

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: P194984

Luminaire Tested: **NVN-AF-02-LED-U-5NQ-7060-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P194984
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)
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-5NQ-7060-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 5700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10117 lumens
Efficiency: N/A
Efficacy: 119.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B3 - U0 - G1

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

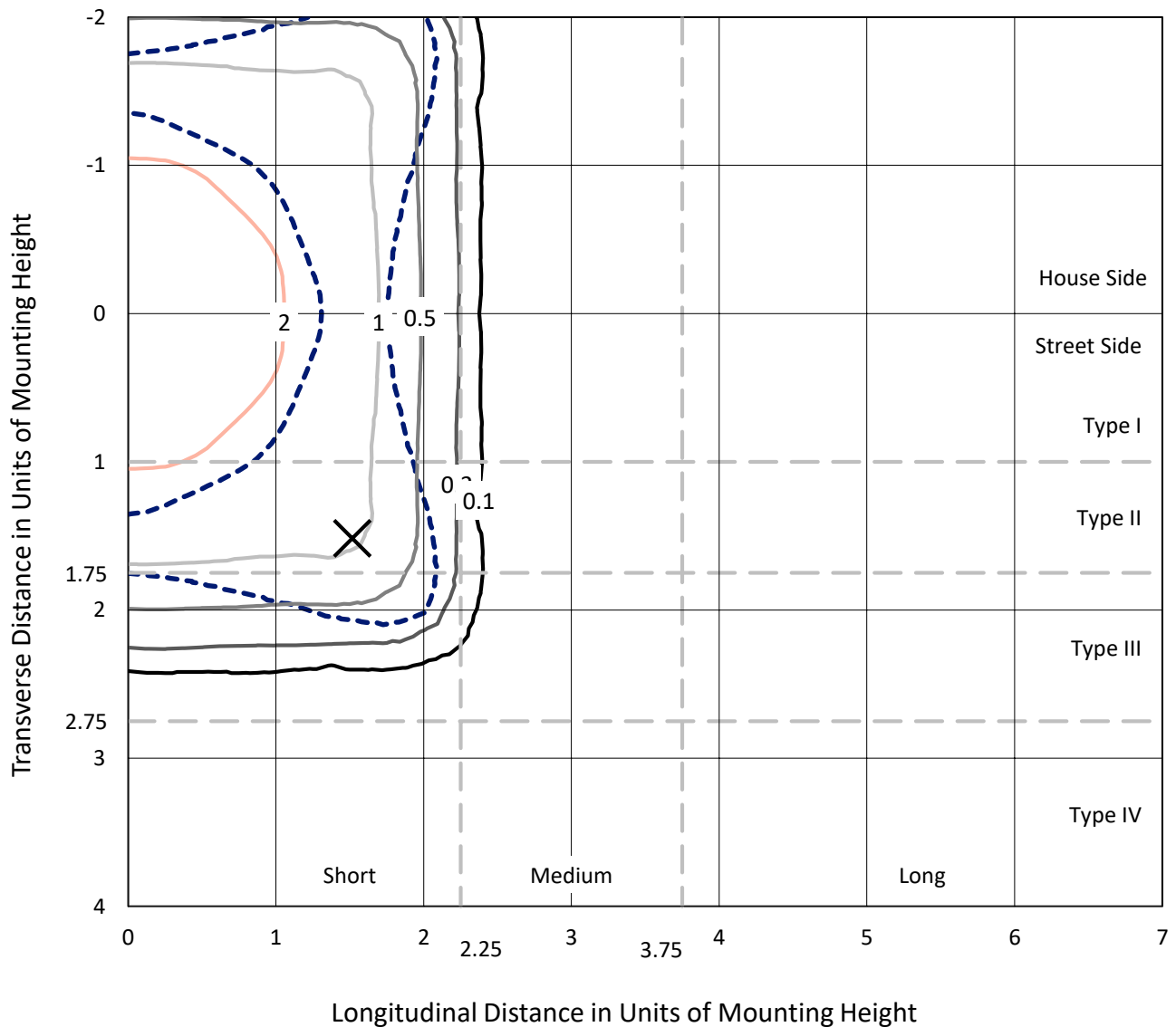


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

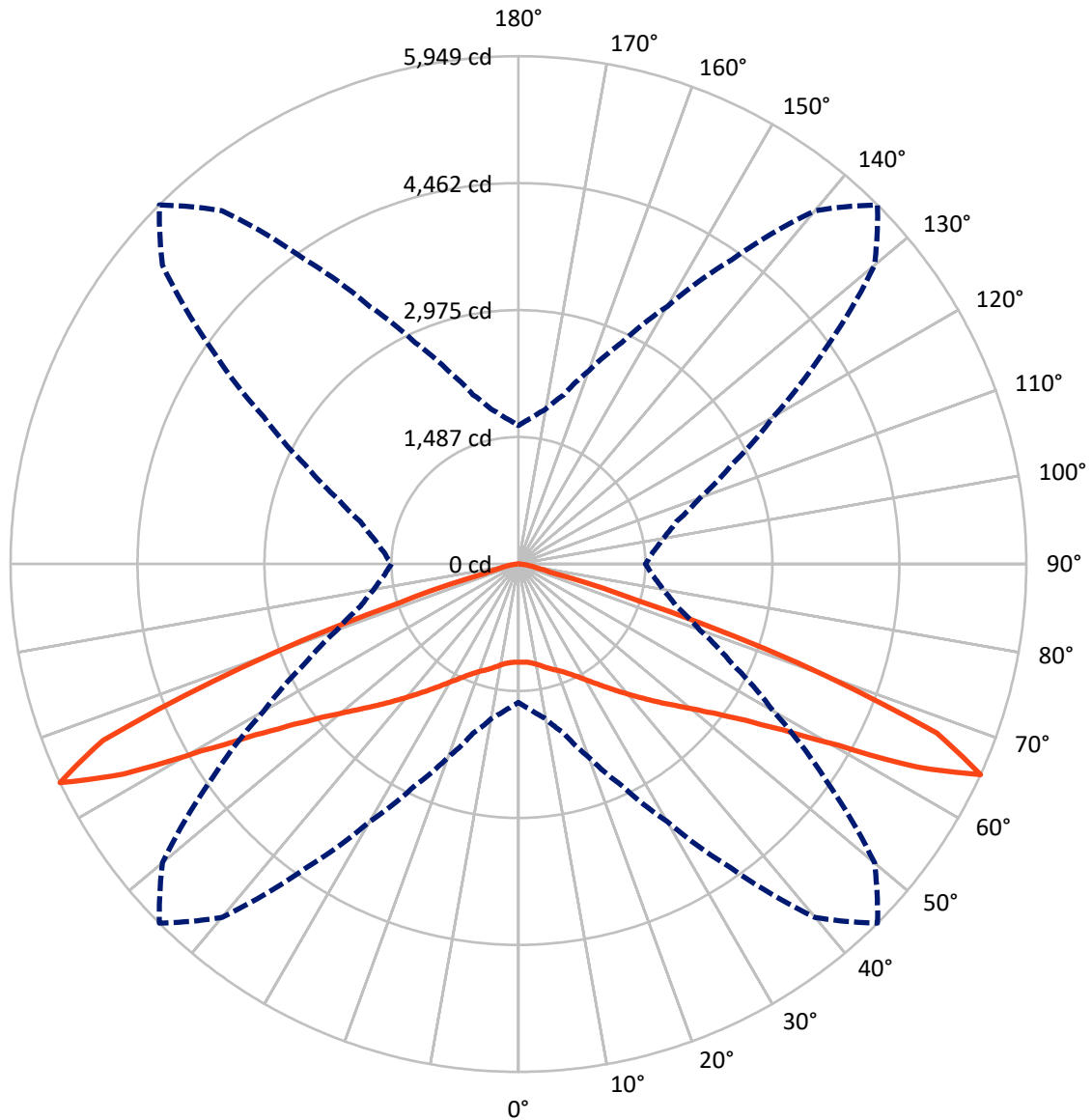


Based on 20 foot mounting height. Maximum calculated value = 2.9 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 5058.5 | 0.0 | 5058.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 5058.5 | 0.0 | 5058.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 10117.0 | 0.0 | 10117.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 112.1 | 1.1 |
| 10°-20° | 359.2 | 3.6 |
| 20°-30° | 670.0 | 6.6 |
| 30°-40° | 1129.8 | 11.2 |
| 40°-50° | 1835.1 | 18.1 |
| 50°-60° | 2875.3 | 28.4 |
| 60°-70° | 2714.1 | 26.8 |
| 70°-80° | 365.8 | 3.6 |
| 80°-90° | 55.7 | 0.6 |
| 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° | 10117.0 | 100.0 |
| 0°-180° | 10117.0 | 100.0 |



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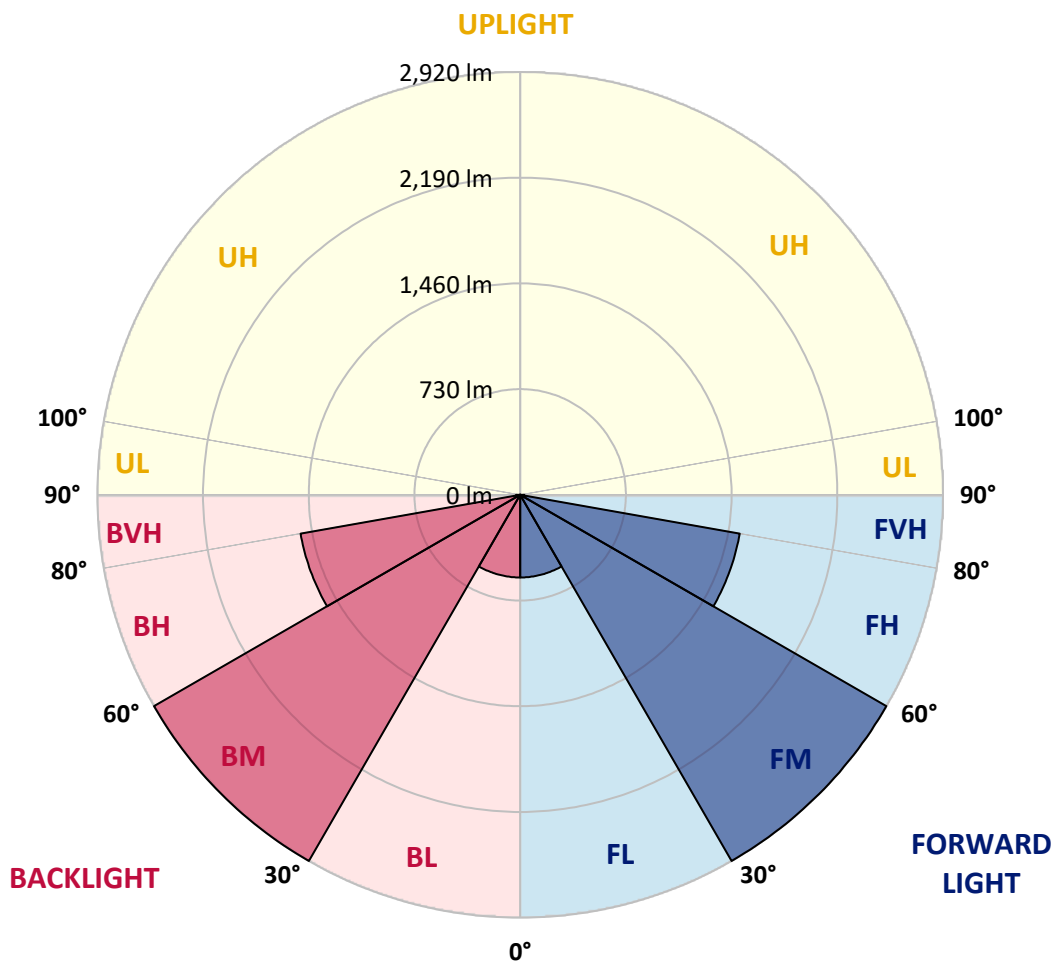
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 570.6 | 5.6 | | | |
| FM | (30°-60°) | 2920.1 | 28.9 | | | |
| FH | (60°-80°) | 1539.9 | 15.2 | | | G1/1800 |
| FVH | (80°-90°) | 27.9 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 570.6 | 5.6 | B2/1000 | | |
| BM | (30°-60°) | 2920.1 | 28.9 | B3/5000 | | |
| BH | (60°-80°) | 1539.9 | 15.2 | B3/2500 | | G1/1800 |
| BVH | (80°-90°) | 27.9 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G1

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1150.8 | 1150.8 | 1150.8 | 1150.8 | 1150.8 | 1150.8 | 1150.8 | 1150.8 | 1150.8 | 1150.8 | 1150.8 |
| 2.5° | 1160.3 | 1160.3 | 1162.1 | 1161.5 | 1159.0 | 1157.1 | 1155.2 | 1152.7 | 1151.4 | 1150.2 | 1149.5 |
| 5° | 1166.6 | 1166.6 | 1168.4 | 1167.8 | 1165.9 | 1163.4 | 1162.1 | 1160.3 | 1158.4 | 1157.1 | 1157.7 |
| 7.5° | 1182.3 | 1182.9 | 1183.6 | 1182.9 | 1181.0 | 1179.2 | 1176.6 | 1176.0 | 1173.5 | 1171.6 | 1172.9 |
| 10° | 1206.3 | 1206.3 | 1206.9 | 1207.5 | 1206.3 | 1201.8 | 1201.8 | 1200.6 | 1198.1 | 1195.5 | 1196.2 |
| 12.5° | 1232.7 | 1232.7 | 1233.4 | 1233.4 | 1233.4 | 1230.8 | 1231.5 | 1230.8 | 1227.7 | 1226.4 | 1227.7 |
| 15° | 1258.6 | 1259.2 | 1259.2 | 1260.5 | 1260.5 | 1261.1 | 1263.6 | 1263.6 | 1262.3 | 1261.7 | 1261.7 |
| 17.5° | 1288.8 | 1290.1 | 1290.7 | 1292.6 | 1293.2 | 1294.5 | 1297.0 | 1297.6 | 1298.3 | 1296.4 | 1297.0 |
| 20° | 1329.2 | 1329.8 | 1331.7 | 1332.3 | 1334.8 | 1334.8 | 1336.1 | 1335.5 | 1334.2 | 1331.7 | 1331.7 |
| 22.5° | 1374.5 | 1375.8 | 1379.6 | 1379.6 | 1382.7 | 1380.8 | 1381.5 | 1379.6 | 1376.4 | 1375.2 | 1373.9 |
| 25° | 1433.8 | 1435.7 | 1438.8 | 1437.6 | 1438.8 | 1435.7 | 1435.7 | 1435.7 | 1433.8 | 1431.9 | 1431.2 |
| 27.5° | 1508.8 | 1505.6 | 1508.8 | 1506.2 | 1505.6 | 1503.1 | 1503.7 | 1502.5 | 1500.6 | 1499.9 | 1497.4 |
| 30° | 1586.9 | 1583.1 | 1585.0 | 1585.7 | 1584.4 | 1583.8 | 1581.2 | 1579.4 | 1576.2 | 1576.8 | 1574.9 |
| 32.5° | 1676.4 | 1672.6 | 1674.5 | 1675.1 | 1673.9 | 1675.1 | 1674.5 | 1670.1 | 1666.3 | 1668.8 | 1668.8 |
| 35° | 1782.9 | 1780.4 | 1785.4 | 1787.3 | 1783.5 | 1781.7 | 1779.1 | 1774.1 | 1768.4 | 1772.2 | 1772.8 |
| 37.5° | 1910.9 | 1907.7 | 1911.5 | 1916.5 | 1909.6 | 1905.8 | 1895.7 | 1888.2 | 1884.4 | 1886.3 | 1888.8 |
| 40° | 2043.8 | 2044.5 | 2055.2 | 2056.4 | 2048.9 | 2044.5 | 2034.4 | 2023.0 | 2012.3 | 2012.3 | 2015.5 |
| 42.5° | 2183.7 | 2185.6 | 2198.2 | 2202.6 | 2200.1 | 2191.9 | 2178.1 | 2164.2 | 2150.3 | 2152.9 | 2156.6 |
| 45° | 2341.9 | 2339.4 | 2352.6 | 2363.4 | 2361.5 | 2358.9 | 2345.7 | 2320.5 | 2307.9 | 2307.3 | 2313.6 |
| 47.5° | 2508.3 | 2513.4 | 2527.2 | 2545.5 | 2544.9 | 2538.6 | 2521.5 | 2498.2 | 2474.9 | 2476.8 | 2484.4 |
| 50° | 2702.4 | 2709.4 | 2732.7 | 2750.9 | 2753.5 | 2751.6 | 2731.4 | 2704.3 | 2671.5 | 2673.4 | 2683.5 |
| 52.5° | 2876.4 | 2886.4 | 2913.5 | 2951.4 | 2974.7 | 2985.4 | 2972.2 | 2946.9 | 2913.5 | 2915.4 | 2926.1 |
| 55° | 3033.9 | 3049.7 | 3090.0 | 3141.7 | 3188.3 | 3231.8 | 3251.3 | 3250.7 | 3226.1 | 3231.8 | 3245.7 |
| 57.5° | 3132.9 | 3154.9 | 3216.1 | 3299.2 | 3391.9 | 3479.5 | 3555.1 | 3626.3 | 3642.1 | 3671.7 | 3671.7 |
| 60° | 2999.9 | 3051.6 | 3132.9 | 3275.3 | 3457.4 | 3654.1 | 3867.1 | 4074.4 | 4208.0 | 4313.3 | 4256.6 |
| 62.5° | 2505.2 | 2581.4 | 2695.5 | 2883.3 | 3166.9 | 3517.9 | 3945.9 | 4428.0 | 4930.9 | 5238.5 | 5012.8 |
| 65° | 1620.9 | 1716.7 | 1840.9 | 2052.0 | 2409.4 | 2861.2 | 3484.5 | 4351.1 | 5403.6 | 5949.4 | 5445.2 |
| 67.5° | 642.2 | 707.1 | 782.7 | 932.7 | 1242.8 | 1686.5 | 2386.0 | 3454.9 | 4771.5 | 5286.4 | 4721.0 |
| 70° | 306.9 | 317.6 | 332.1 | 364.3 | 441.8 | 596.2 | 958.6 | 1702.2 | 2926.1 | 3468.8 | 2856.2 |
| 72.5° | 221.8 | 223.7 | 230.7 | 241.4 | 264.1 | 295.6 | 359.2 | 520.6 | 1009.0 | 1467.2 | 1010.3 |
| 75° | 168.3 | 170.8 | 174.6 | 180.2 | 192.2 | 207.3 | 231.3 | 277.3 | 345.4 | 398.3 | 344.7 |
| 77.5° | 127.9 | 130.5 | 133.6 | 139.3 | 145.6 | 156.3 | 165.1 | 183.4 | 212.4 | 223.7 | 222.5 |
| 80° | 93.3 | 97.7 | 102.7 | 107.8 | 112.2 | 117.2 | 117.9 | 126.7 | 143.1 | 153.8 | 150.6 |
| 82.5° | 59.2 | 63.0 | 76.3 | 81.9 | 82.6 | 83.8 | 83.2 | 83.8 | 92.6 | 100.2 | 97.7 |
| 85° | 37.8 | 40.3 | 47.3 | 53.6 | 52.3 | 54.8 | 54.8 | 53.6 | 49.8 | 42.9 | 51.0 |
| 87.5° | 18.9 | 19.5 | 22.7 | 28.4 | 27.1 | 23.9 | 23.3 | 23.3 | 17.0 | 14.5 | 15.8 |
| 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):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1150.8 | 1150.8 | 1150.8 | 1150.8 | 1150.8 | 1150.8 | 1150.8 | 1150.8 |
| 2.5° | 1147.6 | 1148.9 | 1147.0 | 1147.0 | 1146.4 | 1147.6 | 1145.8 | 1145.8 |
| 5° | 1156.5 | 1158.4 | 1157.7 | 1157.7 | 1159.0 | 1160.3 | 1159.6 | 1159.0 |
| 7.5° | 1172.2 | 1173.5 | 1174.7 | 1175.4 | 1176.6 | 1176.0 | 1177.3 | 1176.6 |
| 10° | 1196.2 | 1194.9 | 1196.8 | 1194.9 | 1195.5 | 1194.3 | 1194.9 | 1194.9 |
| 12.5° | 1226.4 | 1224.5 | 1223.3 | 1222.0 | 1222.0 | 1219.5 | 1219.5 | 1220.1 |
| 15° | 1261.1 | 1257.9 | 1255.4 | 1254.2 | 1252.9 | 1252.9 | 1251.0 | 1252.3 |
| 17.5° | 1295.1 | 1292.0 | 1287.6 | 1287.6 | 1285.7 | 1284.4 | 1283.1 | 1286.3 |
| 20° | 1331.0 | 1327.9 | 1325.4 | 1324.7 | 1321.0 | 1319.7 | 1320.3 | 1324.1 |
| 22.5° | 1372.6 | 1370.7 | 1370.7 | 1369.5 | 1367.0 | 1365.1 | 1365.1 | 1369.5 |
| 25° | 1428.7 | 1424.9 | 1425.6 | 1426.2 | 1424.9 | 1424.9 | 1423.7 | 1426.8 |
| 27.5° | 1497.4 | 1494.3 | 1496.2 | 1497.4 | 1496.2 | 1498.1 | 1496.2 | 1498.7 |
| 30° | 1578.1 | 1576.2 | 1578.1 | 1580.0 | 1576.8 | 1576.8 | 1575.6 | 1577.5 |
| 32.5° | 1674.5 | 1672.0 | 1673.3 | 1673.3 | 1668.8 | 1665.1 | 1660.0 | 1663.8 |
| 35° | 1780.4 | 1777.2 | 1779.8 | 1781.7 | 1776.6 | 1772.8 | 1765.3 | 1768.4 |
| 37.5° | 1897.0 | 1898.2 | 1901.4 | 1909.6 | 1908.3 | 1902.0 | 1896.4 | 1898.9 |
| 40° | 2027.4 | 2033.7 | 2047.6 | 2053.3 | 2052.0 | 2045.7 | 2038.2 | 2039.4 |
| 42.5° | 2174.9 | 2183.1 | 2197.6 | 2207.1 | 2202.6 | 2193.8 | 2184.4 | 2188.2 |
| 45° | 2335.6 | 2348.2 | 2367.1 | 2376.6 | 2370.9 | 2361.5 | 2348.2 | 2355.2 |
| 47.5° | 2505.8 | 2531.0 | 2556.2 | 2568.8 | 2566.9 | 2553.7 | 2536.7 | 2538.6 |
| 50° | 2709.4 | 2742.8 | 2774.9 | 2787.5 | 2778.0 | 2757.9 | 2733.9 | 2733.3 |
| 52.5° | 2962.7 | 2998.6 | 3025.1 | 3021.9 | 2998.6 | 2967.1 | 2940.0 | 2938.8 |
| 55° | 3279.1 | 3291.1 | 3287.3 | 3260.2 | 3219.2 | 3170.0 | 3135.4 | 3129.7 |
| 57.5° | 3661.6 | 3621.3 | 3562.0 | 3480.1 | 3388.1 | 3294.8 | 3231.8 | 3208.5 |
| 60° | 4129.3 | 3947.1 | 3735.4 | 3512.3 | 3308.7 | 3156.2 | 3059.8 | 3001.1 |
| 62.5° | 4515.6 | 3988.1 | 3514.8 | 3127.2 | 2810.2 | 2621.7 | 2490.0 | 2408.7 |
| 65° | 4383.2 | 3445.5 | 2759.8 | 2260.0 | 1914.0 | 1719.3 | 1580.0 | 1487.3 |
| 67.5° | 3386.2 | 2302.2 | 1602.0 | 1110.5 | 842.0 | 712.8 | 622.7 | 564.1 |
| 70° | 1707.3 | 882.9 | 535.1 | 377.5 | 322.7 | 300.0 | 284.9 | 276.0 |
| 72.5° | 501.0 | 334.7 | 277.9 | 245.8 | 226.3 | 212.4 | 203.6 | 199.2 |
| 75° | 277.3 | 226.3 | 199.8 | 181.5 | 168.9 | 159.4 | 153.8 | 150.0 |
| 77.5° | 191.0 | 164.5 | 151.3 | 139.3 | 129.2 | 122.3 | 117.9 | 114.1 |
| 80° | 133.6 | 120.4 | 114.7 | 108.4 | 100.8 | 95.2 | 88.9 | 86.3 |
| 82.5° | 88.9 | 83.2 | 81.9 | 76.9 | 72.5 | 66.2 | 54.8 | 51.0 |
| 85° | 52.3 | 51.7 | 51.7 | 49.8 | 46.6 | 41.0 | 32.8 | 32.8 |
| 87.5° | 18.3 | 18.9 | 19.5 | 20.8 | 20.2 | 17.0 | 13.9 | 13.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)