

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: P270956

Luminaire Tested: **NVN-AF-03-LED-U-T4FT-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270956
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)
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-T4FT-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17400.7 lumens
Efficiency: N/A
Efficacy: 91.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G3

Input Watts (W): 191
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

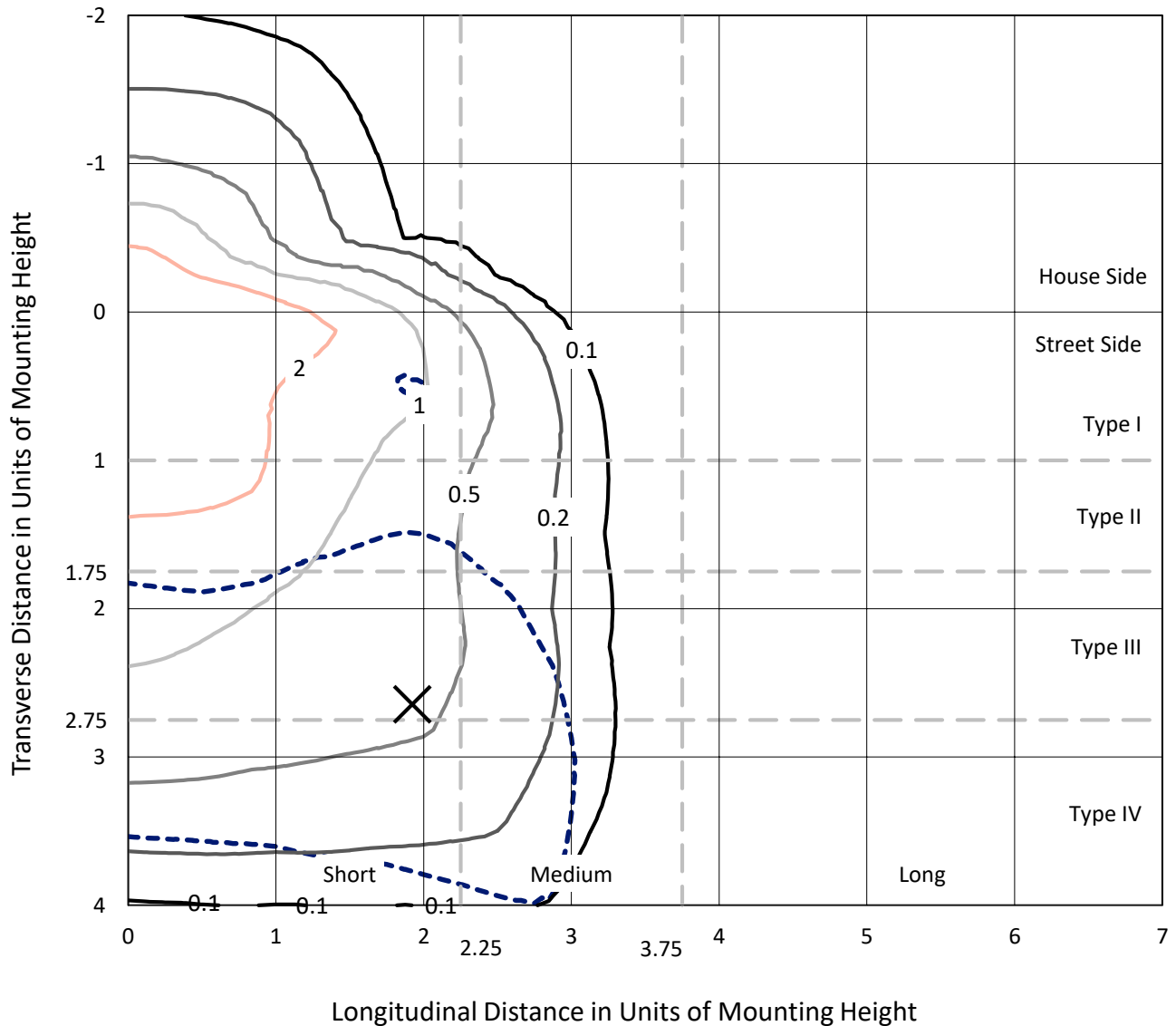


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Iso-Footcandle Lines of Horizontal Illumination

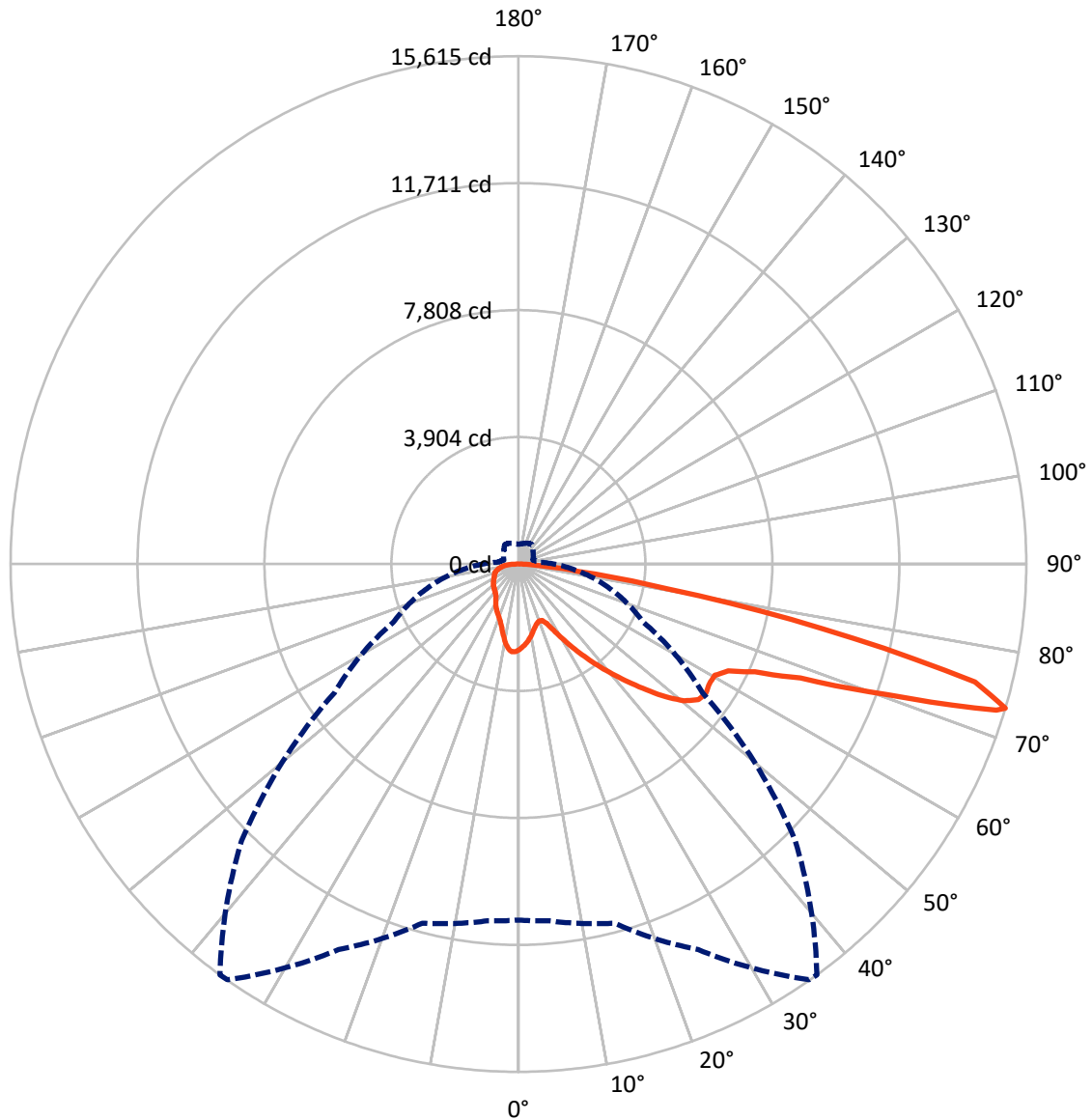
× Max cd
 - - - 1/2 Max cd



Based on 25 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 36-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3355.4 | 0.0 | 3355.4 |
| | % Fixture | 19.3 | 0.0 | 19.3 |
| Street Side | Lumens | 14045.3 | 0.0 | 14045.3 |
| | % Fixture | 80.7 | 0.0 | 80.7 |
| Total | Lumens | 17400.7 | 0.0 | 17400.7 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 239.4 | 1.4 |
| 10°-20° | 601.3 | 3.5 |
| 20°-30° | 964.0 | 5.5 |
| 30°-40° | 1594.5 | 9.2 |
| 40°-50° | 2467.3 | 14.2 |
| 50°-60° | 3303.0 | 19.0 |
| 60°-70° | 4314.7 | 24.8 |
| 70°-80° | 3524.3 | 20.3 |
| 80°-90° | 392.3 | 2.3 |
| 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° | 17400.7 | 100.0 |
| 0°-180° | 17400.7 | 100.0 |



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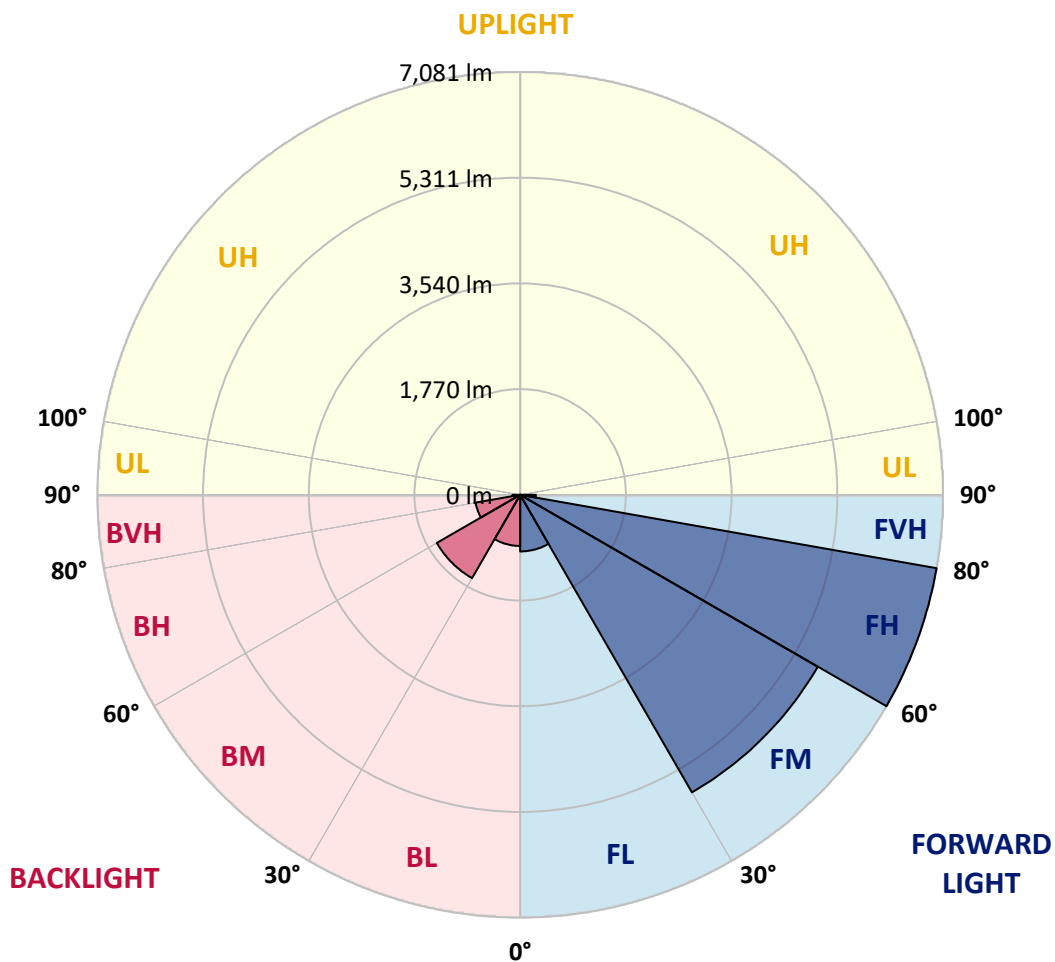
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 948.1 | 5.4 | | | |
| FM | (30°-60°) | 5753.3 | 33.1 | | | |
| FH | (60°-80°) | 7080.8 | 40.7 | | | G3/7500 |
| FVH | (80°-90°) | 263.1 | 1.5 | | | G3/500 |
| BL | (0°-30°) | 856.5 | 4.9 | B2/1000 | | |
| BM | (30°-60°) | 1611.4 | 9.3 | B2/2500 | | |
| BH | (60°-80°) | 758.2 | 4.4 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 129.2 | 0.7 | | | G2/225 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 36° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| 0° | 2635.6 | 2635.6 | 2635.6 | 2635.6 | 2635.6 | 2635.6 | 2635.6 | 2635.6 | 2635.6 | 2635.6 | 2635.6 |
| 2.5° | 2535.0 | 2541.8 | 2542.8 | 2550.6 | 2550.6 | 2549.5 | 2552.8 | 2566.1 | 2572.7 | 2588.1 | 2601.4 |
| 5° | 2410.2 | 2417.9 | 2421.2 | 2434.4 | 2451.0 | 2452.2 | 2464.3 | 2489.7 | 2514.0 | 2548.3 | 2577.1 |
| 7.5° | 2269.7 | 2278.6 | 2287.4 | 2315.1 | 2339.4 | 2341.6 | 2364.9 | 2405.8 | 2437.8 | 2479.9 | 2531.8 |
| 10° | 2133.7 | 2136.0 | 2144.9 | 2180.1 | 2212.3 | 2215.6 | 2248.7 | 2295.2 | 2338.3 | 2396.9 | 2455.4 |
| 12.5° | 2022.2 | 2028.7 | 2026.5 | 2053.0 | 2080.7 | 2082.9 | 2127.1 | 2185.8 | 2248.7 | 2315.1 | 2384.7 |
| 15° | 1983.4 | 1982.3 | 1959.1 | 1957.9 | 1970.2 | 1972.4 | 2015.4 | 2084.0 | 2154.8 | 2236.6 | 2326.2 |
| 17.5° | 2010.0 | 2001.2 | 1940.2 | 1902.7 | 1895.0 | 1897.2 | 1929.2 | 2004.4 | 2079.5 | 2173.5 | 2280.7 |
| 20° | 2155.9 | 2121.5 | 1979.0 | 1888.3 | 1862.8 | 1862.8 | 1881.7 | 1942.6 | 2025.4 | 2134.9 | 2269.7 |
| 22.5° | 2501.9 | 2448.9 | 2144.9 | 1983.4 | 1893.8 | 1885.1 | 1870.6 | 1917.1 | 2008.8 | 2140.4 | 2315.1 |
| 25° | 2937.5 | 2912.0 | 2448.9 | 2236.6 | 2052.0 | 2023.3 | 1928.1 | 1944.7 | 2043.1 | 2200.0 | 2438.9 |
| 27.5° | 3341.1 | 3296.8 | 2847.9 | 2604.7 | 2343.8 | 2299.7 | 2098.4 | 2031.0 | 2124.9 | 2310.7 | 2618.0 |
| 30° | 3576.5 | 3546.7 | 3258.2 | 3026.0 | 2715.2 | 2659.0 | 2370.4 | 2201.1 | 2270.8 | 2493.1 | 2872.3 |
| 32.5° | 3833.1 | 3815.3 | 3669.3 | 3458.2 | 3117.7 | 3052.5 | 2722.0 | 2478.8 | 2494.1 | 2735.2 | 3178.6 |
| 35° | 4081.8 | 4105.1 | 4022.2 | 3867.4 | 3551.1 | 3490.4 | 3194.1 | 2841.2 | 2769.5 | 3007.2 | 3505.7 |
| 37.5° | 4380.2 | 4385.9 | 4333.9 | 4233.3 | 4006.6 | 3956.9 | 3712.5 | 3228.2 | 3069.1 | 3296.8 | 3822.0 |
| 40° | 4976.3 | 4888.8 | 4685.4 | 4605.8 | 4471.0 | 4440.1 | 4161.4 | 3583.2 | 3347.8 | 3594.2 | 4120.4 |
| 42.5° | 5620.8 | 5484.8 | 5166.3 | 5035.9 | 4981.7 | 4953.0 | 4535.1 | 3819.8 | 3608.6 | 3891.6 | 4413.5 |
| 45° | 6140.4 | 6029.9 | 5718.0 | 5556.6 | 5563.3 | 5516.9 | 4861.2 | 4031.0 | 3891.6 | 4190.1 | 4740.7 |
| 47.5° | 6652.3 | 6467.6 | 6118.3 | 6095.1 | 6172.4 | 6104.0 | 5173.0 | 4242.1 | 4186.8 | 4515.2 | 5068.0 |
| 50° | 6685.5 | 6517.5 | 6375.9 | 6561.6 | 6694.3 | 6609.1 | 5456.0 | 4518.6 | 4493.1 | 4908.8 | 5490.4 |
| 52.5° | 6281.8 | 6257.6 | 6473.1 | 6786.1 | 7006.1 | 6929.7 | 5687.1 | 4802.6 | 4805.9 | 5400.7 | 6004.5 |
| 55° | 6134.9 | 6104.0 | 6362.5 | 6747.3 | 7044.8 | 6999.5 | 5859.6 | 5123.3 | 5153.0 | 5997.8 | 6556.1 |
| 57.5° | 6382.5 | 6305.2 | 6356.0 | 6674.3 | 6954.0 | 6927.5 | 6038.6 | 5479.2 | 5533.4 | 6685.5 | 7065.8 |
| 60° | 7150.9 | 6992.8 | 6723.1 | 6782.7 | 6957.5 | 6941.9 | 6295.1 | 5876.2 | 5966.8 | 7401.9 | 7388.6 |
| 62.5° | 8301.7 | 8122.7 | 7573.3 | 7307.9 | 7269.2 | 7239.4 | 6718.7 | 6363.8 | 6409.0 | 7919.3 | 7200.6 |
| 65° | 9564.3 | 9371.9 | 8718.6 | 8284.1 | 8056.4 | 7992.2 | 7401.9 | 6951.9 | 6667.7 | 7918.1 | 6468.8 |
| 67.5° | 10981.7 | 10778.3 | 10127.1 | 9712.6 | 9466.0 | 9356.4 | 8510.7 | 7427.2 | 6583.7 | 7248.2 | 5176.4 |
| 70° | 12433.4 | 12239.9 | 11941.3 | 12086.2 | 12194.5 | 12027.5 | 10257.6 | 7585.4 | 5980.0 | 5682.7 | 3475.9 |
| 72.5° | 11662.8 | 11647.2 | 11873.8 | 13247.0 | 15335.4 | 15368.7 | 12002.2 | 7138.7 | 4620.3 | 3377.5 | 1852.9 |
| 73° | 10947.5 | 11012.6 | 11432.8 | 13075.6 | 15604.1 | 15615.1 | 12036.4 | 6907.6 | 4242.1 | 2909.9 | 1627.4 |
| 75° | 5671.5 | 6113.9 | 7672.8 | 10602.4 | 14448.8 | 14500.8 | 10610.2 | 5229.5 | 2528.5 | 1616.4 | 1096.7 |
| 77.5° | 1519.0 | 1499.1 | 2472.0 | 5165.3 | 9633.0 | 9564.3 | 6704.2 | 2531.8 | 1211.8 | 1013.7 | 769.5 |
| 80° | 520.7 | 527.3 | 841.4 | 1889.4 | 4496.3 | 4656.8 | 2909.9 | 1104.5 | 797.2 | 706.4 | 545.0 |
| 82.5° | 265.3 | 274.3 | 440.0 | 803.8 | 1880.6 | 1840.7 | 936.5 | 650.1 | 534.0 | 429.0 | 305.2 |
| 85° | 141.6 | 146.0 | 242.2 | 416.9 | 689.9 | 697.7 | 329.5 | 347.1 | 339.4 | 243.3 | 150.3 |
| 87.5° | 69.7 | 71.9 | 116.2 | 183.6 | 255.4 | 246.6 | 115.0 | 150.3 | 166.9 | 137.1 | 83.0 |
| 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° | 2635.6 | 2635.6 | 2635.6 | 2635.6 | 2635.6 | 2635.6 | 2635.6 | 2635.6 | 2635.6 | 2635.6 | 2635.6 |
| 2.5° | 2618.0 | 2618.0 | 2632.4 | 2656.6 | 2674.4 | 2691.0 | 2702.0 | 2719.7 | 2729.7 | 2728.5 | 2727.4 |
| 5° | 2600.4 | 2611.4 | 2640.1 | 2669.9 | 2689.9 | 2703.1 | 2703.1 | 2710.8 | 2710.8 | 2707.5 | 2703.1 |
| 7.5° | 2559.5 | 2578.2 | 2620.3 | 2646.8 | 2652.2 | 2638.0 | 2609.1 | 2587.1 | 2559.5 | 2545.1 | 2539.5 |
| 10° | 2494.1 | 2518.5 | 2571.6 | 2583.7 | 2555.0 | 2504.1 | 2434.4 | 2374.8 | 2321.7 | 2297.3 | 2289.7 |
| 12.5° | 2430.1 | 2462.2 | 2511.9 | 2493.1 | 2424.5 | 2325.1 | 2217.7 | 2136.0 | 2076.3 | 2053.0 | 2045.4 |
| 15° | 2376.9 | 2415.7 | 2454.3 | 2395.8 | 2276.3 | 2138.1 | 2019.8 | 1943.7 | 1898.3 | 1880.6 | 1876.2 |
| 17.5° | 2341.6 | 2386.9 | 2400.2 | 2290.8 | 2124.9 | 1970.2 | 1865.2 | 1815.4 | 1795.4 | 1787.7 | 1785.6 |
| 20° | 2343.8 | 2394.7 | 2362.6 | 2189.0 | 1979.0 | 1823.1 | 1753.4 | 1739.1 | 1739.1 | 1739.1 | 1738.0 |
| 22.5° | 2404.7 | 2448.9 | 2347.1 | 2093.9 | 1838.7 | 1699.2 | 1669.4 | 1681.5 | 1690.4 | 1690.4 | 1689.4 |
| 25° | 2530.6 | 2555.0 | 2358.2 | 2002.2 | 1707.0 | 1592.1 | 1593.1 | 1616.4 | 1624.0 | 1624.0 | 1621.9 |
| 27.5° | 2723.0 | 2703.1 | 2378.2 | 1900.5 | 1577.7 | 1494.7 | 1510.2 | 1531.3 | 1536.7 | 1533.4 | 1532.2 |
| 30° | 2964.0 | 2884.5 | 2394.7 | 1781.1 | 1456.1 | 1404.1 | 1417.3 | 1429.6 | 1425.2 | 1417.3 | 1416.3 |
| 32.5° | 3233.8 | 3069.1 | 2384.7 | 1647.3 | 1348.8 | 1310.1 | 1317.9 | 1324.6 | 1317.9 | 1299.0 | 1299.0 |
| 35° | 3501.4 | 3236.1 | 2330.6 | 1501.3 | 1263.6 | 1219.4 | 1218.3 | 1239.3 | 1238.3 | 1216.1 | 1217.3 |
| 37.5° | 3735.7 | 3367.6 | 2225.6 | 1367.6 | 1190.8 | 1153.2 | 1157.6 | 1170.9 | 1177.5 | 1147.6 | 1144.4 |
| 40° | 3940.2 | 3458.2 | 2077.4 | 1253.8 | 1132.1 | 1134.3 | 1122.2 | 1101.1 | 1093.3 | 1080.1 | 1078.0 |
| 42.5° | 4132.7 | 3521.3 | 1920.3 | 1158.6 | 1102.3 | 1127.7 | 1086.8 | 1037.1 | 1016.1 | 1028.2 | 1035.9 |
| 45° | 4321.7 | 3592.1 | 1768.9 | 1080.1 | 1064.8 | 1107.8 | 1051.3 | 996.1 | 971.7 | 977.4 | 985.1 |
| 47.5° | 4552.8 | 3690.3 | 1586.4 | 996.1 | 1007.2 | 1071.3 | 1029.3 | 969.6 | 933.1 | 911.1 | 904.4 |
| 50° | 4856.7 | 3833.1 | 1350.0 | 905.5 | 946.4 | 1031.6 | 1010.6 | 931.0 | 891.1 | 846.9 | 835.9 |
| 52.5° | 5237.1 | 3968.0 | 1111.2 | 832.5 | 896.6 | 997.2 | 979.5 | 897.8 | 849.1 | 796.0 | 787.2 |
| 55° | 5616.4 | 3986.7 | 905.5 | 769.5 | 840.3 | 950.8 | 942.0 | 871.1 | 802.6 | 759.5 | 750.8 |
| 57.5° | 5881.7 | 3808.8 | 767.2 | 716.4 | 786.0 | 893.4 | 907.6 | 839.1 | 764.0 | 730.9 | 725.2 |
| 60° | 5886.1 | 3383.0 | 683.3 | 681.0 | 745.1 | 843.6 | 872.3 | 801.6 | 739.7 | 717.6 | 713.2 |
| 62.5° | 5418.4 | 2726.4 | 629.1 | 654.5 | 715.3 | 802.6 | 845.8 | 780.5 | 734.2 | 725.2 | 720.8 |
| 65° | 4541.7 | 2014.4 | 586.0 | 630.3 | 687.7 | 768.4 | 823.7 | 773.9 | 731.8 | 728.5 | 725.2 |
| 67.5° | 3353.3 | 1380.9 | 549.5 | 599.2 | 656.8 | 732.9 | 802.6 | 764.0 | 718.6 | 731.8 | 727.4 |
| 70° | 2109.4 | 922.0 | 515.2 | 563.9 | 615.8 | 692.1 | 775.0 | 746.2 | 702.0 | 694.3 | 679.9 |
| 72.5° | 1190.8 | 666.6 | 474.2 | 518.5 | 562.8 | 637.9 | 737.4 | 716.4 | 664.4 | 633.5 | 619.1 |
| 73° | 1075.7 | 631.2 | 464.3 | 507.5 | 550.7 | 626.8 | 728.5 | 707.5 | 653.3 | 619.1 | 605.8 |
| 75° | 787.2 | 516.3 | 419.0 | 462.2 | 499.6 | 576.1 | 686.6 | 663.4 | 604.7 | 563.9 | 555.1 |
| 77.5° | 570.5 | 397.9 | 360.4 | 399.0 | 432.3 | 505.2 | 623.6 | 597.1 | 539.5 | 517.5 | 508.6 |
| 80° | 411.2 | 301.8 | 298.4 | 336.1 | 364.8 | 438.9 | 556.1 | 528.5 | 473.1 | 538.4 | 524.0 |
| 82.5° | 245.4 | 193.4 | 218.8 | 260.9 | 290.8 | 368.1 | 483.2 | 451.0 | 397.9 | 402.4 | 342.8 |
| 85° | 117.1 | 109.5 | 136.1 | 171.3 | 192.3 | 252.1 | 402.4 | 377.0 | 318.4 | 260.9 | 255.4 |
| 87.5° | 51.9 | 49.8 | 65.2 | 76.3 | 102.9 | 151.5 | 275.3 | 244.2 | 231.0 | 138.2 | 108.3 |
| 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)