

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: P197225

Luminaire Tested: **NVN-AF-05-LED-U-T2-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197225
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24136)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-05-LED-U-T2-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24017 lumens
Efficiency: N/A
Efficacy: 86.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B3 - U0 - G4

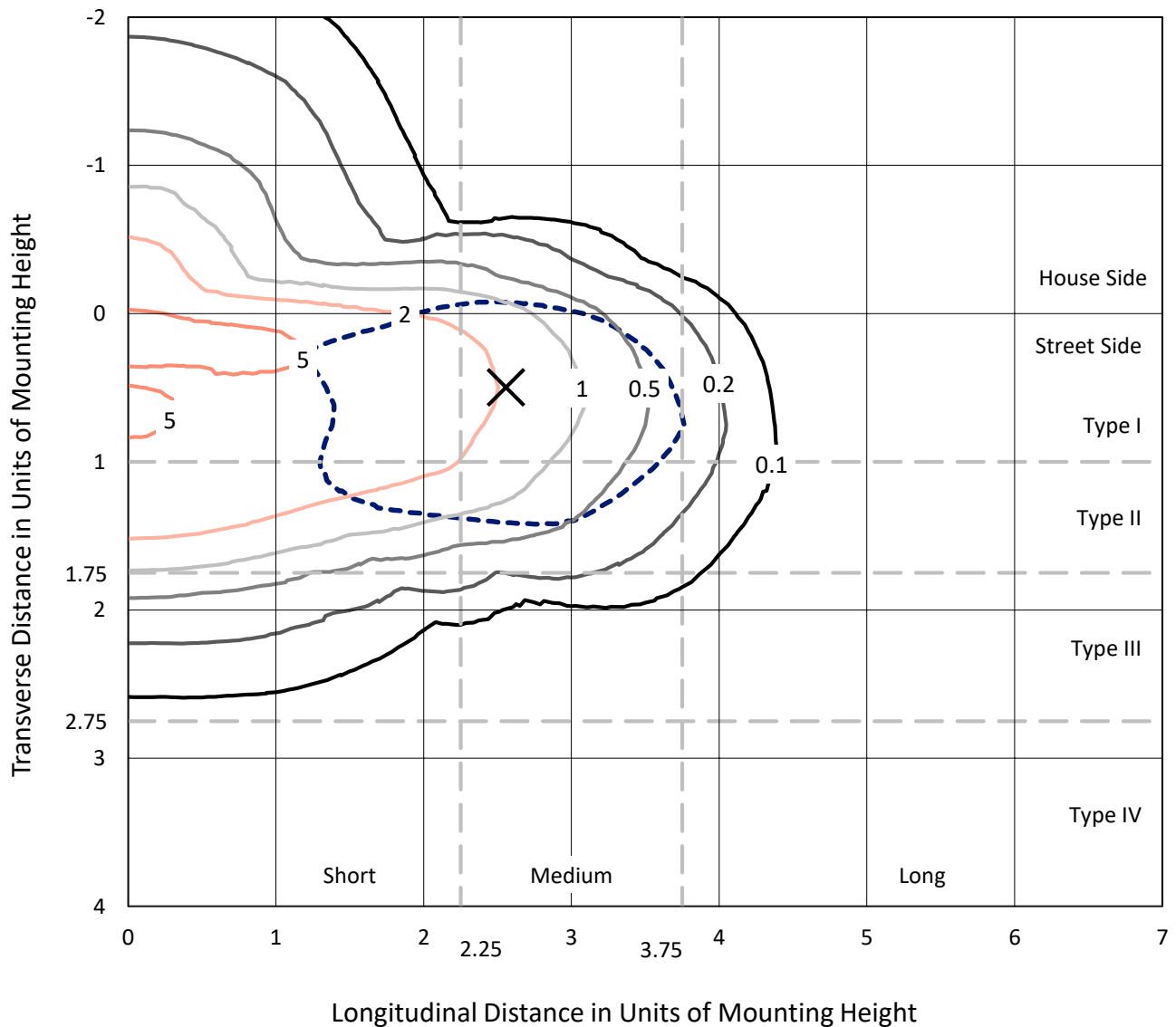
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

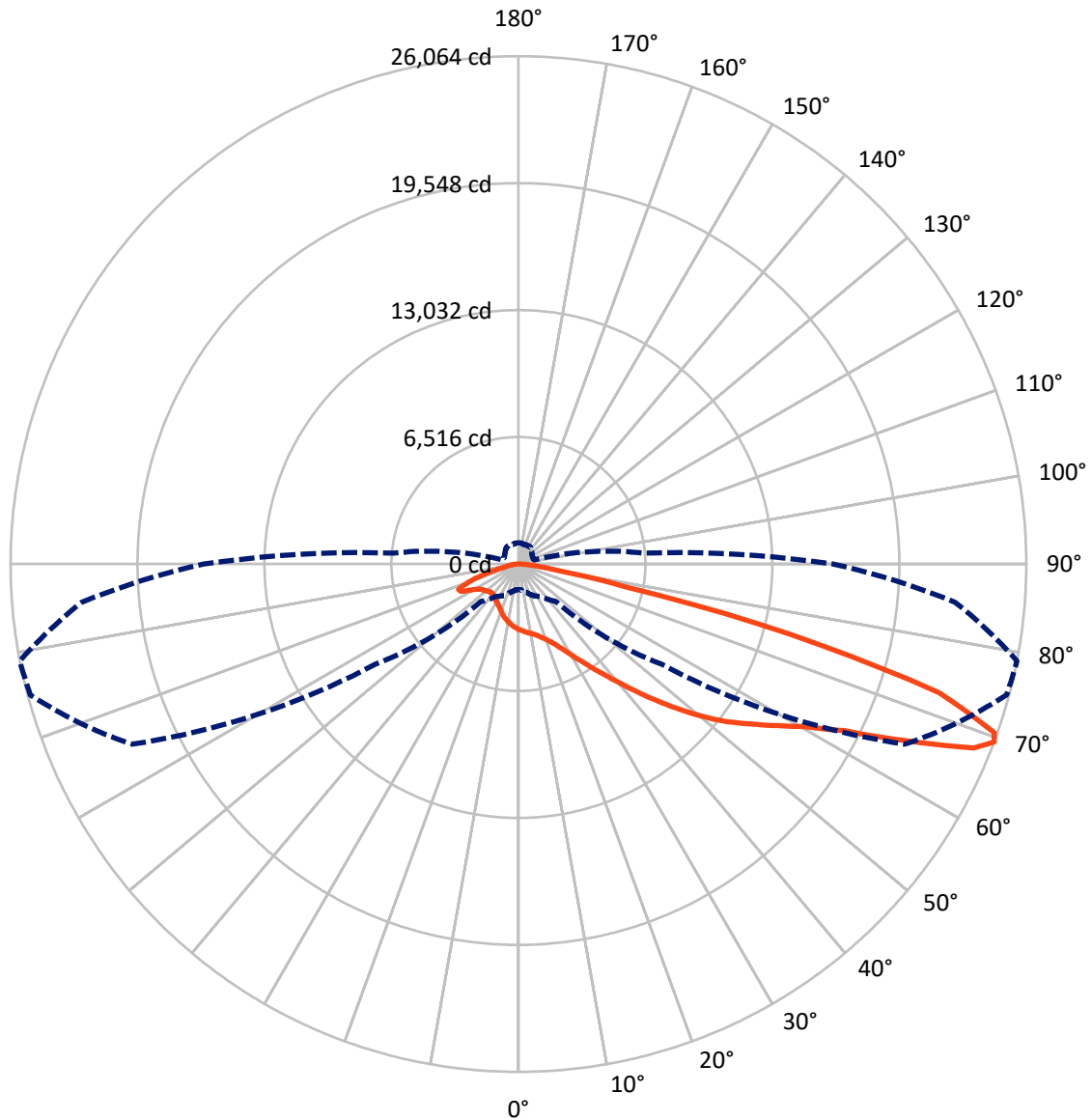
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.5 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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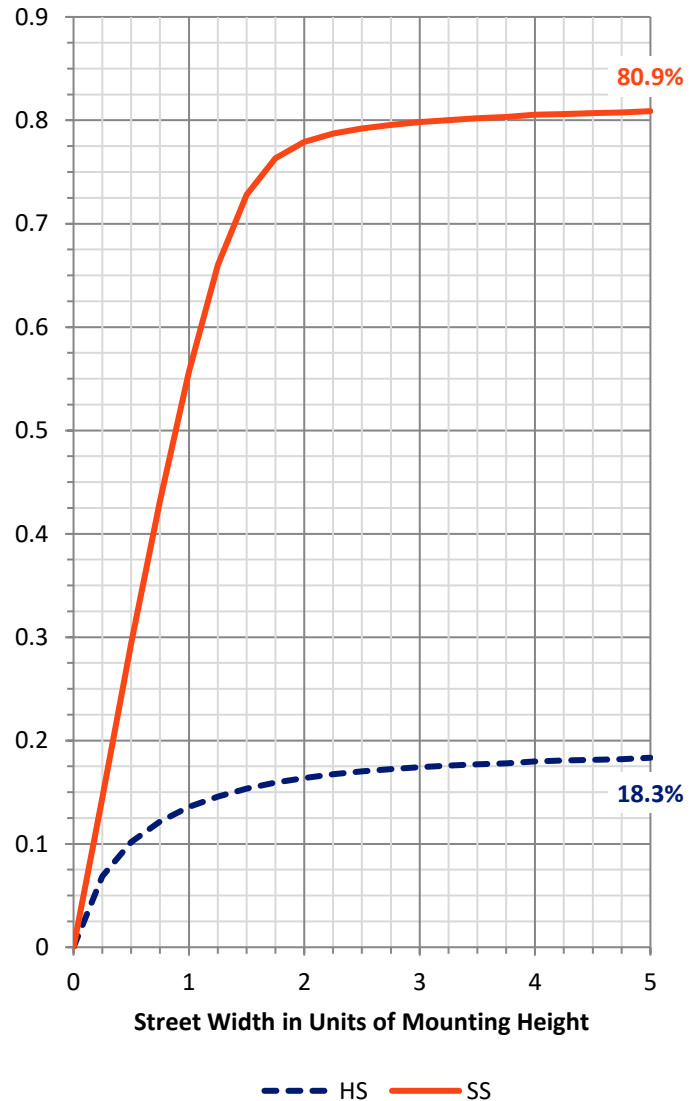
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 4518.0 | 0.0 | 4518.0 |
| | % Fixture | 18.8 | 0.0 | 18.8 |
| Street Side | Lumens | 19499.0 | 0.0 | 19499.0 |
| | % Fixture | 81.2 | 0.0 | 81.2 |
| Total | Lumens | 24017.0 | 0.0 | 24017.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 312.4 | 1.3 |
| 10°-20° | 895.8 | 3.7 |
| 20°-30° | 1480.2 | 6.2 |
| 30°-40° | 2396.8 | 10.0 |
| 40°-50° | 3828.9 | 15.9 |
| 50°-60° | 5483.4 | 22.8 |
| 60°-70° | 6109.4 | 25.4 |
| 70°-80° | 3056.4 | 12.7 |
| 80°-90° | 453.6 | 1.9 |
| 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° | 24017.0 | 100.0 |
| 0°-180° | 24017.0 | 100.0 |



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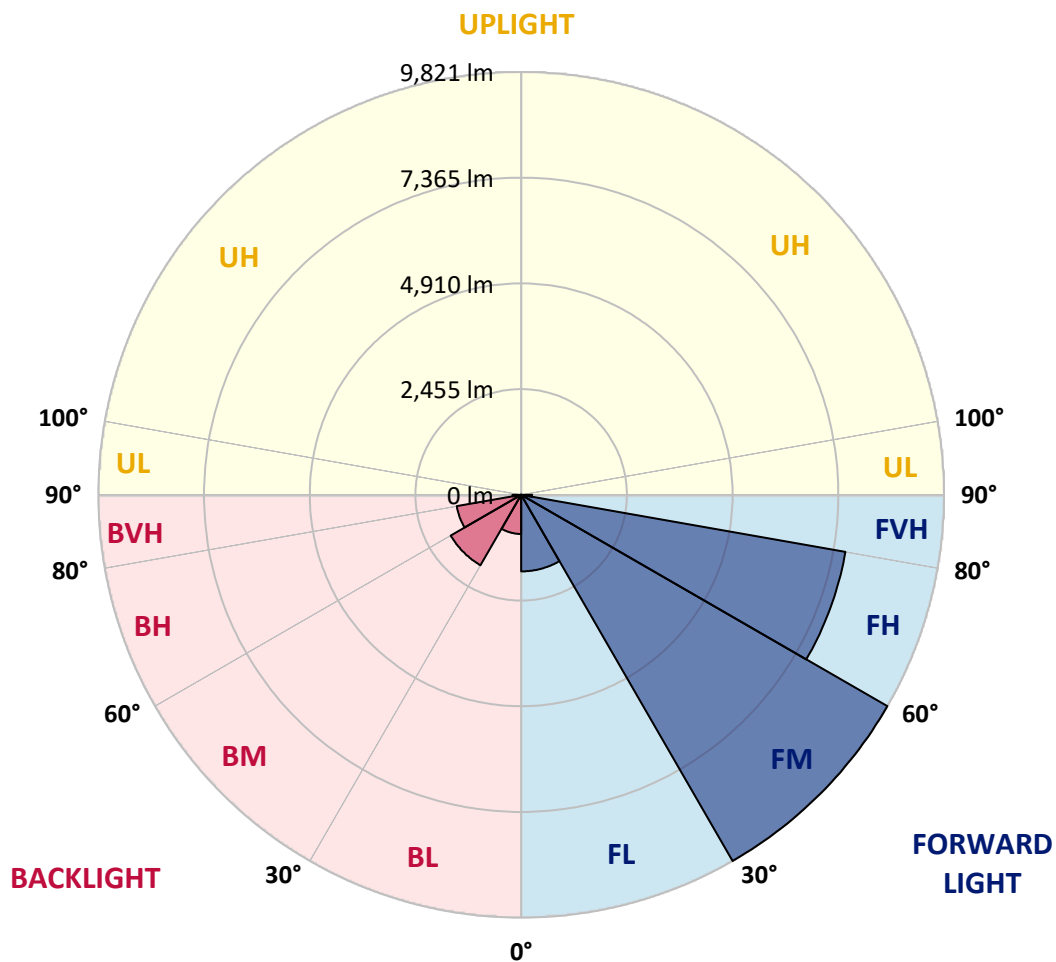
CATALOG NUMBER: NVN-AF-05-LED-U-T2-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 1778.2 | 7.4 | | | |
| FM (30°-60°) | 9820.6 | 40.9 | | | |
| FH (60°-80°) | 7646.7 | 31.8 | | | G4/12000 |
| FVH (80°-90°) | 253.5 | 1.1 | | | G3/500 |
| BL (0°-30°) | 910.2 | 3.8 | B2/1000 | | |
| BM (30°-60°) | 1888.6 | 7.9 | B2/2500 | | |
| BH (60°-80°) | 1519.1 | 6.3 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 200.1 | 0.8 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G4

Type II Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 79° | 85° |
|-------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 3370.3 | 3370.3 | 3370.3 | 3370.3 | 3370.3 | 3370.3 | 3370.3 | 3370.3 | 3370.3 | 3370.3 | 3370.3 |
| 2.5° | 3700.3 | 3692.5 | 3690.9 | 3667.3 | 3654.7 | 3628.0 | 3565.2 | 3500.8 | 3441.1 | 3409.6 | 3376.6 |
| 5° | 4009.8 | 3994.1 | 3986.3 | 3947.0 | 3912.4 | 3852.7 | 3753.7 | 3651.6 | 3544.8 | 3489.8 | 3423.8 |
| 7.5° | 4196.8 | 4198.4 | 4198.4 | 4167.0 | 4132.4 | 4060.1 | 3934.4 | 3794.6 | 3635.9 | 3563.6 | 3459.9 |
| 10° | 4212.5 | 4214.1 | 4237.7 | 4245.5 | 4253.4 | 4215.7 | 4099.4 | 3923.4 | 3719.2 | 3624.9 | 3489.8 |
| 12.5° | 4057.0 | 4068.0 | 4107.3 | 4163.8 | 4244.0 | 4284.8 | 4234.5 | 4061.7 | 3826.0 | 3711.3 | 3546.3 |
| 15° | 3848.0 | 3859.0 | 3909.3 | 3995.7 | 4124.5 | 4261.2 | 4332.0 | 4220.4 | 3965.9 | 3830.7 | 3629.6 |
| 17.5° | 3745.9 | 3758.4 | 3793.0 | 3862.1 | 3987.8 | 4171.7 | 4383.8 | 4390.1 | 4130.8 | 3975.3 | 3728.6 |
| 20° | 3697.2 | 3706.6 | 3750.6 | 3807.2 | 3903.0 | 4079.0 | 4388.5 | 4569.2 | 4327.2 | 4146.5 | 3849.6 |
| 22.5° | 3808.7 | 3811.9 | 3833.9 | 3865.3 | 3929.7 | 4064.8 | 4385.4 | 4754.6 | 4572.4 | 4361.8 | 4005.1 |
| 25° | 4135.5 | 4115.1 | 4099.4 | 4060.1 | 4075.8 | 4171.7 | 4435.7 | 4952.6 | 4886.6 | 4644.6 | 4212.5 |
| 27.5° | 4522.1 | 4518.9 | 4478.1 | 4386.9 | 4328.8 | 4390.1 | 4578.6 | 5174.1 | 5271.6 | 5004.5 | 4484.4 |
| 30° | 4952.6 | 4954.2 | 4911.7 | 4800.2 | 4682.3 | 4688.6 | 4806.5 | 5430.3 | 5731.9 | 5438.1 | 4819.0 |
| 32.5° | 5403.5 | 5431.8 | 5353.3 | 5241.7 | 5098.7 | 5053.2 | 5133.3 | 5739.8 | 6264.6 | 5950.3 | 5207.1 |
| 35° | 5942.5 | 5947.2 | 5860.8 | 5697.4 | 5554.4 | 5482.1 | 5556.0 | 6126.3 | 6879.0 | 6552.1 | 5680.1 |
| 37.5° | 6501.9 | 6505.0 | 6415.4 | 6206.5 | 6025.8 | 5978.6 | 6060.3 | 6596.1 | 7529.5 | 7237.2 | 6236.3 |
| 40° | 6959.1 | 6992.1 | 6921.4 | 6725.0 | 6542.7 | 6514.4 | 6632.3 | 7158.6 | 8360.7 | 8048.0 | 6897.8 |
| 42.5° | 7477.6 | 7515.3 | 7430.5 | 7226.2 | 7081.7 | 7072.2 | 7256.1 | 7799.7 | 9187.1 | 8986.0 | 7647.3 |
| 45° | 8062.1 | 8115.5 | 7997.7 | 7768.3 | 7645.7 | 7853.1 | 7864.1 | 8509.9 | 10139.3 | 10035.6 | 8491.1 |
| 47.5° | 8700.0 | 8744.0 | 8648.2 | 8401.5 | 8267.9 | 8568.1 | 8459.6 | 9278.3 | 11168.5 | 11160.6 | 9404.0 |
| 50° | 9191.8 | 9240.6 | 9250.0 | 9141.6 | 9001.7 | 9039.4 | 9113.3 | 10085.9 | 12194.5 | 12317.1 | 10348.3 |
| 52.5° | 9102.3 | 9149.4 | 9361.5 | 9645.9 | 9870.6 | 9773.2 | 9862.8 | 10943.8 | 13186.0 | 13445.2 | 11245.5 |
| 55° | 8379.5 | 8404.6 | 8802.2 | 9477.8 | 10434.7 | 10899.8 | 10906.1 | 11877.1 | 14128.7 | 14491.7 | 12097.1 |
| 57.5° | 7076.9 | 7080.1 | 7597.0 | 8593.2 | 10106.3 | 11630.4 | 12552.8 | 13049.3 | 15112.3 | 15648.1 | 13153.0 |
| 60° | 5007.6 | 5020.2 | 5622.0 | 6924.5 | 8929.4 | 11542.4 | 14323.6 | 15146.9 | 16251.5 | 16947.6 | 14513.7 |
| 62.5° | 2972.8 | 3001.1 | 3455.2 | 4500.1 | 6632.3 | 10411.1 | 15370.0 | 18878.6 | 17929.6 | 18853.5 | 16691.5 |
| 65° | 1934.2 | 1957.8 | 2229.6 | 2754.4 | 3918.7 | 7575.0 | 15025.9 | 22492.5 | 21105.1 | 21851.5 | 19821.4 |
| 67.5° | 1489.6 | 1508.4 | 1722.1 | 2039.5 | 2404.0 | 4094.7 | 12013.8 | 23249.9 | 24970.4 | 25202.9 | 22462.7 |
| 69° | 1308.9 | 1324.6 | 1481.7 | 1786.5 | 2023.8 | 2710.4 | 8953.0 | 21875.0 | 25936.7 | 26064.0 | 22495.7 |
| 70° | 1213.0 | 1225.6 | 1373.3 | 1637.2 | 1858.8 | 2163.6 | 6852.2 | 20278.6 | 25583.2 | 25908.4 | 21846.7 |
| 72.5° | 999.3 | 1010.3 | 1115.6 | 1318.3 | 1519.4 | 1541.4 | 3035.7 | 14807.5 | 21541.9 | 22582.1 | 18487.4 |
| 75° | 834.3 | 840.6 | 909.8 | 1057.5 | 1230.3 | 1227.2 | 1550.8 | 8387.4 | 13145.1 | 14384.8 | 11415.2 |
| 77.5° | 696.1 | 700.8 | 746.3 | 837.5 | 971.0 | 966.3 | 1092.0 | 3620.2 | 5804.2 | 5600.0 | 3929.7 |
| 80° | 614.4 | 617.5 | 641.1 | 664.6 | 749.5 | 744.8 | 809.2 | 1662.4 | 2361.6 | 2182.5 | 1486.4 |
| 82.5° | 466.7 | 472.9 | 592.4 | 603.4 | 581.4 | 560.9 | 564.1 | 967.9 | 1209.9 | 1101.5 | 798.2 |
| 85° | 264.0 | 265.5 | 380.2 | 444.7 | 505.9 | 380.2 | 366.1 | 499.7 | 597.1 | 523.2 | 348.8 |
| 87.5° | 117.8 | 122.6 | 182.3 | 210.5 | 273.4 | 223.1 | 209.0 | 212.1 | 257.7 | 213.7 | 138.3 |
| 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° | 3370.3 | 3370.3 | 3370.3 | 3370.3 | 3370.3 | 3370.3 | 3370.3 | 3370.3 | 3370.3 | 3370.3 | 3370.3 |
| 2.5° | 3345.2 | 3318.5 | 3255.6 | 3191.2 | 3126.8 | 3085.9 | 3043.5 | 3004.2 | 2988.5 | 2987.0 | 2957.1 |
| 5° | 3359.3 | 3296.5 | 3153.5 | 2996.4 | 2847.1 | 2730.8 | 2633.4 | 2570.6 | 2509.3 | 2498.3 | 2471.6 |
| 7.5° | 3364.1 | 3261.9 | 3029.4 | 2778.0 | 2550.1 | 2389.9 | 2292.5 | 2250.0 | 2220.2 | 2212.3 | 2202.9 |
| 10° | 3362.5 | 3217.9 | 2891.1 | 2547.0 | 2287.7 | 2166.8 | 2130.6 | 2140.1 | 2152.6 | 2158.9 | 2158.9 |
| 12.5° | 3387.6 | 3197.5 | 2752.8 | 2330.2 | 2118.1 | 2059.9 | 2088.2 | 2136.9 | 2174.6 | 2190.3 | 2193.5 |
| 15° | 3433.2 | 3184.9 | 2600.4 | 2141.6 | 1998.6 | 2012.8 | 2081.9 | 2152.6 | 2206.0 | 2229.6 | 2235.9 |
| 17.5° | 3489.8 | 3167.7 | 2424.4 | 1986.1 | 1929.5 | 1978.2 | 2067.8 | 2157.3 | 2221.8 | 2251.6 | 2256.3 |
| 20° | 3552.6 | 3142.5 | 2242.2 | 1869.8 | 1868.2 | 1929.5 | 2019.1 | 2119.6 | 2188.8 | 2221.8 | 2220.2 |
| 22.5° | 3637.5 | 3118.9 | 2072.5 | 1784.9 | 1800.7 | 1857.2 | 1931.1 | 2022.2 | 2086.6 | 2116.5 | 2110.2 |
| 25° | 3750.6 | 3096.9 | 1920.1 | 1709.5 | 1723.7 | 1761.4 | 1813.2 | 1882.4 | 1927.9 | 1943.6 | 1932.6 |
| 27.5° | 3903.0 | 3079.7 | 1800.7 | 1640.4 | 1638.8 | 1656.1 | 1687.5 | 1725.2 | 1747.2 | 1742.5 | 1725.2 |
| 30° | 4090.0 | 3062.4 | 1712.7 | 1579.1 | 1557.1 | 1555.5 | 1569.7 | 1591.7 | 1605.8 | 1577.5 | 1563.4 |
| 32.5° | 4299.0 | 3032.5 | 1634.1 | 1525.7 | 1486.4 | 1472.3 | 1478.6 | 1508.4 | 1566.5 | 1538.3 | 1527.3 |
| 35° | 4545.6 | 2998.0 | 1555.5 | 1467.6 | 1437.7 | 1411.0 | 1415.7 | 1480.1 | 1656.1 | 1635.7 | 1624.7 |
| 37.5° | 4842.6 | 2966.5 | 1483.3 | 1404.7 | 1403.1 | 1370.1 | 1367.0 | 1444.0 | 1679.7 | 1635.7 | 1626.2 |
| 40° | 5199.3 | 2960.2 | 1418.8 | 1335.6 | 1360.7 | 1348.1 | 1337.1 | 1384.3 | 1549.3 | 1459.7 | 1442.4 |
| 42.5° | 5629.8 | 2988.5 | 1371.7 | 1269.6 | 1312.0 | 1341.9 | 1321.4 | 1332.4 | 1400.0 | 1319.9 | 1305.7 |
| 45° | 6132.6 | 3065.5 | 1337.1 | 1211.4 | 1260.1 | 1337.1 | 1313.6 | 1304.1 | 1315.1 | 1271.1 | 1261.7 |
| 47.5° | 6718.7 | 3202.2 | 1313.6 | 1162.7 | 1211.4 | 1324.6 | 1310.4 | 1291.6 | 1286.9 | 1261.7 | 1255.4 |
| 50° | 7345.6 | 3386.1 | 1297.9 | 1118.7 | 1167.4 | 1302.6 | 1308.9 | 1282.1 | 1274.3 | 1263.3 | 1260.1 |
| 52.5° | 7967.8 | 3585.6 | 1279.0 | 1081.0 | 1131.3 | 1275.9 | 1310.4 | 1272.7 | 1261.7 | 1255.4 | 1252.3 |
| 55° | 8586.9 | 3793.0 | 1244.4 | 1048.0 | 1104.6 | 1244.4 | 1308.9 | 1260.1 | 1247.6 | 1247.6 | 1247.6 |
| 57.5° | 9389.8 | 4108.8 | 1198.9 | 1021.3 | 1070.0 | 1203.6 | 1288.4 | 1246.0 | 1228.7 | 1230.3 | 1231.9 |
| 60° | 10549.4 | 4638.3 | 1148.6 | 991.5 | 1024.5 | 1156.4 | 1257.0 | 1220.9 | 1200.4 | 1206.7 | 1208.3 |
| 62.5° | 12486.8 | 5563.8 | 1079.5 | 949.0 | 977.3 | 1106.2 | 1216.2 | 1186.3 | 1167.4 | 1178.4 | 1180.0 |
| 65° | 15069.9 | 6684.1 | 988.3 | 895.6 | 928.6 | 1049.6 | 1164.3 | 1145.4 | 1125.0 | 1151.7 | 1150.2 |
| 67.5° | 16645.9 | 7012.5 | 892.5 | 839.1 | 881.5 | 989.9 | 1099.9 | 1092.0 | 1077.9 | 1125.0 | 1121.9 |
| 69° | 16128.9 | 6418.6 | 837.5 | 802.9 | 848.5 | 949.0 | 1059.0 | 1055.9 | 1044.9 | 1090.5 | 1087.3 |
| 70° | 15326.0 | 5863.9 | 802.9 | 779.3 | 831.2 | 923.9 | 1032.3 | 1032.3 | 1021.3 | 1060.6 | 1052.7 |
| 72.5° | 12310.8 | 4349.2 | 722.8 | 719.6 | 771.5 | 854.8 | 960.0 | 967.9 | 961.6 | 975.7 | 967.9 |
| 75° | 7227.8 | 2620.9 | 644.2 | 653.6 | 699.2 | 780.9 | 879.9 | 886.2 | 879.9 | 878.3 | 879.9 |
| 77.5° | 2506.2 | 1175.3 | 568.8 | 582.9 | 622.2 | 705.5 | 791.9 | 804.5 | 795.1 | 784.1 | 787.2 |
| 80° | 980.5 | 683.5 | 487.1 | 507.5 | 540.5 | 620.6 | 703.9 | 711.8 | 697.6 | 696.1 | 683.5 |
| 82.5° | 589.2 | 416.4 | 378.7 | 411.7 | 452.5 | 538.9 | 608.1 | 604.9 | 593.9 | 658.4 | 576.7 |
| 85° | 256.1 | 231.0 | 276.5 | 309.5 | 330.0 | 403.8 | 513.8 | 499.7 | 472.9 | 416.4 | 407.0 |
| 87.5° | 103.7 | 119.4 | 152.4 | 183.8 | 198.0 | 260.8 | 352.0 | 339.4 | 344.1 | 282.8 | 281.3 |
| 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)