

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: P198727

Luminaire Tested: **XNV2-AF-02-LED-U-SL4-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198727
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24285)
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-HSS
Description: XNV2 ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10049.5 lumens
Efficiency: N/A
Efficacy: 90.5 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 - G2

Input Watts (W): 111
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

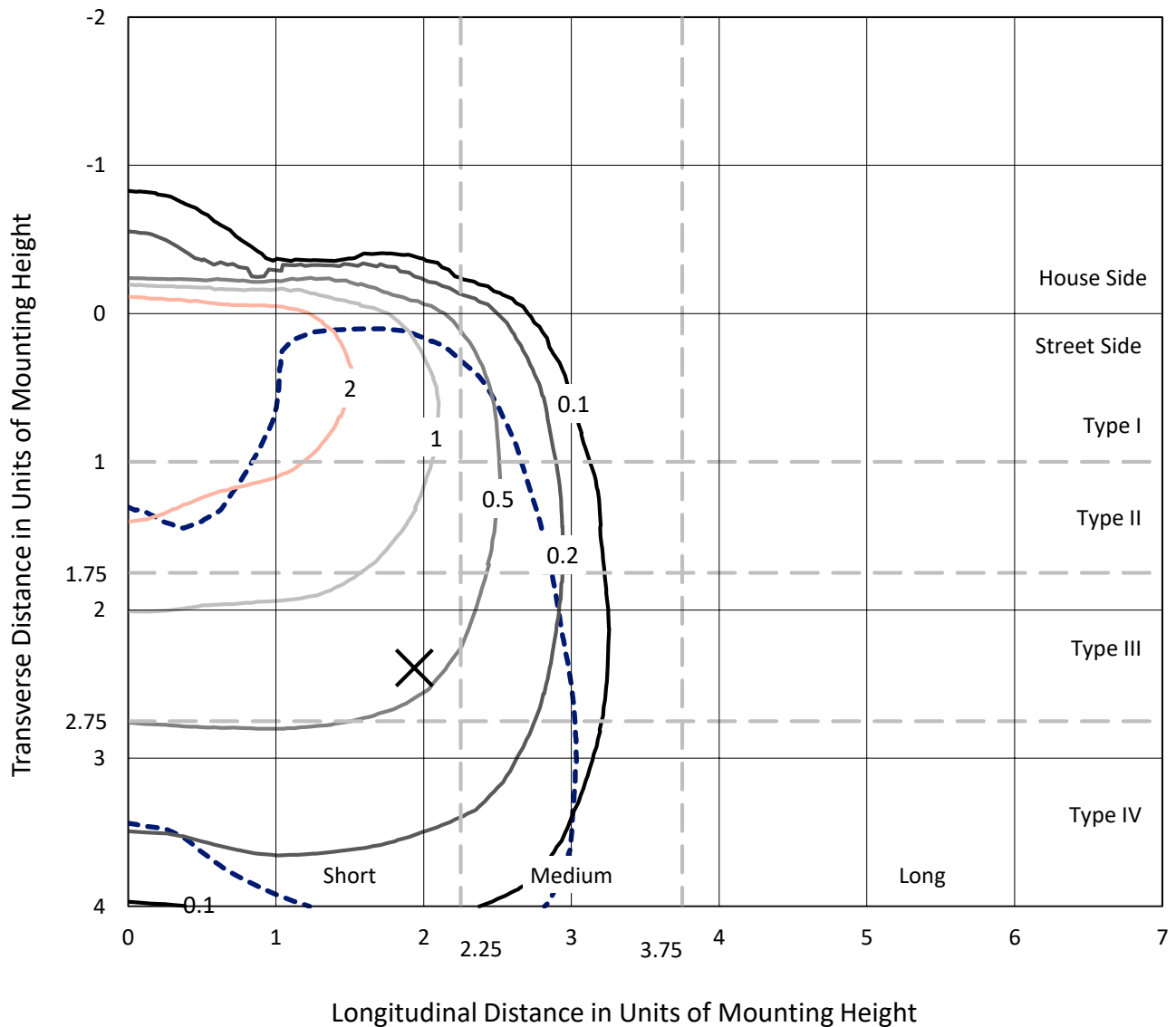


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

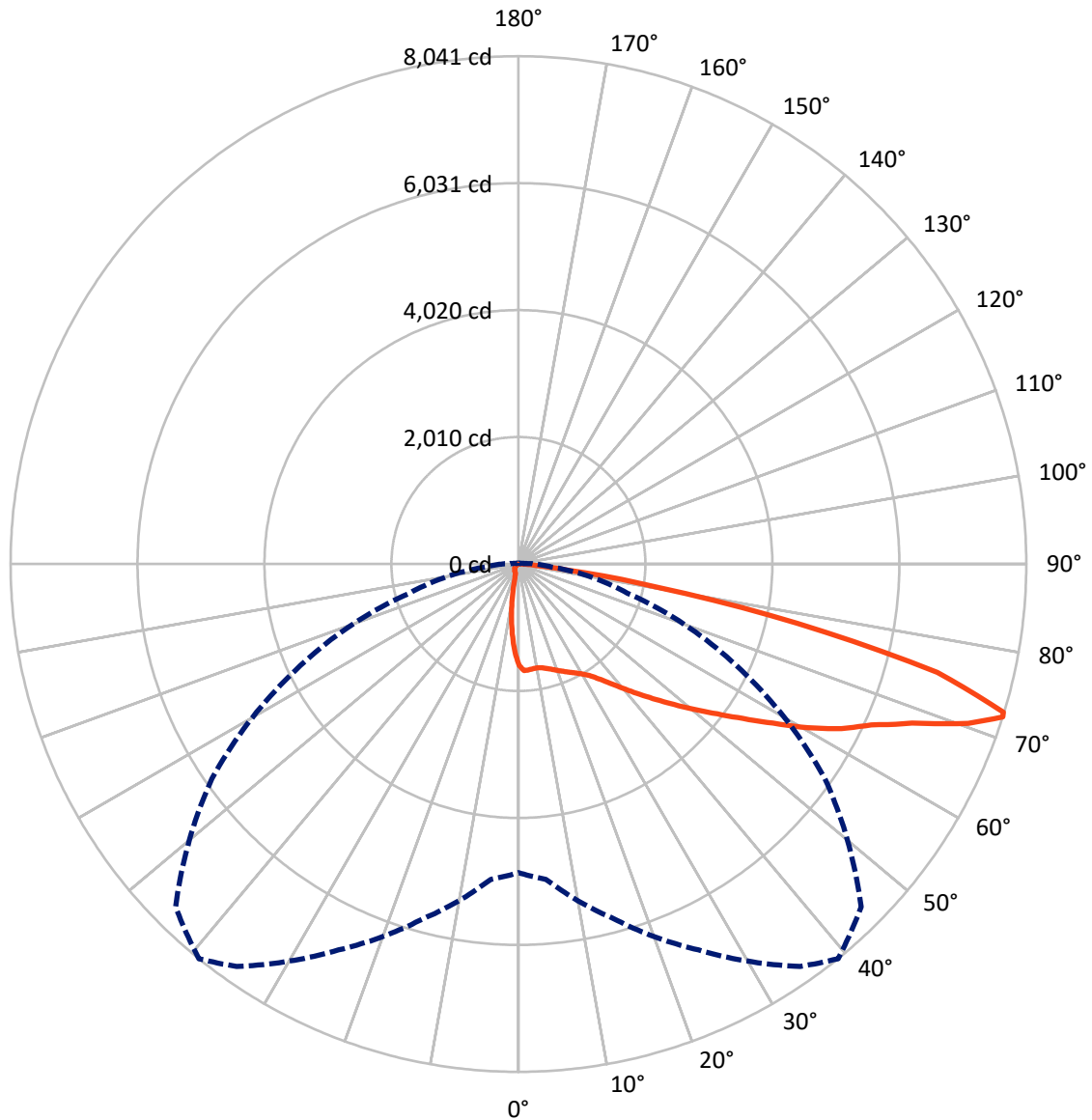


Based on 20 foot mounting height. Maximum calculated value = 4.2 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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

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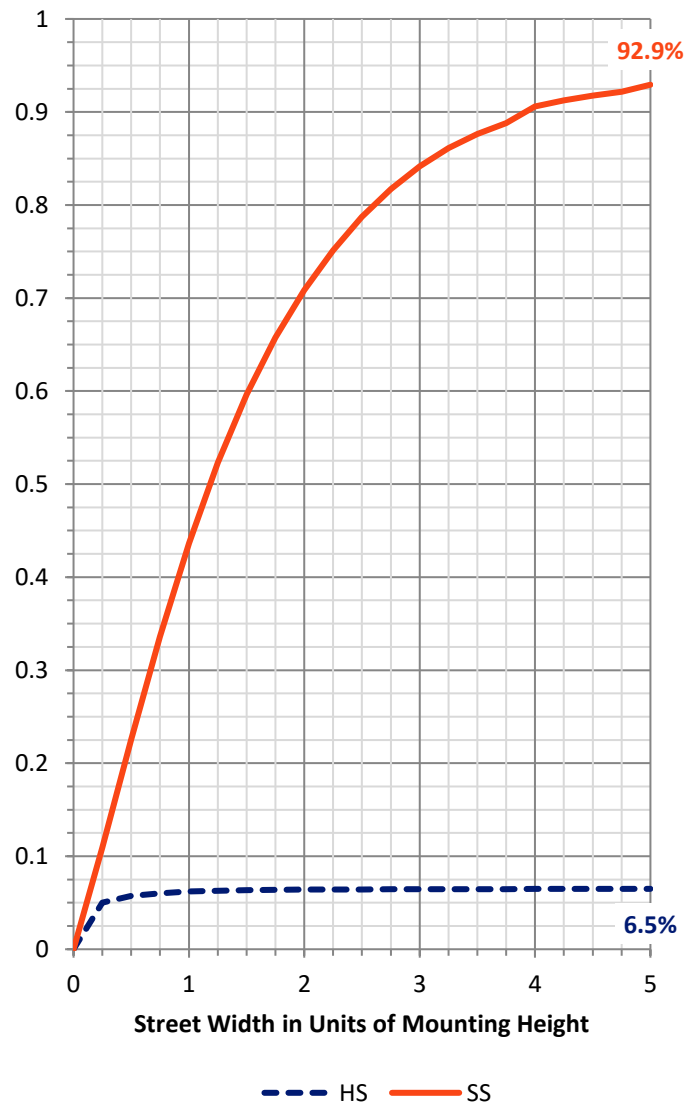
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 658.6 | 0.0 | 658.6 |
| | % Fixture | 6.6 | 0.0 | 6.6 |
| Street Side | Lumens | 9390.9 | 0.0 | 9390.9 |
| | % Fixture | 93.4 | 0.0 | 93.4 |
| Total | Lumens | 10049.5 | 0.0 | 10049.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 130.8 | 1.3 |
| 10°-20° | 316.7 | 3.2 |
| 20°-30° | 526.0 | 5.2 |
| 30°-40° | 838.4 | 8.3 |
| 40°-50° | 1383.9 | 13.8 |
| 50°-60° | 2090.0 | 20.8 |
| 60°-70° | 2722.5 | 27.1 |
| 70°-80° | 1839.6 | 18.3 |
| 80°-90° | 201.5 | 2.0 |
| 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° | 10049.5 | 100.0 |
| 0°-180° | 10049.5 | 100.0 |

Coefficient of Utilization



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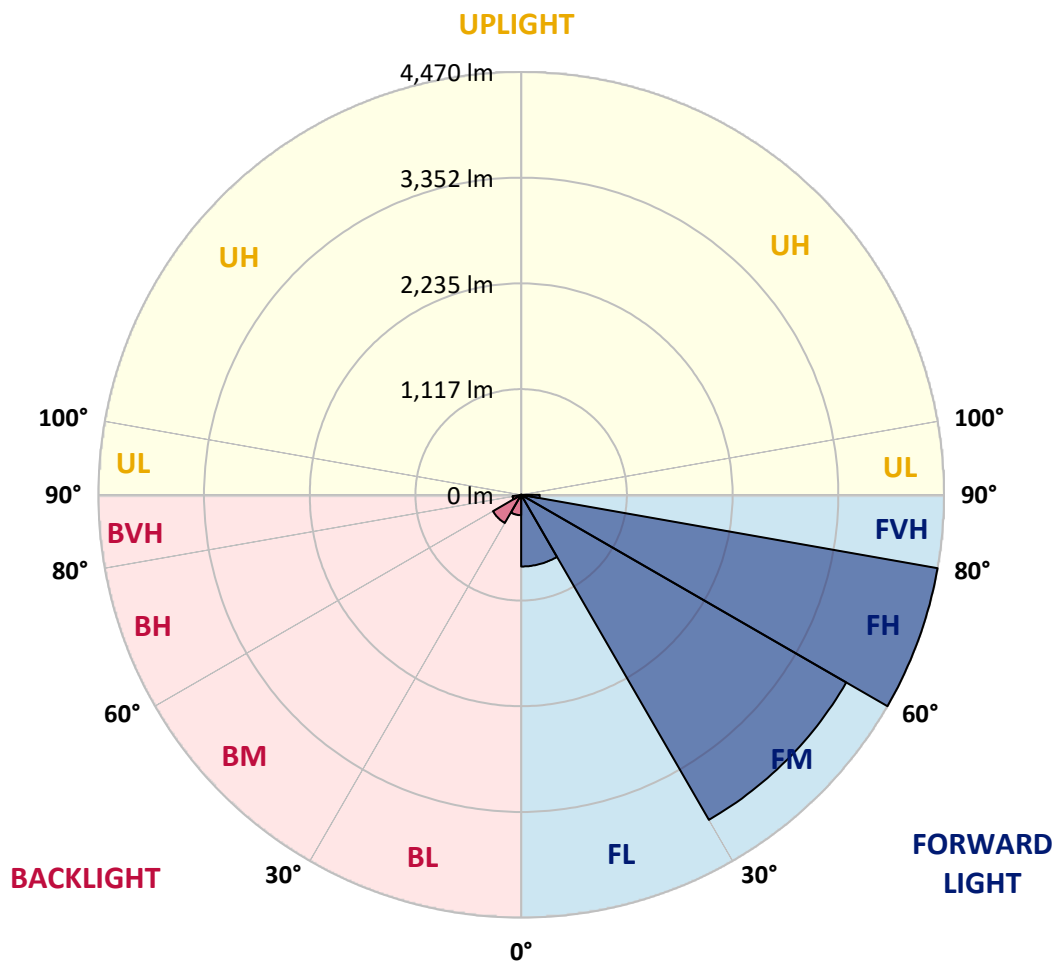
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 758.0 | 7.5 | | | |
| FM | (30°-60°) | 3967.7 | 39.5 | | | |
| FH | (60°-80°) | 4469.5 | 44.5 | | | G2/5000 |
| FVH | (80°-90°) | 195.7 | 1.9 | | | G2/225 |
| BL | (0°-30°) | 215.7 | 2.1 | B1/500 | | |
| BM | (30°-60°) | 344.6 | 3.4 | B1/1000 | | |
| BH | (60°-80°) | 92.6 | 0.9 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 5.8 | 0.1 | | | 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 IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 39° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1608.5 | 1608.5 | 1608.5 | 1608.5 | 1608.5 | 1608.5 | 1608.5 | 1608.5 | 1608.5 | 1608.5 | 1608.5 |
| 2.5° | 1712.7 | 1715.9 | 1712.0 | 1704.8 | 1694.6 | 1688.3 | 1679.6 | 1660.7 | 1636.9 | 1616.4 | 1592.6 |
| 5° | 1726.2 | 1727.8 | 1723.1 | 1709.6 | 1693.8 | 1685.1 | 1674.1 | 1653.5 | 1629.0 | 1600.6 | 1558.0 |
| 7.5° | 1730.1 | 1729.4 | 1723.8 | 1707.2 | 1682.8 | 1671.7 | 1652.7 | 1627.4 | 1602.1 | 1576.1 | 1527.9 |
| 10° | 1728.6 | 1728.6 | 1724.6 | 1708.8 | 1681.1 | 1670.9 | 1649.6 | 1622.7 | 1591.1 | 1565.0 | 1513.7 |
| 12.5° | 1723.1 | 1726.2 | 1723.8 | 1715.2 | 1694.6 | 1686.7 | 1667.7 | 1640.9 | 1610.8 | 1584.0 | 1529.5 |
| 15° | 1730.1 | 1734.9 | 1739.6 | 1736.5 | 1724.6 | 1717.5 | 1700.1 | 1672.5 | 1648.0 | 1619.5 | 1561.1 |
| 17.5° | 1758.6 | 1768.9 | 1779.9 | 1780.8 | 1768.1 | 1755.4 | 1735.6 | 1707.2 | 1683.6 | 1657.5 | 1594.3 |
| 20° | 1812.3 | 1820.2 | 1840.7 | 1844.7 | 1819.4 | 1801.2 | 1773.6 | 1740.4 | 1716.7 | 1694.6 | 1625.1 |
| 22.5° | 1892.0 | 1900.7 | 1917.4 | 1911.9 | 1869.2 | 1847.9 | 1813.1 | 1775.1 | 1750.7 | 1738.1 | 1660.7 |
| 25° | 2013.0 | 2015.3 | 2019.3 | 1994.8 | 1924.5 | 1900.7 | 1858.1 | 1815.4 | 1795.7 | 1794.2 | 1711.2 |
| 27.5° | 2155.2 | 2158.3 | 2140.9 | 2086.4 | 1986.2 | 1955.3 | 1907.1 | 1868.4 | 1858.9 | 1870.8 | 1775.1 |
| 30° | 2317.9 | 2318.7 | 2270.5 | 2182.1 | 2057.3 | 2023.3 | 1973.5 | 1930.8 | 1939.5 | 1968.8 | 1857.4 |
| 32.5° | 2484.6 | 2476.7 | 2410.4 | 2295.0 | 2154.4 | 2113.3 | 2070.7 | 2028.0 | 2053.3 | 2112.5 | 1977.5 |
| 35° | 2637.1 | 2633.9 | 2555.7 | 2421.4 | 2280.8 | 2244.5 | 2213.7 | 2168.7 | 2209.7 | 2306.0 | 2140.9 |
| 37.5° | 2789.6 | 2787.2 | 2697.9 | 2558.1 | 2436.5 | 2410.4 | 2387.5 | 2352.7 | 2419.8 | 2561.3 | 2359.7 |
| 40° | 2957.9 | 2953.9 | 2844.1 | 2709.8 | 2617.3 | 2603.1 | 2589.7 | 2574.7 | 2689.2 | 2885.9 | 2632.4 |
| 42.5° | 3165.6 | 3148.2 | 2998.9 | 2874.9 | 2816.4 | 2820.4 | 2821.2 | 2836.1 | 3015.6 | 3272.3 | 2953.9 |
| 45° | 3404.2 | 3365.5 | 3154.6 | 3051.9 | 3035.3 | 3058.9 | 3082.7 | 3145.1 | 3395.5 | 3717.1 | 3309.3 |
| 47.5° | 3635.7 | 3573.3 | 3333.9 | 3242.2 | 3276.2 | 3325.2 | 3382.1 | 3503.7 | 3822.2 | 4182.3 | 3631.7 |
| 50° | 3834.7 | 3770.8 | 3511.7 | 3435.8 | 3544.0 | 3616.7 | 3717.8 | 3901.9 | 4272.5 | 4575.8 | 3834.7 |
| 52.5° | 3991.1 | 3940.6 | 3699.7 | 3649.1 | 3841.1 | 3940.6 | 4099.4 | 4341.2 | 4697.5 | 4835.0 | 3976.9 |
| 55° | 4106.5 | 4081.3 | 3879.7 | 3886.9 | 4171.3 | 4315.1 | 4512.6 | 4786.0 | 5056.1 | 5036.4 | 4083.6 |
| 57.5° | 4236.9 | 4217.1 | 4068.6 | 4167.4 | 4568.7 | 4754.4 | 4982.7 | 5202.3 | 5316.9 | 5198.3 | 4187.9 |
| 60° | 4370.4 | 4376.7 | 4297.7 | 4507.0 | 5060.1 | 5265.5 | 5464.6 | 5519.1 | 5540.4 | 5362.6 | 4297.7 |
| 62.5° | 4471.5 | 4498.4 | 4505.5 | 4873.6 | 5564.1 | 5739.5 | 5825.6 | 5786.9 | 5782.1 | 5583.1 | 4289.0 |
| 65° | 4587.6 | 4658.0 | 4774.9 | 5275.8 | 6022.3 | 6137.7 | 6199.3 | 6255.3 | 6136.9 | 5648.6 | 3867.2 |
| 67.5° | 4788.3 | 4898.9 | 5162.0 | 5768.7 | 6551.7 | 6722.3 | 6896.8 | 6837.6 | 6189.8 | 4982.7 | 2946.0 |
| 70° | 5058.5 | 5193.6 | 5658.1 | 6412.6 | 7269.8 | 7555.7 | 7701.9 | 6791.1 | 5255.2 | 3442.9 | 1554.0 |
| 72° | 4887.9 | 5010.3 | 5811.4 | 6741.2 | 7778.5 | 8040.8 | 7675.1 | 5923.6 | 3809.5 | 1784.6 | 520.6 |
| 72.5° | 4721.9 | 4848.4 | 5762.4 | 6737.3 | 7829.2 | 8029.8 | 7500.5 | 5581.5 | 3371.0 | 1388.9 | 358.6 |
| 75° | 3276.2 | 3435.8 | 4940.0 | 6056.3 | 7069.9 | 6849.5 | 5738.8 | 3379.7 | 1221.4 | 238.6 | 118.5 |
| 77.5° | 1693.8 | 1817.1 | 2996.5 | 4279.5 | 4927.3 | 4512.6 | 3391.6 | 1466.3 | 338.1 | 126.4 | 78.3 |
| 80° | 1050.0 | 1110.7 | 1401.5 | 2108.6 | 2559.6 | 2238.9 | 1496.3 | 592.5 | 216.5 | 75.1 | 62.4 |
| 82.5° | 543.5 | 590.1 | 882.5 | 850.9 | 945.6 | 786.0 | 552.2 | 496.1 | 133.5 | 46.6 | 64.0 |
| 85° | 178.5 | 189.7 | 542.0 | 565.7 | 404.5 | 271.8 | 244.9 | 473.2 | 38.7 | 30.0 | 54.5 |
| 87.5° | 23.7 | 27.6 | 190.4 | 323.9 | 199.1 | 123.3 | 146.9 | 166.7 | 13.4 | 16.6 | 15.0 |
| 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° | 1608.5 | 1608.5 | 1608.5 | 1608.5 | 1608.5 | 1608.5 | 1608.5 | 1608.5 | 1608.5 | 1608.5 | 1608.5 |
| 2.5° | 1576.9 | 1566.6 | 1534.2 | 1501.8 | 1464.7 | 1430.7 | 1403.9 | 1386.5 | 1394.4 | 1368.3 | 1372.3 |
| 5° | 1531.9 | 1505.8 | 1434.7 | 1358.1 | 1275.1 | 1197.7 | 1136.1 | 1090.3 | 1081.6 | 1042.1 | 1043.6 |
| 7.5° | 1488.4 | 1445.7 | 1330.3 | 1204.0 | 1066.5 | 955.1 | 854.1 | 765.6 | 734.0 | 701.5 | 682.6 |
| 10° | 1464.7 | 1406.3 | 1242.7 | 1058.7 | 865.1 | 701.5 | 559.3 | 448.0 | 401.3 | 367.3 | 350.8 |
| 12.5° | 1471.8 | 1394.4 | 1177.1 | 926.7 | 672.3 | 464.5 | 316.0 | 234.7 | 206.2 | 190.4 | 184.8 |
| 15° | 1495.6 | 1396.7 | 1117.9 | 797.9 | 489.1 | 281.2 | 185.7 | 158.8 | 156.4 | 155.6 | 154.9 |
| 17.5° | 1517.6 | 1399.1 | 1055.5 | 663.6 | 327.0 | 179.3 | 149.4 | 146.9 | 146.9 | 146.9 | 146.9 |
| 20° | 1540.6 | 1399.9 | 986.7 | 523.0 | 214.9 | 146.9 | 140.7 | 139.0 | 140.7 | 140.7 | 140.7 |
| 22.5° | 1567.4 | 1405.4 | 920.3 | 386.4 | 158.8 | 138.3 | 134.3 | 133.5 | 134.3 | 134.3 | 133.5 |
| 25° | 1600.6 | 1417.3 | 848.4 | 276.5 | 143.8 | 132.7 | 128.8 | 128.0 | 128.8 | 128.0 | 128.0 |
| 27.5° | 1644.8 | 1433.1 | 764.8 | 198.2 | 137.5 | 127.2 | 123.3 | 123.3 | 123.3 | 122.4 | 122.4 |
| 30° | 1701.7 | 1452.1 | 652.5 | 156.4 | 131.1 | 121.6 | 118.5 | 118.5 | 117.7 | 116.9 | 116.9 |
| 32.5° | 1783.1 | 1482.9 | 530.1 | 141.4 | 124.1 | 114.6 | 111.4 | 112.2 | 111.4 | 110.6 | 109.8 |
| 35° | 1898.4 | 1531.1 | 409.2 | 133.5 | 116.9 | 107.4 | 104.2 | 104.2 | 104.2 | 102.7 | 102.7 |
| 37.5° | 2062.0 | 1604.5 | 306.6 | 125.6 | 109.8 | 100.4 | 96.4 | 96.4 | 95.5 | 94.0 | 94.8 |
| 40° | 2264.2 | 1697.0 | 222.0 | 118.5 | 102.7 | 92.5 | 89.3 | 87.7 | 86.1 | 84.5 | 84.5 |
| 42.5° | 2507.6 | 1787.0 | 166.7 | 111.4 | 95.5 | 86.1 | 82.1 | 80.6 | 77.4 | 75.8 | 75.1 |
| 45° | 2780.1 | 1882.6 | 138.3 | 102.7 | 87.7 | 79.0 | 75.8 | 72.7 | 68.7 | 66.4 | 65.6 |
| 47.5° | 3009.9 | 1941.0 | 123.3 | 94.0 | 79.8 | 71.9 | 68.7 | 64.0 | 59.2 | 57.7 | 57.7 |
| 50° | 3148.2 | 1916.6 | 110.6 | 85.3 | 71.9 | 64.8 | 60.9 | 54.5 | 51.4 | 49.8 | 49.0 |
| 52.5° | 3225.7 | 1843.9 | 100.4 | 78.3 | 64.8 | 56.9 | 51.4 | 45.8 | 44.2 | 42.7 | 42.7 |
| 55° | 3278.6 | 1738.8 | 89.3 | 71.1 | 58.4 | 49.8 | 43.5 | 39.5 | 38.0 | 37.1 | 36.3 |
| 57.5° | 3329.2 | 1610.8 | 79.0 | 64.8 | 52.2 | 44.2 | 37.1 | 35.6 | 32.4 | 31.6 | 31.6 |
| 60° | 3344.1 | 1434.7 | 69.6 | 57.7 | 46.6 | 38.7 | 32.4 | 30.0 | 26.9 | 26.1 | 26.1 |
| 62.5° | 3152.9 | 1141.6 | 61.6 | 49.0 | 41.1 | 33.1 | 28.4 | 25.3 | 22.1 | 22.1 | 22.1 |
| 65° | 2634.7 | 775.0 | 52.9 | 42.7 | 36.3 | 28.4 | 24.4 | 20.6 | 18.9 | 18.9 | 18.9 |
| 67.5° | 1835.2 | 432.1 | 45.0 | 36.3 | 30.8 | 23.7 | 20.6 | 17.4 | 16.6 | 17.4 | 17.4 |
| 70° | 827.2 | 171.4 | 38.0 | 30.0 | 25.3 | 19.7 | 17.4 | 15.0 | 16.6 | 16.6 | 16.6 |
| 72° | 248.1 | 91.7 | 31.6 | 24.4 | 20.6 | 17.4 | 15.0 | 14.2 | 15.8 | 16.6 | 16.6 |
| 72.5° | 184.0 | 82.1 | 30.0 | 23.7 | 20.6 | 16.6 | 14.2 | 14.2 | 15.8 | 16.6 | 16.6 |
| 75° | 94.8 | 56.1 | 22.9 | 17.4 | 15.0 | 13.4 | 11.9 | 13.4 | 15.8 | 15.8 | 15.8 |
| 77.5° | 74.3 | 45.8 | 18.9 | 13.4 | 12.7 | 11.9 | 11.0 | 12.7 | 14.2 | 14.2 | 14.2 |
| 80° | 69.6 | 30.0 | 15.0 | 12.7 | 11.0 | 10.2 | 10.2 | 11.0 | 12.7 | 13.4 | 13.4 |
| 82.5° | 70.3 | 24.4 | 13.4 | 11.9 | 10.2 | 9.5 | 9.5 | 10.2 | 11.9 | 12.7 | 12.7 |
| 85° | 45.0 | 16.6 | 11.9 | 10.2 | 9.5 | 8.7 | 8.7 | 9.5 | 11.0 | 11.9 | 11.9 |
| 87.5° | 15.0 | 12.7 | 10.2 | 9.5 | 7.9 | 7.9 | 7.9 | 7.9 | 9.5 | 10.2 | 11.0 |
| 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)