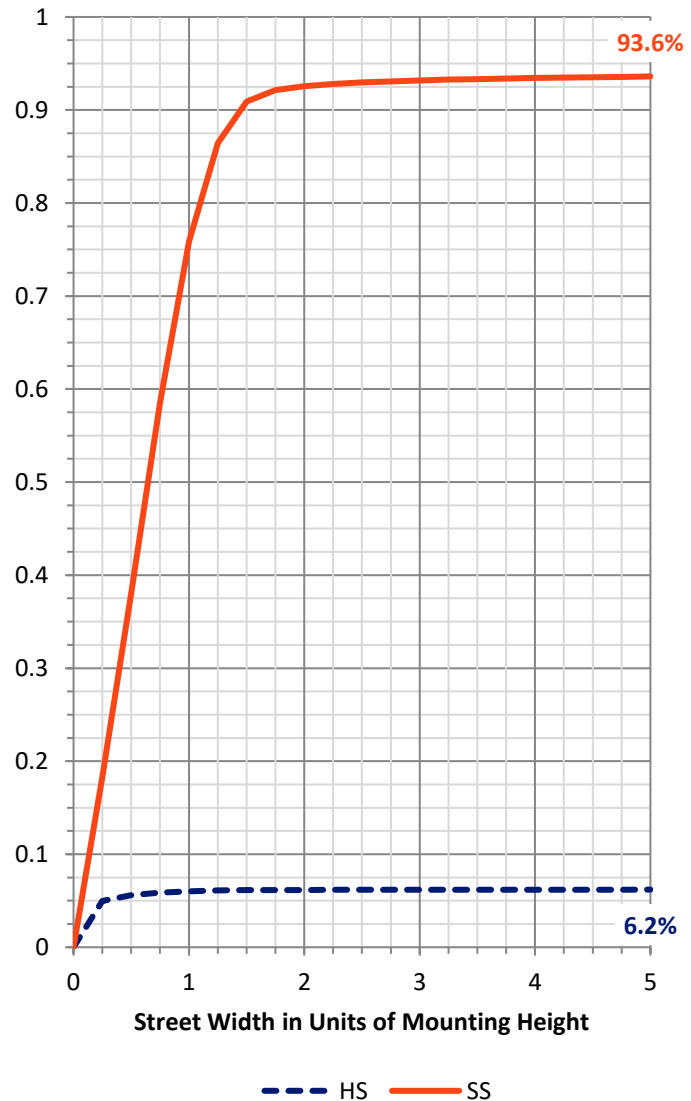
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 320.1 | 0.0 | 320.1 |
| | % Fixture | 6.2 | 0.0 | 6.2 |
| Street Side | Lumens | 4807.9 | 0.0 | 4807.9 |
| | % Fixture | 93.8 | 0.0 | 93.8 |
| Total | Lumens | 5128.0 | 0.0 | 5128.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 123.9 | 2.4 |
| 10°-20° | 288.2 | 5.6 |
| 20°-30° | 484.9 | 9.5 |
| 30°-40° | 830.4 | 16.2 |
| 40°-50° | 1253.1 | 24.4 |
| 50°-60° | 1302.5 | 25.4 |
| 60°-70° | 731.2 | 14.3 |
| 70°-80° | 100.2 | 2.0 |
| 80°-90° | 13.6 | 0.3 |
| 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° | 5128.0 | 100.0 |
| 0°-180° | 5128.0 | 100.0 |

Coefficient of Utilization



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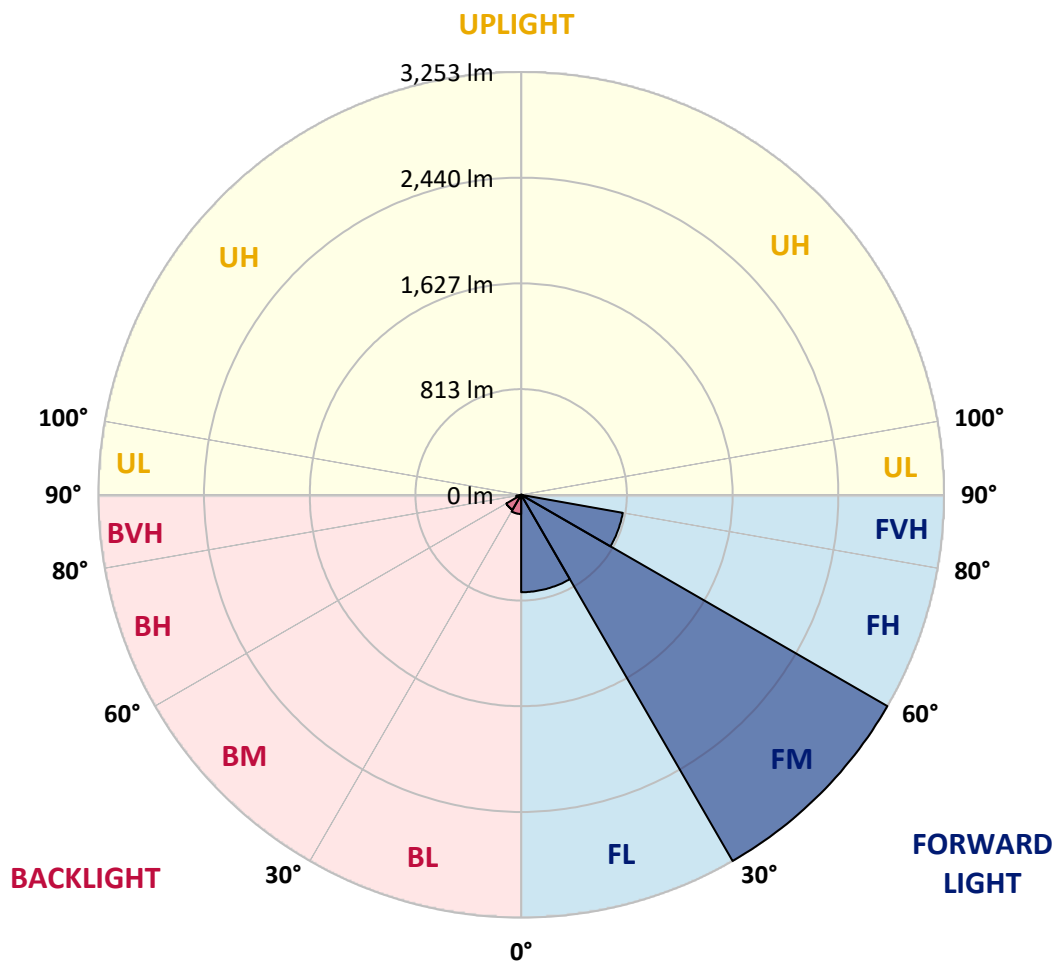
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 749.3 | 14.6 | | | |
| FM | (30°-60°) | 3253.4 | 63.4 | | | |
| FH | (60°-80°) | 793.5 | 15.5 | | | G1/1800 |
| FVH | (80°-90°) | 11.7 | 0.2 | | | G1/100 |
| BL | (0°-30°) | 147.7 | 2.9 | B1/500 | | |
| BM | (30°-60°) | 132.6 | 2.6 | B0/220 | | |
| BH | (60°-80°) | 38.0 | 0.7 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 1.9 | 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-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 58° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1451.9 | 1451.9 | 1451.9 | 1451.9 | 1451.9 | 1451.9 | 1451.9 | 1451.9 | 1451.9 | 1451.9 | 1451.9 |
| 2.5° | 1746.9 | 1736.3 | 1725.4 | 1705.0 | 1686.2 | 1657.3 | 1617.4 | 1607.6 | 1576.3 | 1524.7 | 1476.5 |
| 5° | 1897.5 | 1895.6 | 1888.1 | 1871.7 | 1851.3 | 1816.1 | 1771.1 | 1741.0 | 1692.5 | 1611.1 | 1518.4 |
| 7.5° | 1808.3 | 1824.7 | 1851.7 | 1890.1 | 1915.9 | 1912.4 | 1878.0 | 1851.7 | 1803.6 | 1692.5 | 1559.5 |
| 10° | 1524.3 | 1527.4 | 1564.6 | 1645.2 | 1772.7 | 1891.6 | 1936.6 | 1929.6 | 1885.4 | 1763.7 | 1595.5 |
| 12.5° | 1424.1 | 1426.1 | 1434.7 | 1460.5 | 1543.4 | 1709.3 | 1913.2 | 1949.9 | 1946.4 | 1831.8 | 1633.8 |
| 15° | 1431.9 | 1433.1 | 1435.5 | 1443.7 | 1467.2 | 1550.5 | 1794.2 | 1887.7 | 1985.5 | 1896.3 | 1671.4 |
| 17.5° | 1493.8 | 1493.0 | 1485.5 | 1477.7 | 1485.1 | 1512.5 | 1672.9 | 1771.5 | 1977.3 | 1950.7 | 1702.3 |
| 20° | 1614.3 | 1618.2 | 1593.1 | 1558.3 | 1540.3 | 1541.5 | 1613.1 | 1687.0 | 1931.2 | 1993.0 | 1725.4 |
| 22.5° | 1783.7 | 1786.4 | 1745.3 | 1685.1 | 1632.3 | 1605.6 | 1625.6 | 1664.7 | 1878.0 | 2032.1 | 1744.1 |
| 25° | 1985.9 | 1985.9 | 1928.4 | 1842.7 | 1761.0 | 1702.7 | 1685.5 | 1700.3 | 1857.6 | 2076.3 | 1762.9 |
| 27.5° | 2204.2 | 2212.1 | 2137.0 | 2024.7 | 1916.7 | 1831.4 | 1777.4 | 1774.7 | 1873.3 | 2131.9 | 1784.1 |
| 30° | 2441.7 | 2448.8 | 2359.6 | 2222.2 | 2094.3 | 1985.2 | 1902.2 | 1884.2 | 1933.1 | 2206.6 | 1815.0 |
| 32.5° | 2678.0 | 2683.9 | 2585.3 | 2445.3 | 2296.2 | 2167.9 | 2058.7 | 2030.1 | 2040.7 | 2315.7 | 1860.3 |
| 35° | 2978.5 | 2979.7 | 2854.9 | 2688.2 | 2529.0 | 2378.3 | 2240.2 | 2212.1 | 2200.3 | 2453.5 | 1925.7 |
| 37.5° | 3217.6 | 3208.2 | 3129.1 | 2971.5 | 2788.8 | 2631.5 | 2469.1 | 2432.3 | 2404.2 | 2647.1 | 2027.0 |
| 40° | 3273.9 | 3273.9 | 3262.2 | 3214.8 | 3069.7 | 2918.3 | 2761.0 | 2706.2 | 2644.0 | 2875.2 | 2163.2 |
| 42.5° | 3127.2 | 3136.6 | 3214.0 | 3316.9 | 3318.1 | 3221.1 | 3067.3 | 3021.2 | 2911.6 | 3135.0 | 2311.8 |
| 45° | 2798.9 | 2801.7 | 2987.5 | 3265.3 | 3453.9 | 3509.4 | 3396.0 | 3332.2 | 3180.4 | 3405.0 | 2448.0 |
| 47.5° | 2680.8 | 2689.4 | 2768.4 | 3108.0 | 3464.0 | 3743.0 | 3711.3 | 3623.7 | 3429.2 | 3651.4 | 2575.1 |
| 50° | 2499.2 | 2509.8 | 2606.4 | 2876.4 | 3372.5 | 3892.8 | 4012.9 | 3919.1 | 3655.7 | 3856.8 | 2638.1 |
| 52.5° | 2065.0 | 2081.4 | 2217.9 | 2570.1 | 3143.6 | 3899.1 | 4289.2 | 4232.8 | 3887.8 | 3966.8 | 2630.7 |
| 55° | 1421.0 | 1433.1 | 1592.3 | 2006.3 | 2682.0 | 3707.8 | 4408.1 | 4446.8 | 4094.7 | 3991.4 | 2594.7 |
| 56° | 1146.3 | 1191.7 | 1308.3 | 1709.3 | 2419.0 | 3545.0 | 4380.7 | 4470.3 | 4156.1 | 3987.5 | 2579.1 |
| 57.5° | 757.8 | 766.4 | 893.6 | 1238.7 | 1942.5 | 3191.7 | 4257.1 | 4420.2 | 4235.2 | 3967.6 | 2567.7 |
| 60° | 356.4 | 360.3 | 406.1 | 571.6 | 1051.3 | 2325.9 | 3855.3 | 4126.0 | 4264.1 | 3925.7 | 2567.3 |
| 62.5° | 232.4 | 233.2 | 238.7 | 272.7 | 430.0 | 1266.8 | 3196.0 | 3585.7 | 4024.3 | 3921.0 | 2559.9 |
| 65° | 191.3 | 193.3 | 186.6 | 190.9 | 225.0 | 477.7 | 2254.3 | 2795.4 | 3461.3 | 3810.7 | 2476.2 |
| 67.5° | 168.6 | 169.0 | 160.0 | 154.9 | 164.7 | 209.7 | 1135.8 | 1763.3 | 2588.8 | 3237.9 | 2039.5 |
| 70° | 153.8 | 153.4 | 143.2 | 131.5 | 131.8 | 139.3 | 370.1 | 732.4 | 1432.3 | 1922.6 | 1171.0 |
| 72.5° | 136.5 | 137.3 | 131.5 | 115.0 | 109.5 | 98.6 | 139.3 | 197.6 | 487.5 | 617.4 | 308.7 |
| 75° | 119.7 | 118.2 | 112.3 | 101.7 | 91.6 | 66.1 | 70.0 | 84.1 | 127.2 | 126.0 | 66.5 |
| 77.5° | 90.8 | 89.2 | 91.9 | 86.9 | 71.6 | 46.2 | 38.3 | 43.8 | 57.5 | 53.6 | 27.0 |
| 80° | 69.2 | 68.5 | 62.6 | 74.3 | 65.3 | 34.8 | 26.2 | 27.0 | 31.3 | 28.6 | 13.3 |
| 82.5° | 50.1 | 49.7 | 47.3 | 45.8 | 41.5 | 25.4 | 20.0 | 21.1 | 23.5 | 20.0 | 9.8 |
| 85° | 19.2 | 19.2 | 37.2 | 31.3 | 28.6 | 17.2 | 14.1 | 15.3 | 18.0 | 14.5 | 6.7 |
| 87.5° | 3.1 | 3.1 | 25.0 | 20.7 | 12.9 | 8.6 | 9.0 | 9.8 | 10.6 | 8.6 | 5.1 |
| 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° | 1451.9 | 1451.9 | 1451.9 | 1451.9 | 1451.9 | 1451.9 | 1451.9 | 1451.9 | 1451.9 | 1451.9 | 1451.9 |
| 2.5° | 1448.0 | 1421.8 | 1364.3 | 1308.7 | 1260.2 | 1207.0 | 1180.0 | 1148.7 | 1136.9 | 1113.5 | 1115.8 |
| 5° | 1462.8 | 1408.1 | 1292.7 | 1171.0 | 1059.5 | 946.0 | 865.4 | 789.5 | 747.3 | 705.4 | 705.4 |
| 7.5° | 1478.1 | 1394.4 | 1216.0 | 1021.5 | 833.7 | 639.3 | 501.6 | 391.2 | 329.8 | 288.7 | 287.6 |
| 10° | 1488.7 | 1376.8 | 1128.7 | 848.2 | 571.2 | 329.4 | 198.7 | 156.5 | 141.2 | 134.6 | 134.2 |
| 12.5° | 1502.4 | 1359.2 | 1029.4 | 644.0 | 317.3 | 156.5 | 124.0 | 117.4 | 114.6 | 113.1 | 113.1 |
| 15° | 1514.1 | 1334.1 | 908.9 | 433.1 | 166.7 | 117.4 | 106.8 | 104.5 | 104.1 | 103.7 | 104.1 |
| 17.5° | 1516.8 | 1298.5 | 764.5 | 253.5 | 120.9 | 102.5 | 97.8 | 95.9 | 95.9 | 95.5 | 95.5 |
| 20° | 1510.6 | 1251.6 | 604.9 | 156.5 | 104.5 | 94.3 | 89.2 | 86.9 | 86.5 | 86.5 | 86.5 |
| 22.5° | 1497.7 | 1191.7 | 447.2 | 118.5 | 95.1 | 86.9 | 80.2 | 77.9 | 77.9 | 78.2 | 78.6 |
| 25° | 1481.6 | 1120.9 | 307.1 | 102.1 | 88.0 | 79.0 | 72.4 | 70.0 | 70.8 | 71.6 | 72.0 |
| 27.5° | 1461.3 | 1036.4 | 201.1 | 88.4 | 78.6 | 71.2 | 65.3 | 63.8 | 65.3 | 66.9 | 67.7 |
| 30° | 1440.9 | 943.7 | 136.2 | 76.7 | 68.1 | 62.6 | 59.1 | 58.7 | 61.0 | 64.6 | 64.9 |
| 32.5° | 1427.6 | 848.6 | 102.9 | 68.9 | 59.9 | 55.2 | 53.6 | 54.4 | 57.9 | 61.8 | 62.6 |
| 35° | 1426.5 | 755.9 | 87.6 | 62.6 | 54.4 | 50.1 | 49.3 | 51.6 | 55.6 | 58.7 | 59.5 |
| 37.5° | 1444.8 | 669.0 | 79.4 | 57.9 | 50.1 | 45.8 | 44.6 | 48.9 | 52.4 | 55.6 | 56.3 |
| 40° | 1482.0 | 591.2 | 73.9 | 53.6 | 46.6 | 41.5 | 40.7 | 44.2 | 47.7 | 51.3 | 52.4 |
| 42.5° | 1528.6 | 518.4 | 67.7 | 49.3 | 42.6 | 36.8 | 36.0 | 38.7 | 42.3 | 47.3 | 48.1 |
| 45° | 1568.9 | 450.7 | 61.0 | 44.6 | 38.3 | 31.7 | 31.3 | 34.4 | 37.2 | 41.9 | 42.6 |
| 47.5° | 1602.9 | 394.4 | 54.8 | 39.5 | 32.9 | 28.2 | 27.8 | 29.3 | 30.9 | 35.2 | 36.0 |
| 50° | 1584.9 | 346.6 | 48.5 | 32.5 | 26.6 | 24.3 | 23.9 | 23.9 | 25.8 | 30.1 | 30.9 |
| 52.5° | 1540.7 | 316.9 | 42.6 | 27.0 | 21.9 | 20.7 | 19.6 | 20.0 | 21.9 | 23.9 | 24.3 |
| 55° | 1505.1 | 302.8 | 37.6 | 23.9 | 18.4 | 17.2 | 16.0 | 15.6 | 16.0 | 15.3 | 14.5 |
| 56° | 1496.5 | 301.3 | 36.4 | 23.1 | 17.6 | 16.0 | 14.5 | 13.7 | 13.3 | 11.7 | 11.3 |
| 57.5° | 1492.6 | 301.3 | 34.4 | 21.5 | 16.4 | 14.5 | 12.5 | 11.0 | 9.4 | 8.2 | 8.2 |
| 60° | 1489.5 | 303.2 | 32.1 | 18.8 | 14.1 | 11.7 | 9.0 | 6.7 | 5.5 | 5.5 | 5.5 |
| 62.5° | 1482.8 | 302.4 | 29.3 | 15.6 | 12.1 | 9.0 | 5.5 | 4.3 | 3.9 | 4.3 | 4.7 |
| 65° | 1408.1 | 280.9 | 25.8 | 12.5 | 9.4 | 6.3 | 3.1 | 3.1 | 3.5 | 4.3 | 4.7 |
| 67.5° | 1134.6 | 212.8 | 21.1 | 9.8 | 6.7 | 4.7 | 2.7 | 2.7 | 3.5 | 4.3 | 4.7 |
| 70° | 623.2 | 112.3 | 18.0 | 7.0 | 5.1 | 3.9 | 2.7 | 2.3 | 3.5 | 4.3 | 4.7 |
| 72.5° | 152.2 | 46.9 | 16.4 | 5.5 | 4.7 | 3.5 | 2.3 | 2.3 | 3.5 | 4.3 | 4.7 |
| 75° | 37.6 | 35.2 | 13.3 | 4.3 | 3.9 | 3.1 | 2.3 | 2.3 | 3.5 | 4.3 | 4.7 |
| 77.5° | 17.6 | 46.6 | 9.0 | 3.9 | 3.5 | 2.7 | 2.3 | 2.3 | 3.5 | 4.3 | 4.3 |
| 80° | 10.6 | 35.2 | 5.5 | 3.5 | 3.1 | 2.7 | 2.3 | 2.3 | 3.5 | 4.3 | 4.7 |
| 82.5° | 6.3 | 10.2 | 3.9 | 3.5 | 3.1 | 2.3 | 2.3 | 2.3 | 3.5 | 4.3 | 4.7 |
| 85° | 5.5 | 5.1 | 3.9 | 3.5 | 3.1 | 2.7 | 2.3 | 2.3 | 3.9 | 4.7 | 4.7 |
| 87.5° | 4.3 | 3.9 | 3.5 | 3.1 | 3.1 | 2.7 | 2.3 | 2.3 | 3.5 | 4.3 | 4.7 |
| 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)