

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: P195839

Luminaire Tested: **NVN-AF-05-LED-U-T3-7050-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195839
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)
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-T3-7050-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 5000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 32995 lumens
Efficiency: N/A
Efficacy: 103.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G4

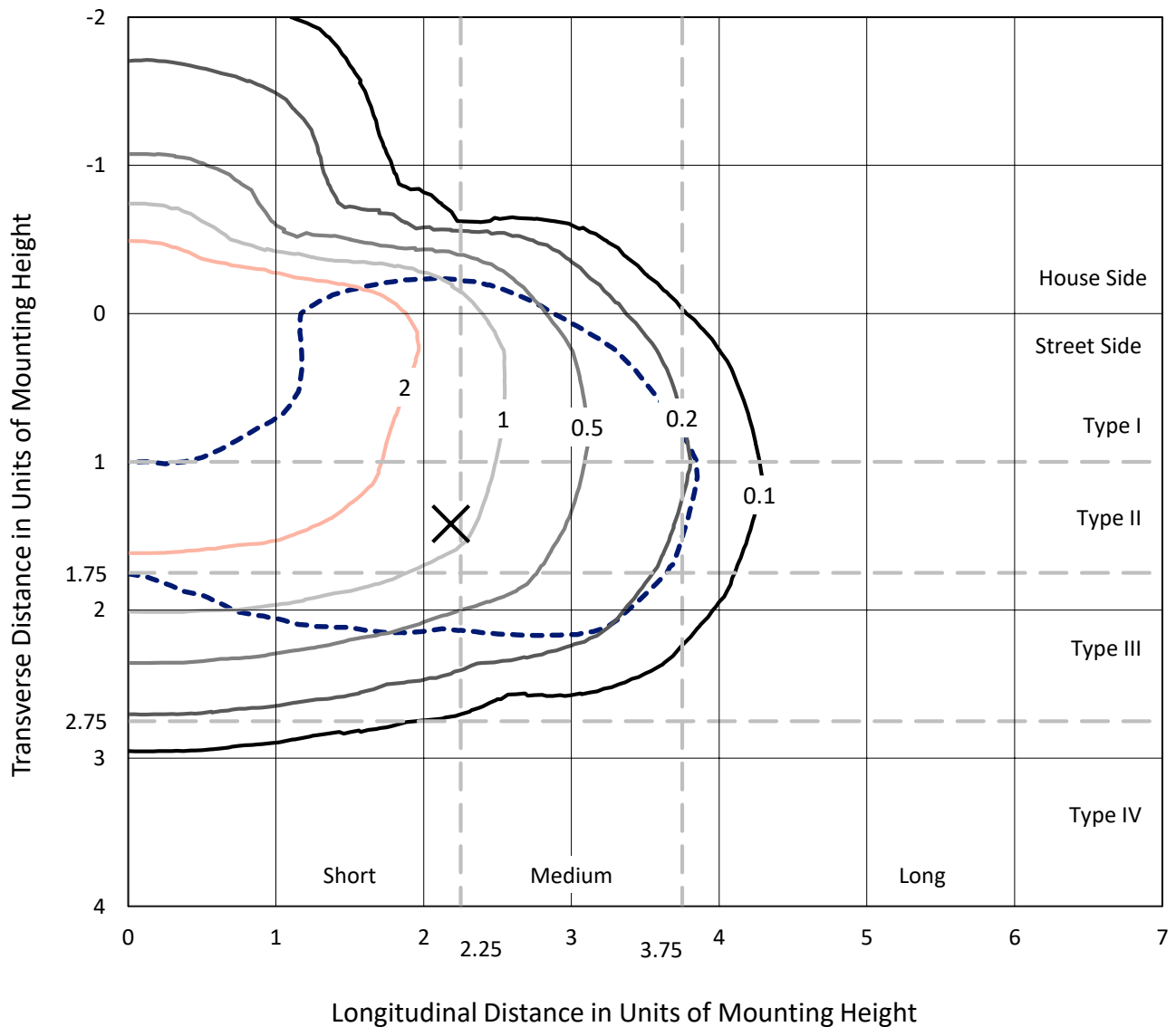
Input Watts (W): 320
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

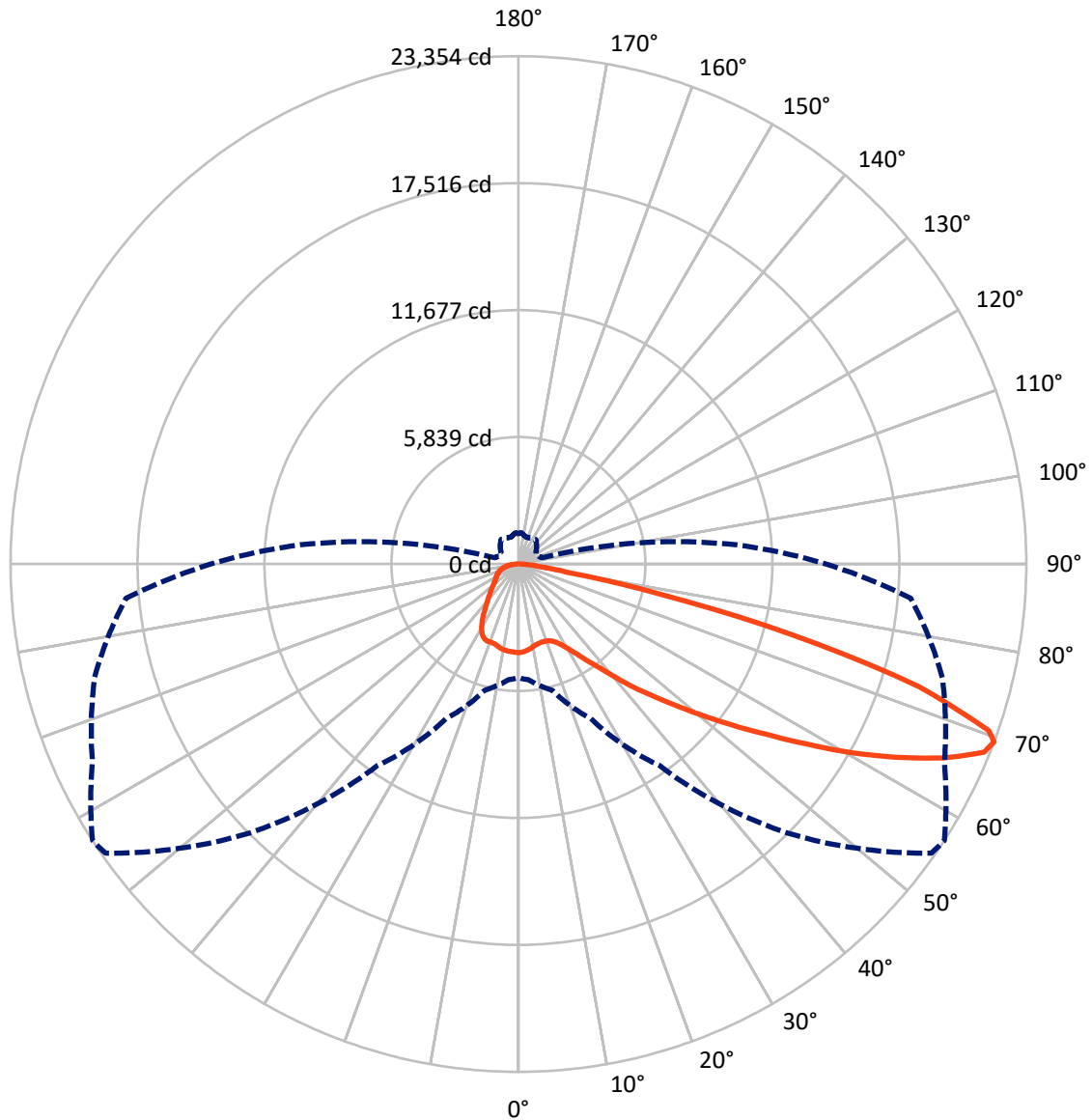
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.6 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical



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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 7280.8 | 0.0 | 7280.8 |
| | % Fixture | 22.1 | 0.0 | 22.1 |
| Street Side | Lumens | 25714.2 | 0.0 | 25714.2 |
| | % Fixture | 77.9 | 0.0 | 77.9 |
| Total | Lumens | 32995.0 | 0.0 | 32995.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 381.7 | 1.2 |
| 10°-20° | 1085.2 | 3.3 |
| 20°-30° | 1805.2 | 5.5 |
| 30°-40° | 2947.9 | 8.9 |
| 40°-50° | 4975.3 | 15.1 |
| 50°-60° | 7739.3 | 23.5 |
| 60°-70° | 9219.2 | 27.9 |
| 70°-80° | 4294.9 | 13.0 |
| 80°-90° | 546.3 | 1.7 |
| 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° | 32995.0 | 100.0 |
| 0°-180° | 32995.0 | 100.0 |

Coefficient of Utilization



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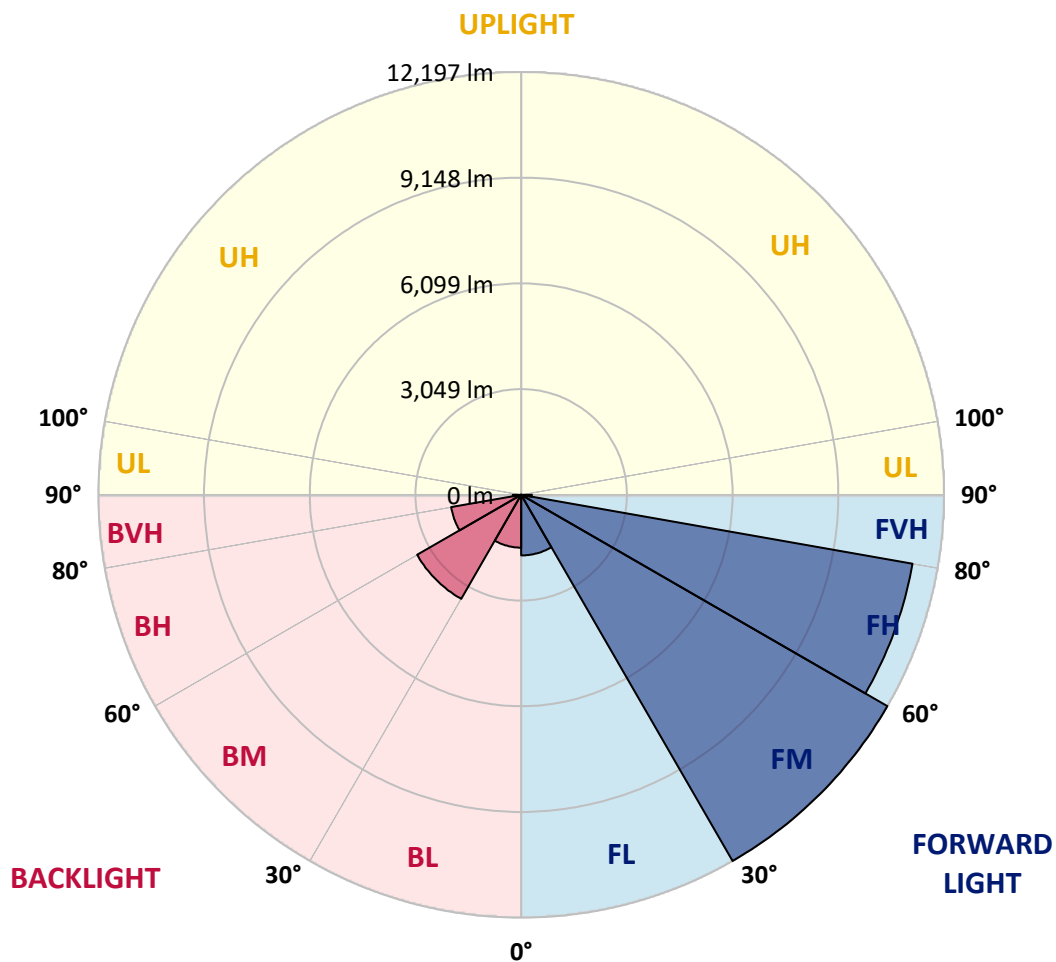
CATALOG NUMBER: NVN-AF-05-LED-U-T3-7050-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 1747.4 | 5.3 | | | |
| FM | (30°-60°) | 12197.2 | 37.0 | | | |
| FH | (60°-80°) | 11462.5 | 34.7 | | | G4/12000 |
| FVH | (80°-90°) | 307.1 | 0.9 | | | G3/500 |
| BL | (0°-30°) | 1524.7 | 4.6 | B3/2500 | | |
| BM | (30°-60°) | 3465.3 | 10.5 | B3/5000 | | |
| BH | (60°-80°) | 2051.6 | 6.2 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 239.2 | 0.7 | | | G3/500 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G4

Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 57° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 4076.9 | 4076.9 | 4076.9 | 4076.9 | 4076.9 | 4076.9 | 4076.9 | 4076.9 | 4076.9 | 4076.9 | 4076.9 |
| 2.5° | 4053.6 | 4053.6 | 4064.2 | 4064.2 | 4064.2 | 4060.0 | 4047.3 | 4051.5 | 4043.1 | 4036.7 | 4026.2 |
| 5° | 3971.2 | 3975.5 | 3988.1 | 3992.4 | 3998.7 | 4000.8 | 4000.8 | 3998.7 | 4000.8 | 4000.8 | 3994.5 |
| 7.5° | 3857.2 | 3861.4 | 3876.2 | 3884.6 | 3903.6 | 3920.5 | 3929.0 | 3929.0 | 3939.6 | 3948.0 | 3950.1 |
| 10° | 3787.5 | 3787.5 | 3795.9 | 3795.9 | 3810.7 | 3819.1 | 3846.6 | 3844.5 | 3874.1 | 3901.5 | 3914.2 |
| 12.5° | 3779.0 | 3779.0 | 3774.8 | 3760.0 | 3751.6 | 3749.4 | 3776.9 | 3781.1 | 3825.5 | 3874.1 | 3897.3 |
| 15° | 3806.5 | 3806.5 | 3793.8 | 3764.2 | 3732.5 | 3717.8 | 3745.2 | 3753.7 | 3802.2 | 3859.3 | 3895.2 |
| 17.5° | 3895.2 | 3893.1 | 3865.6 | 3806.5 | 3751.6 | 3728.3 | 3736.8 | 3745.2 | 3789.6 | 3855.1 | 3899.4 |
| 20° | 4091.6 | 4091.6 | 4032.5 | 3924.8 | 3829.7 | 3774.8 | 3762.1 | 3768.4 | 3800.1 | 3861.4 | 3918.4 |
| 22.5° | 4436.0 | 4442.3 | 4336.7 | 4159.2 | 3996.6 | 3880.4 | 3829.7 | 3836.0 | 3850.8 | 3910.0 | 3973.3 |
| 25° | 4942.9 | 4926.0 | 4776.0 | 4524.7 | 4271.2 | 4072.6 | 3969.1 | 3975.5 | 3975.5 | 4030.4 | 4095.9 |
| 27.5° | 5479.5 | 5483.7 | 5268.2 | 4997.8 | 4664.1 | 4368.4 | 4203.6 | 4201.5 | 4199.4 | 4252.2 | 4321.9 |
| 30° | 6085.7 | 6087.8 | 5838.6 | 5525.9 | 5143.6 | 4765.5 | 4518.3 | 4516.2 | 4497.2 | 4562.7 | 4653.5 |
| 32.5° | 6749.0 | 6746.9 | 6457.5 | 6104.7 | 5680.1 | 5251.3 | 4930.2 | 4928.1 | 4913.3 | 5002.1 | 5111.9 |
| 35° | 7484.1 | 7484.1 | 7196.8 | 6761.7 | 6303.3 | 5825.9 | 5454.1 | 5452.0 | 5460.4 | 5580.9 | 5684.4 |
| 37.5° | 8369.2 | 8388.2 | 8041.8 | 7513.7 | 7013.0 | 6504.0 | 6070.9 | 6058.2 | 5994.9 | 6197.7 | 6368.8 |
| 40° | 9292.3 | 9345.1 | 8986.0 | 8369.2 | 7828.4 | 7302.4 | 6825.0 | 6816.6 | 6761.7 | 6977.1 | 7253.8 |
| 42.5° | 10291.4 | 10411.8 | 10012.6 | 9383.1 | 8793.8 | 8225.5 | 7746.0 | 7722.8 | 7511.6 | 7847.4 | 8280.4 |
| 45° | 11601.1 | 11679.2 | 11100.4 | 10530.1 | 9974.6 | 9326.1 | 8755.7 | 8631.1 | 8419.9 | 8850.8 | 9412.7 |
| 47.5° | 12492.5 | 12454.5 | 12093.3 | 11710.9 | 11353.9 | 10732.9 | 9856.3 | 9697.8 | 9440.1 | 10010.5 | 10629.4 |
| 50° | 13045.9 | 13073.4 | 12870.6 | 12851.6 | 12832.6 | 12399.6 | 11098.3 | 10908.2 | 10610.4 | 11286.3 | 12008.8 |
| 52.5° | 13411.4 | 13286.7 | 13322.7 | 13753.6 | 14275.3 | 14068.3 | 12503.1 | 12291.8 | 11985.5 | 12661.5 | 13476.9 |
| 55° | 13259.3 | 13094.5 | 13426.2 | 14275.3 | 15502.6 | 15549.1 | 14045.1 | 13827.5 | 13565.6 | 14123.2 | 15242.8 |
| 57.5° | 12629.8 | 12712.2 | 13236.0 | 14416.9 | 16341.2 | 16875.6 | 15817.3 | 15595.6 | 15080.1 | 15646.2 | 16920.0 |
| 60° | 11744.7 | 11911.6 | 12712.2 | 14192.9 | 16928.4 | 17908.6 | 17762.8 | 17615.0 | 16727.8 | 17129.1 | 18681.7 |
| 62.5° | 10794.2 | 10958.9 | 11943.3 | 13810.6 | 16664.4 | 18823.2 | 19672.4 | 19581.6 | 18546.5 | 18557.1 | 19799.1 |
| 65° | 9389.4 | 9457.0 | 10462.5 | 12767.1 | 15931.4 | 19649.2 | 21584.1 | 21503.8 | 20285.0 | 19775.9 | 20111.8 |
| 67.5° | 7091.2 | 7175.7 | 8001.6 | 10078.1 | 13700.8 | 19201.3 | 23111.3 | 23098.7 | 21330.6 | 20228.0 | 19368.2 |
| 69° | 5236.5 | 5340.0 | 6013.9 | 7824.2 | 11328.6 | 17494.6 | 23183.1 | 23354.2 | 21613.7 | 20181.5 | 18111.4 |
| 70° | 3831.8 | 3950.1 | 4573.3 | 6210.3 | 9435.9 | 15610.3 | 22568.4 | 22936.0 | 21505.9 | 19887.9 | 17131.2 |
| 72.5° | 1628.6 | 1668.8 | 1975.1 | 2803.1 | 4786.6 | 9412.7 | 18485.3 | 19258.4 | 19423.1 | 17819.9 | 13383.9 |
| 75° | 1020.3 | 1032.9 | 1153.3 | 1438.5 | 2129.3 | 3893.1 | 11970.7 | 13024.8 | 14501.3 | 13825.4 | 8960.6 |
| 77.5° | 768.9 | 779.5 | 849.2 | 990.7 | 1322.3 | 1453.3 | 5553.4 | 6622.2 | 8305.8 | 8132.6 | 4459.2 |
| 80° | 589.3 | 595.7 | 642.2 | 720.3 | 931.6 | 910.4 | 1801.8 | 2264.4 | 3466.4 | 3058.7 | 1577.9 |
| 82.5° | 462.6 | 464.7 | 504.9 | 519.6 | 650.6 | 612.6 | 904.1 | 1007.6 | 1400.5 | 1163.9 | 771.0 |
| 85° | 409.8 | 416.1 | 456.3 | 380.2 | 416.1 | 369.7 | 496.4 | 538.7 | 743.6 | 701.3 | 291.5 |
| 87.5° | 209.1 | 219.7 | 382.3 | 325.3 | 209.1 | 175.3 | 217.6 | 234.5 | 302.1 | 327.4 | 141.5 |
| 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° | 4076.9 | 4076.9 | 4076.9 | 4076.9 | 4076.9 | 4076.9 | 4076.9 | 4076.9 | 4076.9 | 4076.9 | 4076.9 |
| 2.5° | 4028.3 | 4030.4 | 4036.7 | 4047.3 | 4064.2 | 4085.3 | 4110.7 | 4136.0 | 4150.8 | 4161.3 | 4157.1 |
| 5° | 3994.5 | 3996.6 | 4009.3 | 4028.3 | 4049.4 | 4081.1 | 4123.3 | 4155.0 | 4178.2 | 4193.0 | 4190.9 |
| 7.5° | 3952.2 | 3958.6 | 3983.9 | 4005.0 | 4034.6 | 4060.0 | 4093.8 | 4123.3 | 4146.6 | 4161.3 | 4159.2 |
| 10° | 3920.5 | 3926.9 | 3958.6 | 3986.0 | 4011.4 | 4015.6 | 4009.3 | 4000.8 | 3998.7 | 4009.3 | 4005.0 |
| 12.5° | 3905.8 | 3918.4 | 3948.0 | 3967.0 | 3956.4 | 3916.3 | 3869.8 | 3850.8 | 3844.5 | 3865.6 | 3867.7 |
| 15° | 3910.0 | 3920.5 | 3945.9 | 3933.2 | 3876.2 | 3808.6 | 3783.2 | 3798.0 | 3810.7 | 3823.4 | 3825.5 |
| 17.5° | 3920.5 | 3926.9 | 3933.2 | 3886.7 | 3806.5 | 3762.1 | 3753.7 | 3738.9 | 3700.9 | 3679.7 | 3677.6 |
| 20° | 3939.6 | 3948.0 | 3937.4 | 3863.5 | 3791.7 | 3732.5 | 3631.1 | 3540.3 | 3453.7 | 3407.2 | 3388.2 |
| 22.5° | 4005.0 | 4011.4 | 3979.7 | 3907.9 | 3798.0 | 3605.8 | 3400.9 | 3244.6 | 3111.5 | 3039.7 | 3012.2 |
| 25° | 4133.9 | 4144.4 | 4100.1 | 4009.3 | 3722.0 | 3386.1 | 3096.7 | 2885.5 | 2718.6 | 2632.0 | 2608.8 |
| 27.5° | 4359.9 | 4370.5 | 4321.9 | 4085.3 | 3544.5 | 3092.5 | 2741.8 | 2532.7 | 2389.1 | 2315.1 | 2304.6 |
| 30° | 4697.9 | 4712.7 | 4668.3 | 4083.2 | 3274.2 | 2718.6 | 2395.4 | 2272.9 | 2190.5 | 2139.8 | 2137.7 |
| 32.5° | 5166.8 | 5221.8 | 5040.1 | 4011.4 | 2940.4 | 2340.5 | 2133.5 | 2091.2 | 2051.1 | 2017.3 | 2017.3 |
| 35° | 5762.5 | 5891.4 | 5407.6 | 3861.4 | 2572.9 | 2082.8 | 1987.7 | 1947.6 | 1896.9 | 1861.0 | 1856.8 |
| 37.5° | 6474.4 | 6675.1 | 5669.6 | 3595.2 | 2256.0 | 1958.2 | 1899.0 | 1833.5 | 1753.3 | 1683.6 | 1666.7 |
| 40° | 7452.4 | 7498.9 | 5798.4 | 3162.2 | 2019.4 | 1890.6 | 1816.6 | 1734.2 | 1632.9 | 1554.7 | 1546.2 |
| 42.5° | 8434.7 | 8282.6 | 5773.1 | 2697.5 | 1884.2 | 1829.3 | 1732.1 | 1641.3 | 1550.5 | 1485.0 | 1485.0 |
| 45° | 9552.1 | 8967.0 | 5580.9 | 2230.7 | 1761.7 | 1759.6 | 1654.0 | 1567.4 | 1497.7 | 1449.1 | 1438.5 |
| 47.5° | 10620.9 | 9581.7 | 5249.2 | 1886.3 | 1635.0 | 1689.9 | 1603.3 | 1533.6 | 1470.2 | 1423.7 | 1415.3 |
| 50° | 11917.9 | 10293.5 | 4896.4 | 1645.5 | 1512.4 | 1628.6 | 1582.2 | 1546.2 | 1485.0 | 1404.7 | 1396.3 |
| 52.5° | 13206.5 | 11125.8 | 4624.0 | 1463.9 | 1404.7 | 1580.0 | 1594.8 | 1599.1 | 1542.0 | 1385.7 | 1375.1 |
| 55° | 14590.1 | 12015.1 | 4336.7 | 1322.3 | 1316.0 | 1556.8 | 1624.4 | 1620.2 | 1592.7 | 1389.9 | 1373.0 |
| 57.5° | 15906.1 | 12908.6 | 3907.9 | 1223.1 | 1246.3 | 1533.6 | 1630.7 | 1563.1 | 1514.6 | 1411.1 | 1383.6 |
| 60° | 16996.0 | 13648.0 | 3278.4 | 1153.3 | 1187.1 | 1487.1 | 1588.5 | 1487.1 | 1404.7 | 1406.8 | 1381.5 |
| 62.5° | 17526.2 | 13855.0 | 2507.4 | 1073.1 | 1138.6 | 1411.1 | 1527.2 | 1430.1 | 1354.0 | 1415.3 | 1400.5 |
| 65° | 17122.8 | 13265.6 | 1787.1 | 999.1 | 1079.4 | 1322.3 | 1491.3 | 1381.5 | 1328.7 | 1457.5 | 1440.6 |
| 67.5° | 15673.7 | 11660.2 | 1297.0 | 933.7 | 1022.4 | 1231.5 | 1423.7 | 1337.1 | 1303.3 | 1489.2 | 1451.2 |
| 69° | 14133.8 | 10067.5 | 1123.8 | 895.6 | 982.2 | 1182.9 | 1379.4 | 1313.9 | 1284.3 | 1444.9 | 1389.9 |
| 70° | 12853.7 | 8840.2 | 1037.2 | 872.4 | 948.4 | 1155.5 | 1345.6 | 1299.1 | 1265.3 | 1392.0 | 1326.6 |
| 72.5° | 9216.2 | 5713.9 | 872.4 | 802.7 | 859.7 | 1094.2 | 1271.6 | 1244.2 | 1193.5 | 1256.9 | 1214.6 |
| 75° | 5568.2 | 2982.7 | 741.4 | 730.9 | 766.8 | 1009.7 | 1185.0 | 1151.2 | 1100.5 | 1106.9 | 1085.8 |
| 77.5° | 2558.1 | 1377.3 | 621.0 | 646.4 | 669.6 | 904.1 | 1079.4 | 1041.4 | 994.9 | 978.0 | 980.1 |
| 80° | 1121.7 | 804.8 | 519.6 | 551.3 | 564.0 | 813.3 | 965.3 | 923.1 | 872.4 | 963.2 | 893.5 |
| 82.5° | 606.2 | 466.8 | 405.6 | 426.7 | 462.6 | 707.6 | 838.6 | 783.7 | 735.1 | 855.5 | 690.7 |
| 85° | 245.0 | 238.7 | 274.6 | 295.7 | 321.1 | 509.1 | 701.3 | 644.3 | 585.1 | 523.9 | 511.2 |
| 87.5° | 105.6 | 114.1 | 135.2 | 143.6 | 171.1 | 316.9 | 471.1 | 411.9 | 414.0 | 354.9 | 348.5 |
| 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)