

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: P197121

Luminaire Tested: **NVN-AF-03-LED-U-SL4-8030-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197121
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: NVN-AF-03-LED-U-SL4-8030-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 800mA 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: 9728 lumens
Efficiency: N/A
Efficacy: 78.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 124
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

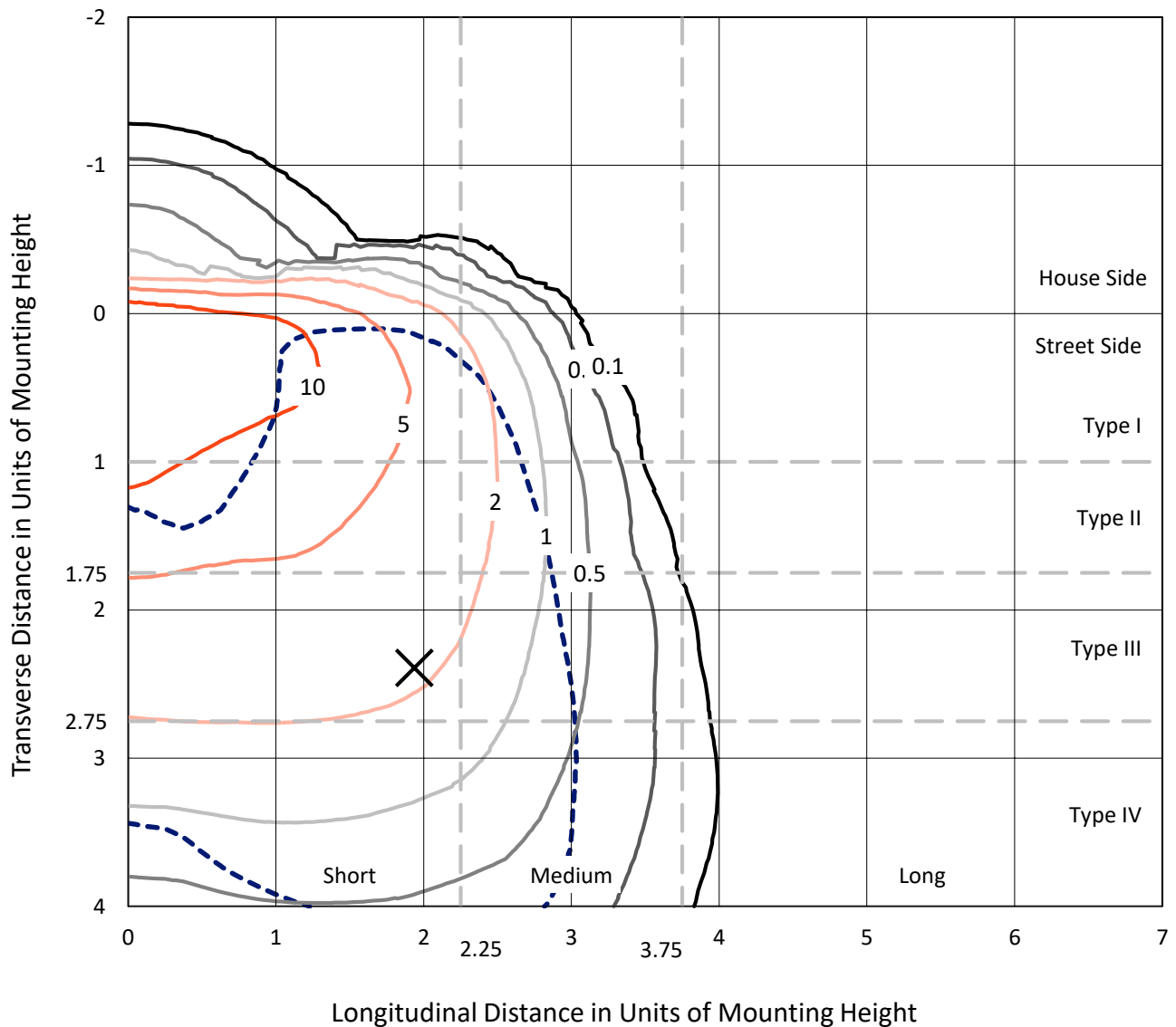


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

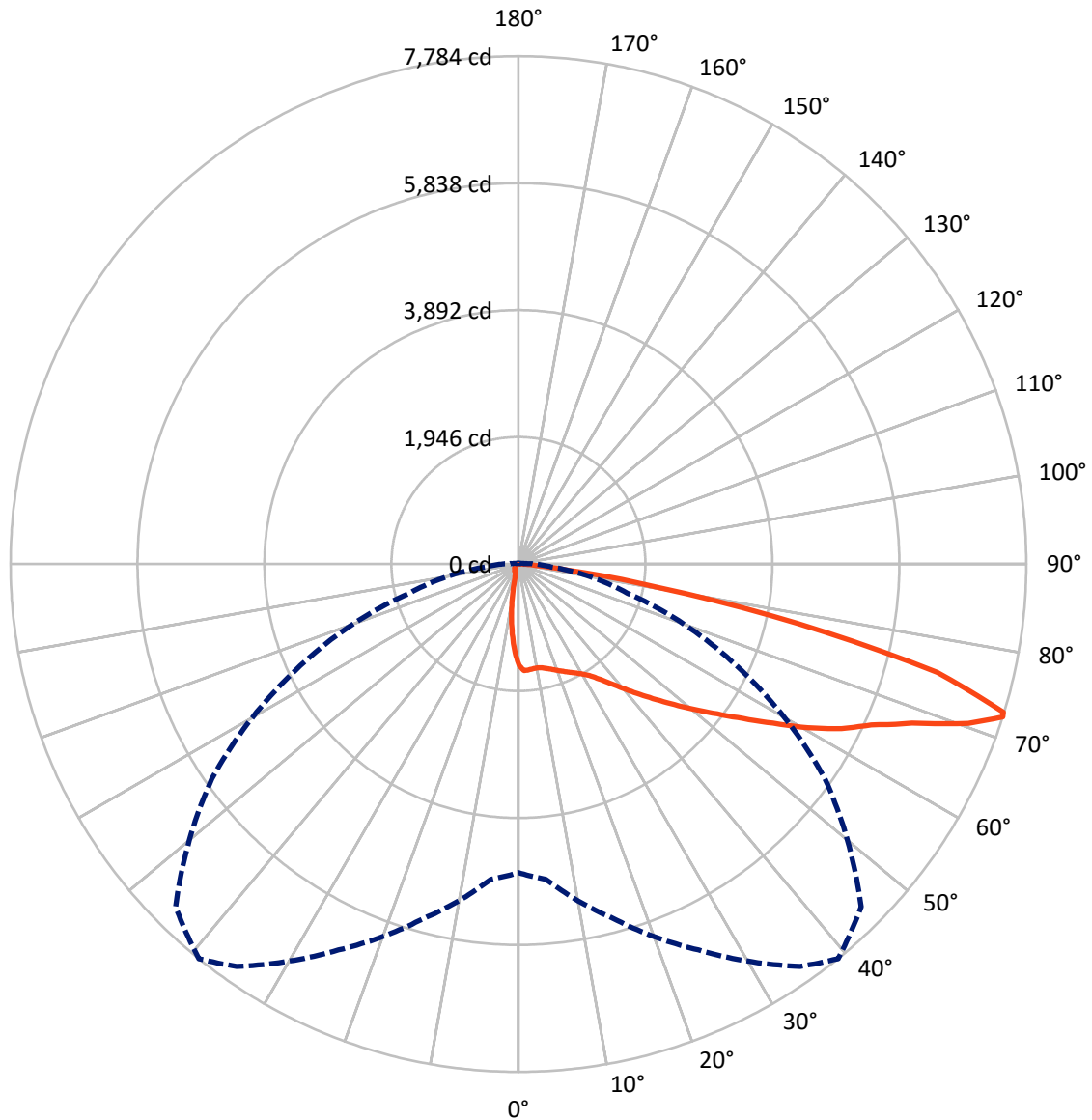


Based on 10 foot mounting height. Maximum calculated value = 16.4 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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



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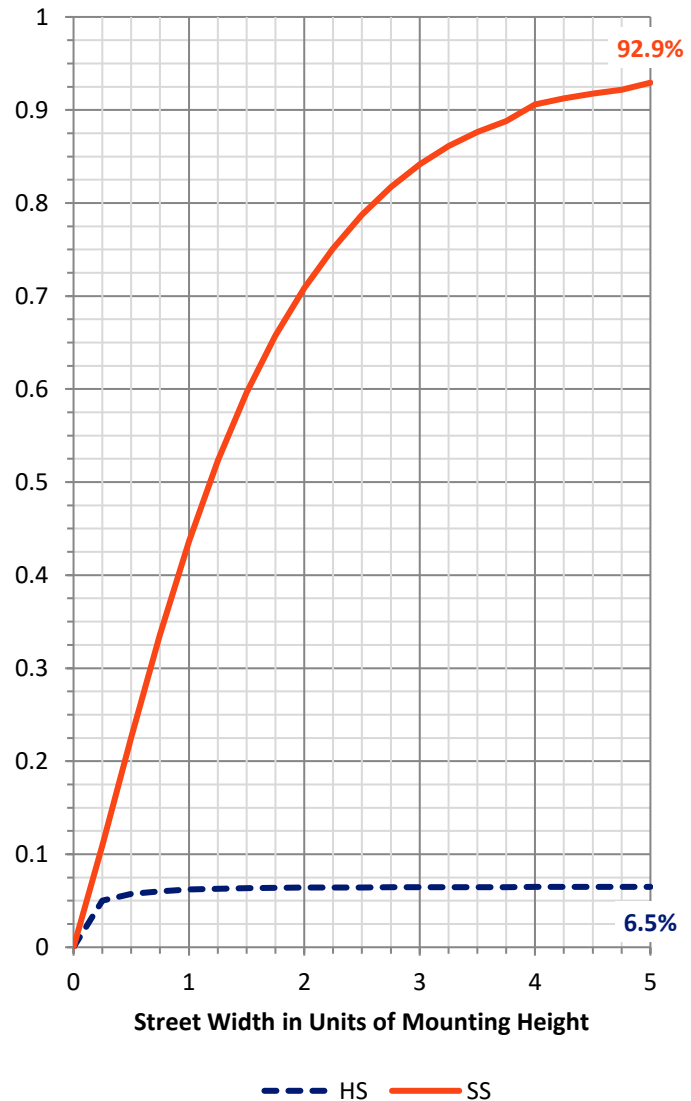
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 637.6 | 0.0 | 637.6 |
| | % Fixture | 6.6 | 0.0 | 6.6 |
| Street Side | Lumens | 9090.4 | 0.0 | 9090.4 |
| | % Fixture | 93.4 | 0.0 | 93.4 |
| Total | Lumens | 9728.0 | 0.0 | 9728.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 126.6 | 1.3 |
| 10°-20° | 306.6 | 3.2 |
| 20°-30° | 509.2 | 5.2 |
| 30°-40° | 811.6 | 8.3 |
| 40°-50° | 1339.6 | 13.8 |
| 50°-60° | 2023.1 | 20.8 |
| 60°-70° | 2635.4 | 27.1 |
| 70°-80° | 1780.8 | 18.3 |
| 80°-90° | 195.0 | 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° | 9728.0 | 100.0 |
| 0°-180° | 9728.0 | 100.0 |

Coefficient of Utilization



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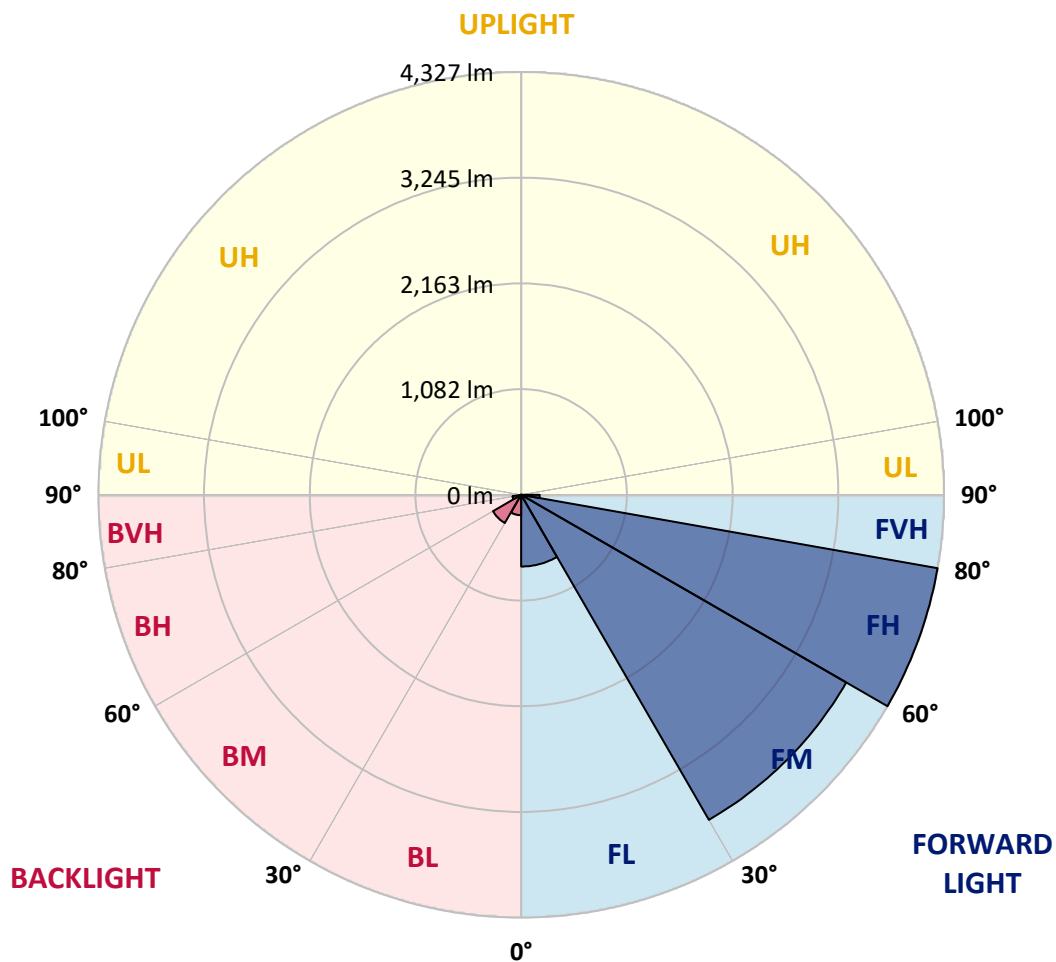
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 733.7 | 7.5 | | | |
| FM (30°-60°) | 3840.7 | 39.5 | | | |
| FH (60°-80°) | 4326.6 | 44.5 | | | G2/5000 |
| FVH (80°-90°) | 189.4 | 1.9 | | | G2/225 |
| BL (0°-30°) | 208.8 | 2.1 | B1/500 | | |
| BM (30°-60°) | 333.6 | 3.4 | B1/1000 | | |
| BH (60°-80°) | 89.6 | 0.9 | B0/110 | | G0/110 |
| BVH (80°-90°) | 5.6 | 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° | 1557.0 | 1557.0 | 1557.0 | 1557.0 | 1557.0 | 1557.0 | 1557.0 | 1557.0 | 1557.0 | 1557.0 | 1557.0 |
| 2.5° | 1658.0 | 1661.0 | 1657.2 | 1650.3 | 1640.4 | 1634.3 | 1625.9 | 1607.5 | 1584.6 | 1564.7 | 1541.7 |
| 5° | 1671.0 | 1672.5 | 1667.9 | 1654.9 | 1639.6 | 1631.2 | 1620.5 | 1600.6 | 1576.9 | 1549.4 | 1508.1 |
| 7.5° | 1674.8 | 1674.0 | 1668.7 | 1652.6 | 1628.9 | 1618.2 | 1599.9 | 1575.4 | 1550.9 | 1525.7 | 1479.0 |
| 10° | 1673.3 | 1673.3 | 1669.4 | 1654.2 | 1627.4 | 1617.4 | 1596.8 | 1570.8 | 1540.2 | 1515.0 | 1465.3 |
| 12.5° | 1667.9 | 1671.0 | 1668.7 | 1660.3 | 1640.4 | 1632.7 | 1614.4 | 1588.4 | 1559.3 | 1533.3 | 1480.6 |
| 15° | 1674.8 | 1679.4 | 1684.0 | 1680.9 | 1669.4 | 1662.6 | 1645.7 | 1619.0 | 1595.3 | 1567.7 | 1511.1 |
| 17.5° | 1702.3 | 1712.3 | 1723.0 | 1723.7 | 1711.5 | 1699.3 | 1680.2 | 1652.6 | 1629.7 | 1604.4 | 1543.3 |
| 20° | 1754.3 | 1762.0 | 1781.9 | 1785.7 | 1761.2 | 1743.6 | 1716.9 | 1684.7 | 1661.8 | 1640.4 | 1573.1 |
| 22.5° | 1831.6 | 1840.0 | 1856.0 | 1850.7 | 1809.4 | 1788.7 | 1755.1 | 1718.4 | 1694.7 | 1682.4 | 1607.5 |
| 25° | 1948.6 | 1950.9 | 1954.7 | 1931.0 | 1862.9 | 1840.0 | 1798.7 | 1757.4 | 1738.3 | 1736.7 | 1656.4 |
| 27.5° | 2086.2 | 2089.3 | 2072.5 | 2019.7 | 1922.6 | 1892.8 | 1846.1 | 1808.6 | 1799.5 | 1810.9 | 1718.4 |
| 30° | 2243.8 | 2244.5 | 2197.9 | 2112.2 | 1991.4 | 1958.5 | 1910.3 | 1869.0 | 1877.5 | 1905.8 | 1797.9 |
| 32.5° | 2405.1 | 2397.5 | 2333.2 | 2221.6 | 2085.5 | 2045.7 | 2004.4 | 1963.1 | 1987.6 | 2044.9 | 1914.2 |
| 35° | 2552.7 | 2549.7 | 2474.0 | 2344.0 | 2207.8 | 2172.7 | 2142.8 | 2099.2 | 2139.0 | 2232.3 | 2072.5 |
| 37.5° | 2700.3 | 2698.0 | 2611.6 | 2476.3 | 2358.5 | 2333.2 | 2311.1 | 2277.4 | 2342.4 | 2479.3 | 2284.3 |
| 40° | 2863.2 | 2859.4 | 2753.1 | 2623.1 | 2533.6 | 2519.8 | 2506.8 | 2492.3 | 2603.2 | 2793.6 | 2548.1 |
| 42.5° | 3064.3 | 3047.5 | 2903.0 | 2782.9 | 2726.3 | 2730.2 | 2730.9 | 2745.4 | 2919.0 | 3167.6 | 2859.4 |
| 45° | 3295.3 | 3257.8 | 3053.6 | 2954.2 | 2938.2 | 2961.1 | 2984.1 | 3044.5 | 3286.9 | 3598.1 | 3203.5 |
| 47.5° | 3519.4 | 3459.0 | 3227.2 | 3138.5 | 3171.4 | 3218.8 | 3273.9 | 3391.7 | 3699.9 | 4048.6 | 3515.6 |
| 50° | 3712.1 | 3650.1 | 3399.3 | 3325.9 | 3430.7 | 3501.0 | 3598.9 | 3777.1 | 4135.8 | 4429.4 | 3712.1 |
| 52.5° | 3863.5 | 3814.6 | 3581.3 | 3532.4 | 3718.2 | 3814.6 | 3968.3 | 4202.3 | 4547.2 | 4680.3 | 3849.7 |
| 55° | 3975.2 | 3950.7 | 3755.7 | 3762.6 | 4037.9 | 4177.1 | 4368.2 | 4632.9 | 4894.4 | 4875.3 | 3953.0 |
| 57.5° | 4101.3 | 4082.2 | 3938.5 | 4034.1 | 4422.5 | 4602.3 | 4823.3 | 5035.9 | 5146.8 | 5032.0 | 4053.9 |
| 60° | 4230.6 | 4236.7 | 4160.2 | 4362.9 | 4898.2 | 5097.1 | 5289.8 | 5342.5 | 5363.2 | 5191.1 | 4160.2 |
| 62.5° | 4328.5 | 4354.5 | 4361.4 | 4717.7 | 5386.1 | 5555.9 | 5639.3 | 5601.8 | 5597.2 | 5404.5 | 4151.8 |
| 65° | 4440.9 | 4509.0 | 4622.1 | 5107.0 | 5829.7 | 5941.3 | 6001.0 | 6055.3 | 5940.6 | 5468.0 | 3743.4 |
| 67.5° | 4635.1 | 4742.2 | 4996.9 | 5584.2 | 6342.1 | 6507.3 | 6676.3 | 6618.9 | 5991.8 | 4823.3 | 2851.7 |
| 70° | 4896.7 | 5027.5 | 5477.1 | 6207.5 | 7037.2 | 7314.1 | 7455.5 | 6573.8 | 5087.1 | 3332.8 | 1504.3 |
| 72° | 4731.5 | 4850.0 | 5625.5 | 6525.6 | 7529.7 | 7783.6 | 7429.5 | 5734.1 | 3687.6 | 1727.6 | 504.0 |
| 72.5° | 4570.9 | 4693.3 | 5578.1 | 6521.8 | 7578.7 | 7772.9 | 7260.5 | 5403.0 | 3263.2 | 1344.4 | 347.2 |
| 75° | 3171.4 | 3325.9 | 4782.0 | 5862.6 | 6843.7 | 6630.4 | 5555.1 | 3271.6 | 1182.3 | 231.0 | 114.7 |
| 77.5° | 1639.6 | 1758.9 | 2900.7 | 4142.6 | 4769.7 | 4368.2 | 3283.1 | 1419.4 | 327.3 | 122.4 | 75.7 |
| 80° | 1016.4 | 1075.2 | 1356.7 | 2041.1 | 2477.8 | 2167.3 | 1448.4 | 573.6 | 209.5 | 72.7 | 60.4 |
| 82.5° | 526.1 | 571.3 | 854.2 | 823.6 | 915.4 | 760.9 | 534.6 | 480.3 | 129.2 | 45.1 | 61.9 |
| 85° | 172.8 | 183.5 | 524.6 | 547.6 | 391.6 | 263.1 | 237.1 | 458.1 | 37.5 | 29.1 | 52.8 |
| 87.5° | 22.9 | 26.8 | 184.3 | 313.5 | 192.7 | 119.3 | 142.2 | 161.4 | 13.0 | 16.1 | 14.5 |
| 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° | 1557.0 | 1557.0 | 1557.0 | 1557.0 | 1557.0 | 1557.0 | 1557.0 | 1557.0 | 1557.0 | 1557.0 | 1557.0 |
| 2.5° | 1526.4 | 1516.5 | 1485.1 | 1453.8 | 1417.8 | 1385.0 | 1359.0 | 1342.1 | 1349.8 | 1324.5 | 1328.4 |
| 5° | 1482.8 | 1457.6 | 1388.8 | 1314.6 | 1234.3 | 1159.4 | 1099.7 | 1055.4 | 1046.9 | 1008.7 | 1010.2 |
| 7.5° | 1440.8 | 1399.5 | 1287.8 | 1165.5 | 1032.4 | 924.6 | 826.7 | 741.0 | 710.5 | 679.1 | 660.7 |
| 10° | 1417.8 | 1361.3 | 1203.0 | 1024.8 | 837.4 | 679.1 | 541.4 | 433.6 | 388.5 | 355.6 | 339.5 |
| 12.5° | 1424.7 | 1349.8 | 1139.5 | 897.1 | 650.8 | 449.7 | 305.9 | 227.1 | 199.6 | 184.3 | 179.0 |
| 15° | 1447.7 | 1352.1 | 1082.1 | 772.4 | 473.4 | 272.3 | 179.7 | 153.7 | 151.4 | 150.7 | 149.9 |
| 17.5° | 1469.1 | 1354.4 | 1021.7 | 642.4 | 316.6 | 173.6 | 144.5 | 142.2 | 142.2 | 142.2 | 142.2 |
| 20° | 1491.3 | 1355.1 | 955.2 | 506.3 | 208.0 | 142.2 | 136.1 | 134.6 | 136.1 | 136.1 | 136.1 |
| 22.5° | 1517.3 | 1360.5 | 890.9 | 374.0 | 153.7 | 133.8 | 130.0 | 129.2 | 130.0 | 130.0 | 129.2 |
| 25° | 1549.4 | 1372.0 | 821.3 | 267.7 | 139.2 | 128.5 | 124.7 | 123.9 | 124.7 | 123.9 | 123.9 |
| 27.5° | 1592.2 | 1387.3 | 740.3 | 192.0 | 133.1 | 123.1 | 119.3 | 119.3 | 119.3 | 118.5 | 118.5 |
| 30° | 1647.3 | 1405.6 | 631.7 | 151.4 | 126.9 | 117.8 | 114.7 | 114.7 | 113.9 | 113.2 | 113.2 |
| 32.5° | 1726.0 | 1435.4 | 513.1 | 136.9 | 120.1 | 110.9 | 107.8 | 108.6 | 107.8 | 107.1 | 106.3 |
| 35° | 1837.7 | 1482.1 | 396.1 | 129.2 | 113.2 | 104.0 | 100.9 | 100.9 | 100.9 | 99.4 | 99.4 |
| 37.5° | 1996.0 | 1553.2 | 296.7 | 121.6 | 106.3 | 97.1 | 93.3 | 93.3 | 92.5 | 91.0 | 91.8 |
| 40° | 2191.8 | 1642.7 | 214.9 | 114.7 | 99.4 | 89.5 | 86.4 | 84.9 | 83.4 | 81.8 | 81.8 |
| 42.5° | 2427.3 | 1729.9 | 161.4 | 107.8 | 92.5 | 83.4 | 79.5 | 78.0 | 74.9 | 73.4 | 72.7 |
| 45° | 2691.2 | 1822.4 | 133.8 | 99.4 | 84.9 | 76.5 | 73.4 | 70.4 | 66.5 | 64.2 | 63.5 |
| 47.5° | 2913.7 | 1879.0 | 119.3 | 91.0 | 77.2 | 69.6 | 66.5 | 61.9 | 57.4 | 55.8 | 55.8 |
| 50° | 3047.5 | 1855.3 | 107.1 | 82.6 | 69.6 | 62.7 | 58.9 | 52.8 | 49.7 | 48.2 | 47.4 |
| 52.5° | 3122.5 | 1784.9 | 97.1 | 75.7 | 62.7 | 55.1 | 49.7 | 44.4 | 42.8 | 41.3 | 41.3 |
| 55° | 3173.7 | 1683.2 | 86.4 | 68.8 | 56.6 | 48.2 | 42.1 | 38.2 | 36.7 | 35.9 | 35.2 |
| 57.5° | 3222.7 | 1559.3 | 76.5 | 62.7 | 50.5 | 42.8 | 35.9 | 34.4 | 31.4 | 30.6 | 30.6 |
| 60° | 3237.2 | 1388.8 | 67.3 | 55.8 | 45.1 | 37.5 | 31.4 | 29.1 | 26.0 | 25.2 | 25.2 |
| 62.5° | 3052.1 | 1105.1 | 59.7 | 47.4 | 39.8 | 32.1 | 27.5 | 24.5 | 21.4 | 21.4 | 21.4 |
| 65° | 2550.4 | 750.2 | 51.2 | 41.3 | 35.2 | 27.5 | 23.7 | 19.9 | 18.4 | 18.4 | 18.4 |
| 67.5° | 1776.5 | 418.3 | 43.6 | 35.2 | 29.8 | 22.9 | 19.9 | 16.8 | 16.1 | 16.8 | 16.8 |
| 70° | 800.7 | 166.0 | 36.7 | 29.1 | 24.5 | 19.1 | 16.8 | 14.5 | 16.1 | 16.1 | 16.1 |
| 72° | 240.1 | 88.7 | 30.6 | 23.7 | 19.9 | 16.8 | 14.5 | 13.8 | 15.3 | 16.1 | 16.1 |
| 72.5° | 178.2 | 79.5 | 29.1 | 22.9 | 19.9 | 16.1 | 13.8 | 13.8 | 15.3 | 16.1 | 16.1 |
| 75° | 91.8 | 54.3 | 22.2 | 16.8 | 14.5 | 13.0 | 11.5 | 13.0 | 15.3 | 15.3 | 15.3 |
| 77.5° | 71.9 | 44.4 | 18.4 | 13.0 | 12.2 | 11.5 | 10.7 | 12.2 | 13.8 | 13.8 | 13.8 |
| 80° | 67.3 | 29.1 | 14.5 | 12.2 | 10.7 | 9.9 | 9.9 | 10.7 | 12.2 | 13.0 | 13.0 |
| 82.5° | 68.1 | 23.7 | 13.0 | 11.5 | 9.9 | 9.2 | 9.2 | 9.9 | 11.5 | 12.2 | 12.2 |
| 85° | 43.6 | 16.1 | 11.5 | 9.9 | 9.2 | 8.4 | 8.4 | 9.2 | 10.7 | 11.5 | 11.5 |
| 87.5° | 14.5 | 12.2 | 9.9 | 9.2 | 7.6 | 7.6 | 7.6 | 7.6 | 9.2 | 9.9 | 10.7 |
| 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)