

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: P197072

Luminaire Tested: **NVN-AF-02-LED-U-SL3-8030-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197072
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)
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-SL3-8030-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6817 lumens
Efficiency: N/A
Efficacy: 80.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 85
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

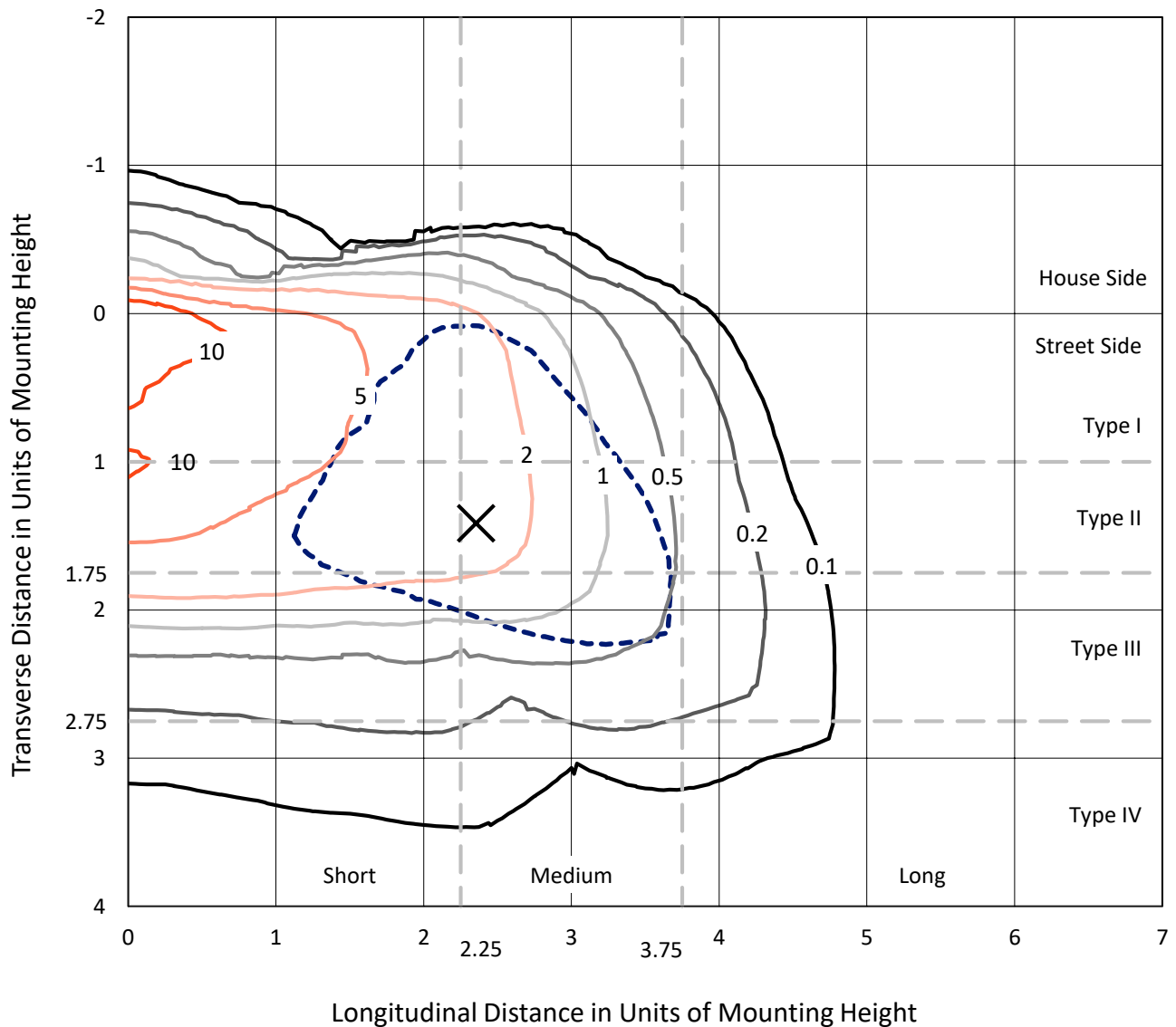


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

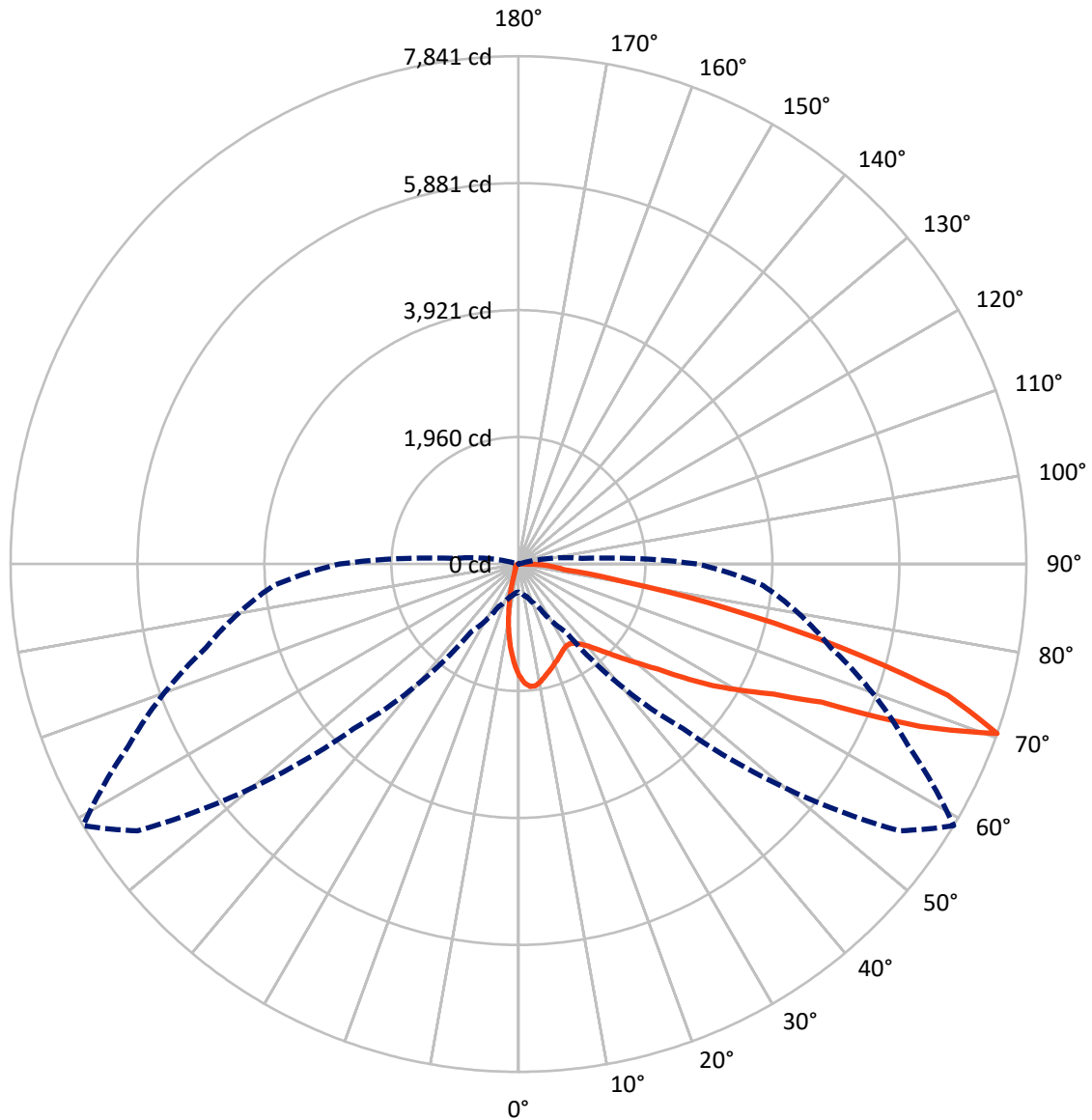


Based on 10 foot mounting height. Maximum calculated value = 18.3 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 524.0 | 0.0 | 524.0 |
| | % Fixture | 7.7 | 0.0 | 7.7 |
| Street Side | Lumens | 6293.0 | 0.0 | 6293.0 |
| | % Fixture | 92.3 | 0.0 | 92.3 |
| Total | Lumens | 6817.0 | 0.0 | 6817.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 141.7 | 2.1 |
| 10°-20° | 297.3 | 4.4 |
| 20°-30° | 402.5 | 5.9 |
| 30°-40° | 580.8 | 8.5 |
| 40°-50° | 964.6 | 14.1 |
| 50°-60° | 1475.4 | 21.6 |
| 60°-70° | 1835.1 | 26.9 |
| 70°-80° | 1014.4 | 14.9 |
| 80°-90° | 105.2 | 1.5 |
| 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° | 6817.0 | 100.0 |
| 0°-180° | 6817.0 | 100.0 |



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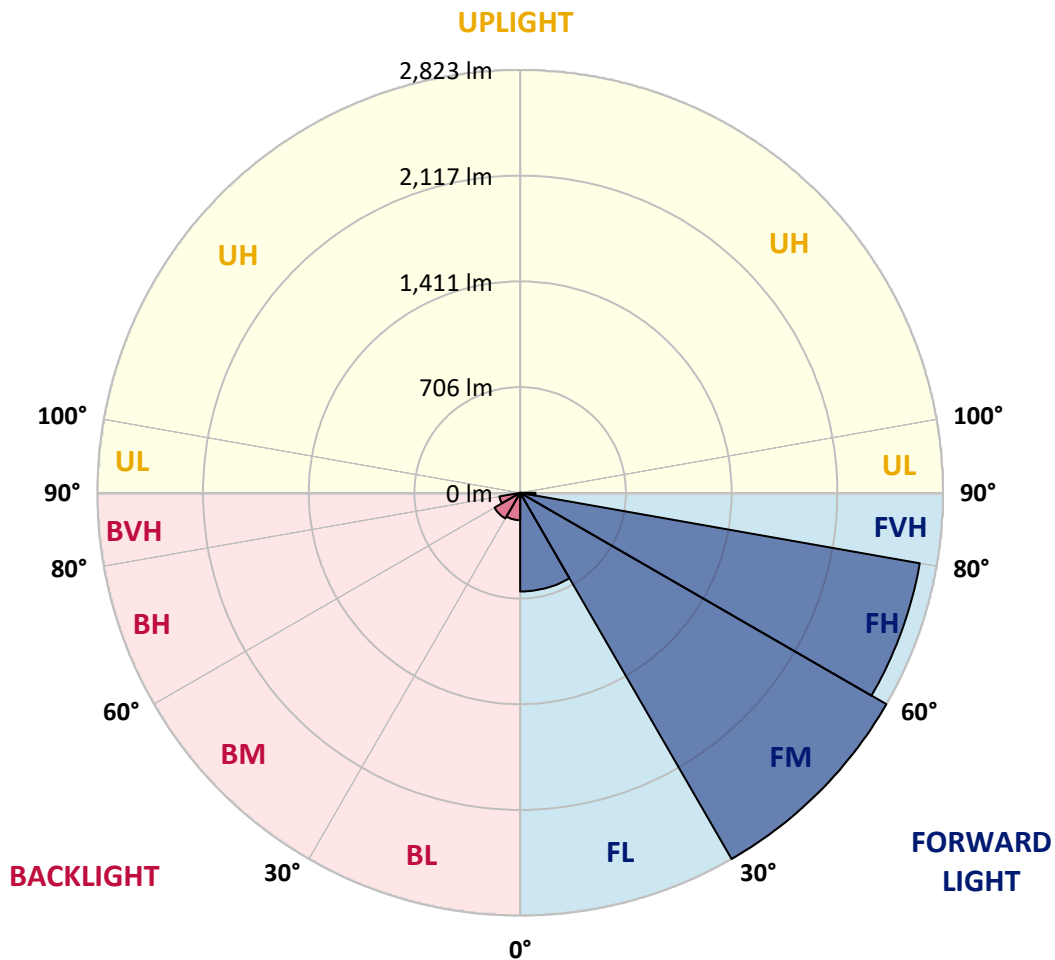
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 658.9 | 9.7 | | | |
| FM (30°-60°) | 2823.0 | 41.4 | | | |
| FH (60°-80°) | 2708.9 | 39.7 | | | G2/5000 |
| FVH (80°-90°) | 102.1 | 1.5 | | | G2/225 |
| BL (0°-30°) | 182.6 | 2.7 | B1/500 | | |
| BM (30°-60°) | 197.8 | 2.9 | B0/220 | | |
| BH (60°-80°) | 140.6 | 2.1 | B1/500 | | G1/500 |
| BVH (80°-90°) | 3.0 | 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 III Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 59° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1723.8 | 1723.8 | 1723.8 | 1723.8 | 1723.8 | 1723.8 | 1723.8 | 1723.8 | 1723.8 | 1723.8 | 1723.8 |
| 2.5° | 1948.5 | 1945.4 | 1932.6 | 1930.0 | 1915.6 | 1886.8 | 1853.4 | 1840.0 | 1812.7 | 1769.5 | 1721.7 |
| 5° | 1980.9 | 1982.4 | 1983.5 | 1977.8 | 1975.8 | 1952.1 | 1915.1 | 1899.1 | 1862.6 | 1791.7 | 1704.2 |
| 7.5° | 1859.5 | 1863.7 | 1876.5 | 1882.2 | 1906.8 | 1916.1 | 1908.4 | 1898.1 | 1869.3 | 1785.5 | 1662.6 |
| 10° | 1731.5 | 1739.2 | 1753.1 | 1762.3 | 1792.7 | 1817.4 | 1848.7 | 1851.3 | 1845.1 | 1764.9 | 1615.8 |
| 12.5° | 1621.4 | 1628.6 | 1644.1 | 1662.6 | 1693.4 | 1725.3 | 1772.1 | 1788.6 | 1809.1 | 1751.5 | 1582.4 |
| 15° | 1526.8 | 1528.9 | 1543.8 | 1566.9 | 1607.6 | 1651.3 | 1706.8 | 1731.0 | 1771.1 | 1746.4 | 1556.6 |
| 17.5° | 1444.0 | 1444.5 | 1454.3 | 1475.4 | 1524.8 | 1582.4 | 1647.2 | 1679.0 | 1729.9 | 1739.2 | 1534.0 |
| 20° | 1389.5 | 1389.0 | 1389.5 | 1400.8 | 1444.5 | 1512.9 | 1591.6 | 1625.0 | 1690.3 | 1730.5 | 1510.9 |
| 22.5° | 1371.0 | 1368.4 | 1356.6 | 1352.5 | 1380.3 | 1440.4 | 1534.5 | 1578.2 | 1654.9 | 1727.9 | 1493.9 |
| 25° | 1393.6 | 1392.1 | 1366.9 | 1343.2 | 1345.8 | 1383.3 | 1476.4 | 1529.9 | 1627.1 | 1737.1 | 1489.8 |
| 27.5° | 1466.6 | 1463.6 | 1425.0 | 1378.7 | 1349.4 | 1356.1 | 1433.2 | 1489.3 | 1605.0 | 1759.8 | 1495.4 |
| 30° | 1562.3 | 1562.8 | 1521.7 | 1465.6 | 1396.7 | 1358.7 | 1410.1 | 1463.0 | 1590.1 | 1793.7 | 1507.8 |
| 32.5° | 1668.7 | 1668.2 | 1638.9 | 1574.1 | 1486.2 | 1406.0 | 1420.4 | 1465.1 | 1592.1 | 1843.6 | 1531.4 |
| 35° | 1778.8 | 1773.1 | 1763.4 | 1706.3 | 1603.4 | 1488.8 | 1467.2 | 1500.1 | 1613.7 | 1909.4 | 1571.6 |
| 37.5° | 1905.8 | 1903.8 | 1913.5 | 1853.4 | 1748.5 | 1610.6 | 1549.4 | 1571.6 | 1668.2 | 2006.6 | 1636.4 |
| 40° | 2107.9 | 2096.6 | 2101.2 | 2019.5 | 1912.0 | 1774.7 | 1664.6 | 1670.3 | 1755.1 | 2135.2 | 1738.7 |
| 42.5° | 2493.1 | 2447.3 | 2361.4 | 2208.2 | 2092.0 | 1956.7 | 1815.3 | 1805.5 | 1878.0 | 2291.0 | 1873.4 |
| 45° | 2953.4 | 2900.9 | 2684.4 | 2416.5 | 2272.0 | 2152.1 | 2001.5 | 1975.2 | 2029.2 | 2476.6 | 2047.2 |
| 47.5° | 3337.5 | 3280.9 | 2994.0 | 2634.0 | 2455.0 | 2353.7 | 2207.7 | 2176.8 | 2210.3 | 2692.1 | 2256.0 |
| 50° | 3468.6 | 3437.3 | 3185.3 | 2815.0 | 2639.7 | 2580.0 | 2466.4 | 2414.9 | 2423.2 | 2924.6 | 2499.8 |
| 52.5° | 3408.5 | 3397.7 | 3229.0 | 2939.0 | 2810.4 | 2829.9 | 2749.7 | 2695.7 | 2686.5 | 3178.6 | 2769.2 |
| 55° | 3281.4 | 3276.3 | 3194.0 | 3007.9 | 2961.1 | 3058.8 | 3147.2 | 3100.4 | 3013.0 | 3448.6 | 2991.9 |
| 57.5° | 3099.9 | 3119.5 | 3178.6 | 3140.5 | 3146.2 | 3300.5 | 3516.5 | 3540.6 | 3410.0 | 3663.5 | 3157.0 |
| 60° | 2615.0 | 2667.4 | 2938.4 | 3283.0 | 3546.8 | 3702.6 | 3911.9 | 3957.2 | 3746.3 | 3810.6 | 3347.8 |
| 62.5° | 1933.1 | 2008.2 | 2394.4 | 3027.4 | 3767.4 | 4467.3 | 4438.0 | 4417.9 | 4067.2 | 4007.6 | 3694.9 |
| 65° | 1135.5 | 1223.4 | 1550.0 | 2365.6 | 3434.7 | 4958.9 | 5420.2 | 5142.5 | 4556.3 | 4416.9 | 4247.7 |
| 67.5° | 565.7 | 566.2 | 713.8 | 1248.6 | 2538.3 | 4615.9 | 6854.0 | 6693.5 | 5596.1 | 5020.1 | 4465.8 |
| 70° | 435.1 | 446.9 | 528.1 | 725.6 | 1283.6 | 3595.1 | 7182.6 | 7841.3 | 6641.1 | 4993.4 | 3789.0 |
| 72.5° | 368.7 | 376.4 | 470.0 | 631.5 | 959.6 | 1973.7 | 6217.8 | 6931.1 | 6337.1 | 4218.9 | 2792.9 |
| 75° | 265.4 | 271.5 | 416.0 | 572.9 | 883.5 | 979.1 | 4265.2 | 5140.5 | 4754.8 | 2967.8 | 1537.1 |
| 77.5° | 65.8 | 65.3 | 145.0 | 464.9 | 790.4 | 815.6 | 2447.3 | 3296.4 | 2728.1 | 1215.2 | 394.9 |
| 80° | 29.3 | 28.3 | 32.9 | 97.7 | 735.4 | 769.8 | 1076.3 | 1664.6 | 1046.5 | 197.0 | 120.8 |
| 82.5° | 20.6 | 19.5 | 20.6 | 36.0 | 245.8 | 714.3 | 650.5 | 721.5 | 383.1 | 67.4 | 51.4 |
| 85° | 6.7 | 6.2 | 11.3 | 30.3 | 68.9 | 411.9 | 634.6 | 538.9 | 284.9 | 28.8 | 34.5 |
| 87.5° | 1.0 | 1.0 | 4.1 | 16.5 | 20.1 | 137.3 | 372.3 | 373.3 | 128.0 | 17.0 | 15.4 |
| 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° | 1723.8 | 1723.8 | 1723.8 | 1723.8 | 1723.8 | 1723.8 | 1723.8 | 1723.8 | 1723.8 | 1723.8 | 1723.8 |
| 2.5° | 1697.5 | 1667.2 | 1624.5 | 1581.8 | 1543.3 | 1503.7 | 1471.8 | 1456.9 | 1450.2 | 1440.9 | 1420.9 |
| 5° | 1658.5 | 1603.4 | 1509.8 | 1417.8 | 1331.9 | 1249.6 | 1179.2 | 1139.1 | 1095.9 | 1093.8 | 1072.7 |
| 7.5° | 1595.7 | 1517.6 | 1370.0 | 1227.0 | 1095.9 | 970.4 | 862.4 | 792.5 | 744.6 | 714.8 | 694.2 |
| 10° | 1525.8 | 1425.5 | 1230.1 | 1029.0 | 850.6 | 682.9 | 544.1 | 453.6 | 398.5 | 370.8 | 354.8 |
| 12.5° | 1470.2 | 1344.3 | 1092.3 | 839.3 | 615.6 | 423.2 | 294.2 | 228.3 | 199.0 | 187.7 | 182.6 |
| 15° | 1422.4 | 1269.7 | 963.2 | 669.6 | 410.9 | 243.2 | 170.2 | 148.6 | 144.0 | 144.0 | 143.5 |
| 17.5° | 1374.1 | 1197.7 | 837.7 | 502.9 | 258.7 | 159.4 | 134.2 | 131.1 | 131.6 | 133.2 | 133.2 |
| 20° | 1328.3 | 1129.3 | 716.9 | 358.4 | 169.7 | 127.5 | 121.9 | 120.8 | 122.4 | 124.4 | 123.9 |
| 22.5° | 1291.3 | 1069.1 | 603.7 | 246.3 | 130.6 | 115.7 | 112.1 | 110.6 | 111.6 | 113.1 | 112.6 |
| 25° | 1265.1 | 1017.7 | 499.9 | 171.8 | 113.6 | 105.4 | 101.3 | 99.3 | 98.2 | 99.3 | 98.7 |
| 27.5° | 1249.1 | 974.5 | 402.1 | 129.1 | 101.8 | 95.1 | 90.0 | 85.9 | 83.3 | 83.3 | 82.3 |
| 30° | 1238.8 | 933.9 | 315.2 | 107.0 | 92.1 | 84.9 | 77.7 | 72.0 | 67.9 | 66.9 | 66.3 |
| 32.5° | 1238.3 | 898.9 | 235.5 | 94.6 | 82.8 | 74.6 | 65.8 | 58.6 | 54.0 | 53.0 | 52.5 |
| 35° | 1251.2 | 870.6 | 173.3 | 85.4 | 74.6 | 64.8 | 55.0 | 47.3 | 43.2 | 43.2 | 42.7 |
| 37.5° | 1284.6 | 854.2 | 131.1 | 78.2 | 67.9 | 56.6 | 46.3 | 39.1 | 35.5 | 36.5 | 36.5 |
| 40° | 1346.8 | 851.1 | 107.0 | 72.5 | 62.2 | 49.4 | 37.5 | 31.9 | 30.3 | 31.9 | 31.9 |
| 42.5° | 1442.0 | 867.5 | 95.1 | 68.4 | 57.1 | 42.2 | 31.4 | 27.3 | 26.7 | 28.3 | 28.3 |
| 45° | 1565.9 | 899.9 | 88.5 | 64.8 | 51.4 | 35.0 | 26.2 | 23.7 | 23.1 | 25.2 | 25.2 |
| 47.5° | 1716.1 | 943.7 | 82.3 | 60.7 | 45.8 | 28.8 | 22.1 | 20.1 | 20.1 | 22.1 | 22.6 |
| 50° | 1894.0 | 1002.8 | 76.1 | 56.6 | 41.1 | 24.2 | 18.5 | 17.0 | 17.5 | 19.5 | 20.1 |
| 52.5° | 2098.7 | 1075.3 | 70.5 | 53.0 | 36.0 | 19.5 | 15.4 | 14.4 | 14.9 | 17.0 | 17.5 |
| 55° | 2275.1 | 1138.6 | 63.8 | 49.4 | 29.3 | 15.9 | 12.9 | 12.3 | 12.9 | 15.4 | 15.4 |
| 57.5° | 2428.8 | 1199.2 | 57.6 | 43.7 | 23.1 | 12.9 | 10.3 | 10.3 | 11.3 | 13.9 | 14.4 |
| 60° | 2633.0 | 1294.9 | 52.5 | 37.0 | 17.5 | 9.8 | 8.2 | 8.7 | 10.3 | 12.3 | 12.9 |
| 62.5° | 2994.5 | 1457.4 | 45.8 | 30.9 | 12.9 | 7.7 | 6.7 | 7.2 | 9.3 | 11.8 | 12.3 |
| 65° | 3447.0 | 1611.2 | 38.1 | 25.7 | 9.8 | 5.7 | 5.1 | 6.7 | 9.3 | 11.8 | 12.3 |
| 67.5° | 3400.8 | 1401.3 | 29.8 | 20.6 | 7.2 | 4.6 | 4.1 | 6.2 | 8.7 | 11.8 | 12.3 |
| 70° | 2757.9 | 982.2 | 22.1 | 13.9 | 5.7 | 4.1 | 4.1 | 6.2 | 8.7 | 11.3 | 11.8 |
| 72.5° | 1913.0 | 546.7 | 17.0 | 9.3 | 5.1 | 4.1 | 3.6 | 5.7 | 8.2 | 11.3 | 11.8 |
| 75° | 910.2 | 167.6 | 13.4 | 6.7 | 4.6 | 3.6 | 3.1 | 5.7 | 8.2 | 11.3 | 11.8 |
| 77.5° | 174.8 | 42.7 | 10.8 | 5.7 | 4.1 | 3.6 | 3.1 | 5.1 | 8.2 | 10.8 | 11.3 |
| 80° | 59.1 | 19.0 | 8.7 | 5.1 | 4.1 | 3.6 | 3.1 | 5.1 | 7.7 | 10.3 | 10.8 |
| 82.5° | 32.4 | 10.8 | 7.7 | 4.6 | 4.1 | 3.1 | 2.6 | 4.6 | 7.2 | 10.3 | 10.8 |
| 85° | 25.2 | 7.7 | 6.2 | 4.6 | 4.1 | 3.1 | 2.6 | 4.6 | 7.2 | 9.8 | 10.3 |
| 87.5° | 12.9 | 5.7 | 5.1 | 4.6 | 4.1 | 3.1 | 2.6 | 4.1 | 6.7 | 9.3 | 10.3 |
| 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)