

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: P270875

Luminaire Tested: **NVN-AF-02-LED-U-T4FT-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270875
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-02-LED-U-T4FT-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 800mA 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: 8617.4 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G2

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

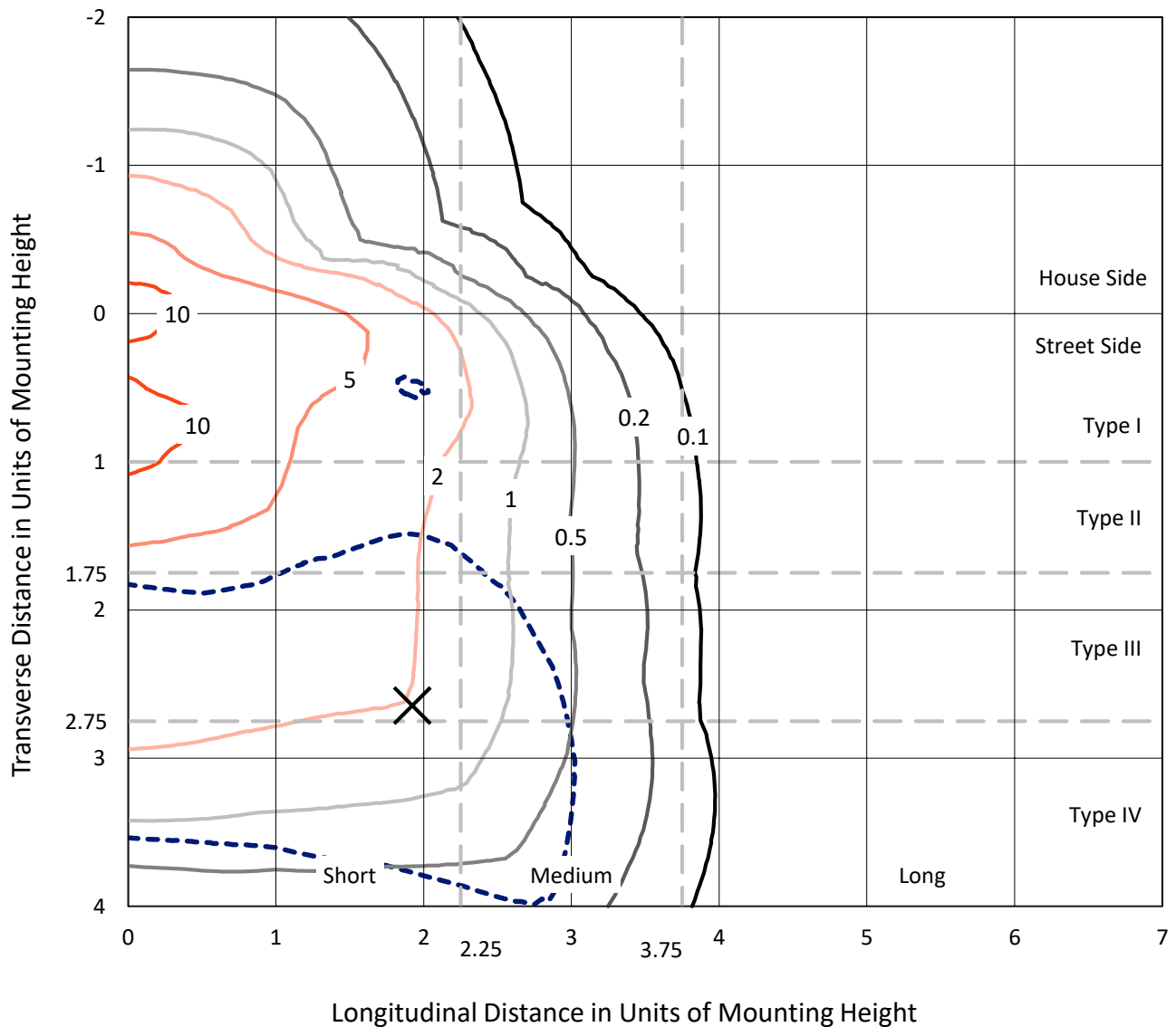


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

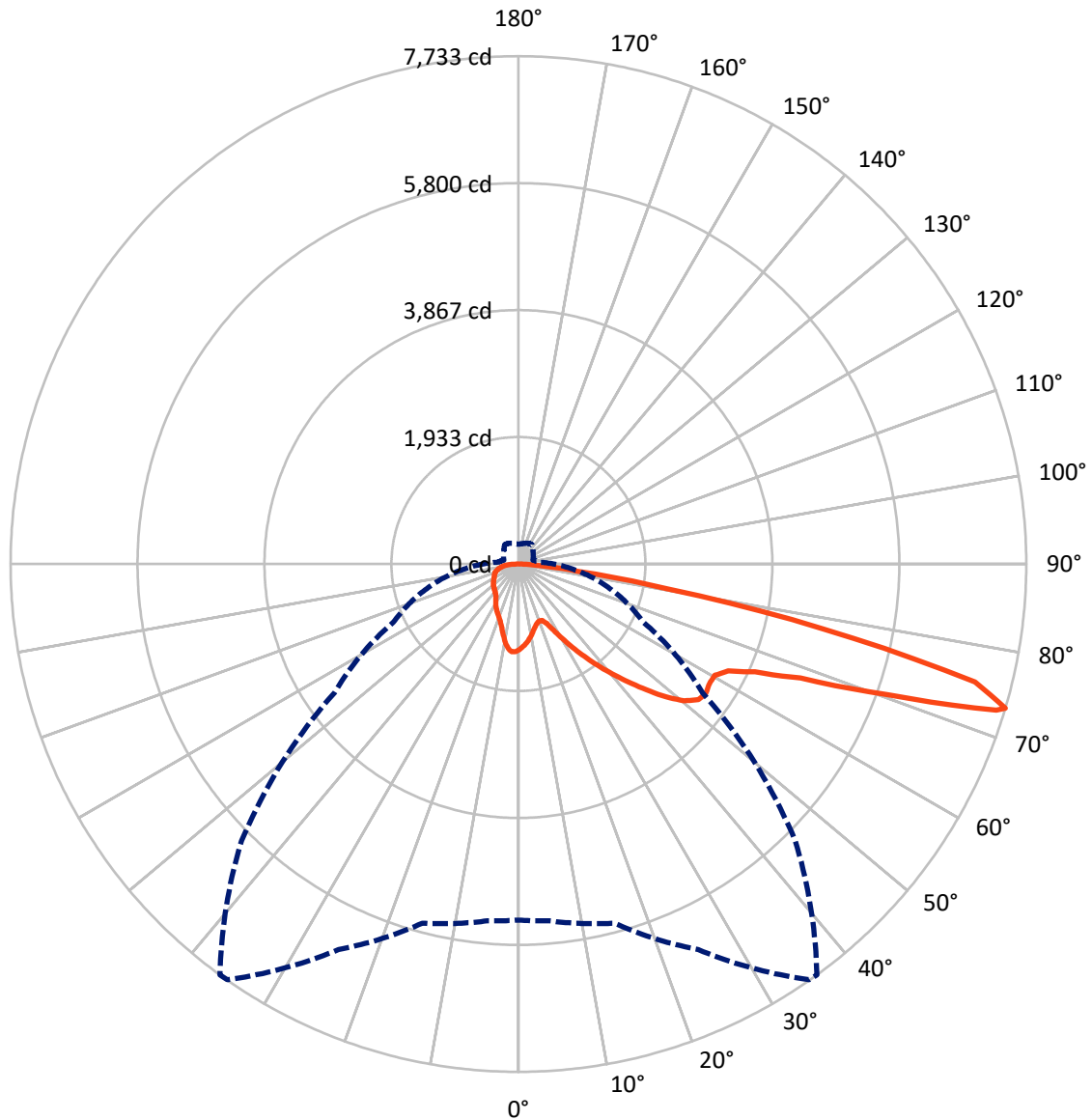


Based on 10 foot mounting height. Maximum calculated value = 13.1 fc
 Type IV - Short - Non-Cutoff

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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 | 1661.7 | 0.0 | 1661.7 |
| | % Fixture | 19.3 | 0.0 | 19.3 |
| Street Side | Lumens | 6955.7 | 0.0 | 6955.7 |
| | % Fixture | 80.7 | 0.0 | 80.7 |
| Total | Lumens | 8617.4 | 0.0 | 8617.4 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 118.6 | 1.4 |
| 10°-20° | 297.8 | 3.5 |
| 20°-30° | 477.4 | 5.5 |
| 30°-40° | 789.6 | 9.2 |
| 40°-50° | 1221.9 | 14.2 |
| 50°-60° | 1635.7 | 19.0 |
| 60°-70° | 2136.8 | 24.8 |
| 70°-80° | 1745.4 | 20.3 |
| 80°-90° | 194.3 | 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° | 8617.4 | 100.0 |
| 0°-180° | 8617.4 | 100.0 |



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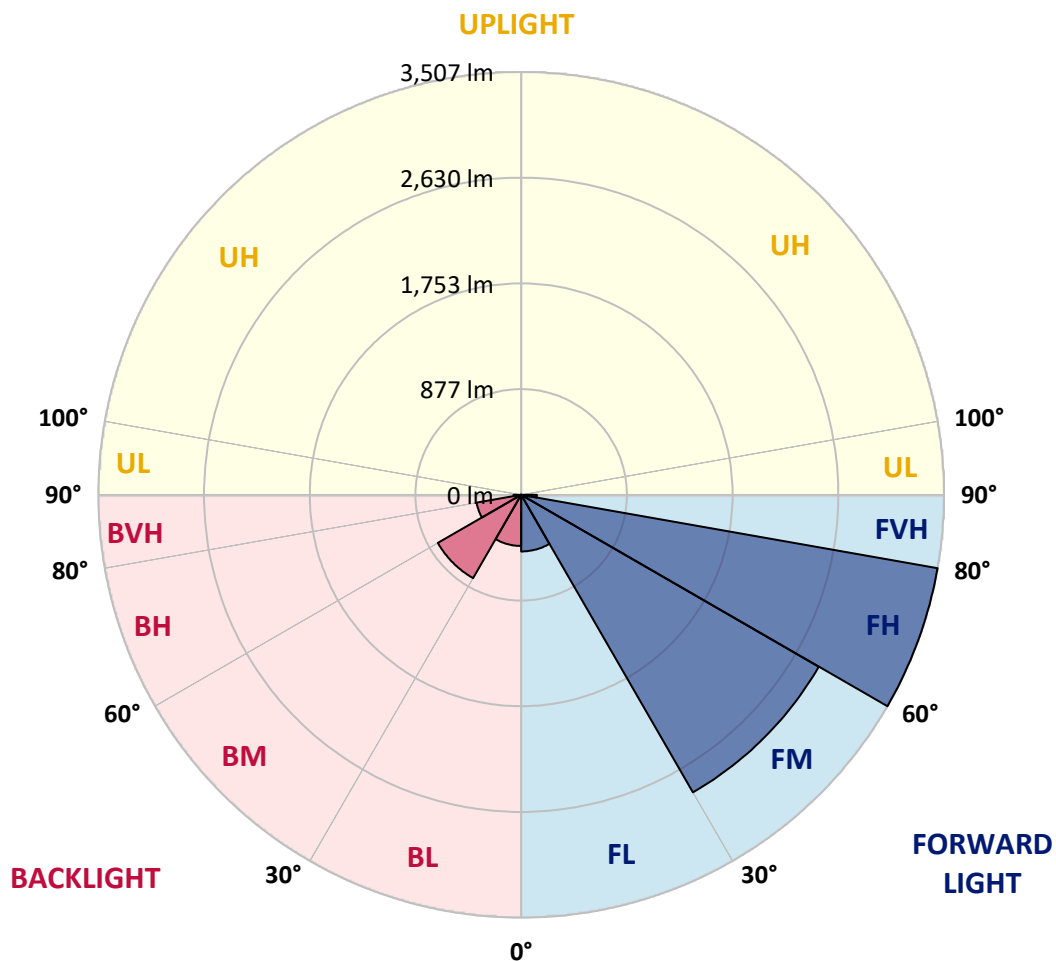
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 469.5 | 5.4 | | | |
| FM (30°-60°) | 2849.2 | 33.1 | | | |
| FH (60°-80°) | 3506.7 | 40.7 | | | G2/5000 |
| FVH (80°-90°) | 130.3 | 1.5 | | | G2/225 |
| BL (0°-30°) | 424.2 | 4.9 | B1/500 | | |
| BM (30°-60°) | 798.0 | 9.3 | B1/1000 | | |
| BH (60°-80°) | 375.5 | 4.4 | B1/500 | | G1/500 |
| BVH (80°-90°) | 64.0 | 0.7 | | | G1/100 |
| 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° | 36° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1305.2 | 1305.2 | 1305.2 | 1305.2 | 1305.2 | 1305.2 | 1305.2 | 1305.2 | 1305.2 | 1305.2 | 1305.2 |
| 2.5° | 1255.6 | 1258.7 | 1259.3 | 1263.1 | 1263.1 | 1262.6 | 1264.3 | 1270.8 | 1274.1 | 1281.7 | 1288.3 |
| 5° | 1193.6 | 1197.4 | 1199.1 | 1205.6 | 1213.9 | 1214.4 | 1220.3 | 1233.1 | 1245.1 | 1261.9 | 1276.2 |
| 7.5° | 1124.0 | 1128.5 | 1132.9 | 1146.4 | 1158.5 | 1159.6 | 1171.1 | 1191.4 | 1207.3 | 1228.2 | 1253.9 |
| 10° | 1056.8 | 1057.8 | 1062.2 | 1079.8 | 1095.7 | 1097.2 | 1113.7 | 1136.6 | 1158.0 | 1187.0 | 1216.0 |
| 12.5° | 1001.4 | 1004.8 | 1003.5 | 1016.7 | 1030.4 | 1031.6 | 1053.4 | 1082.5 | 1113.7 | 1146.4 | 1181.0 |
| 15° | 982.2 | 981.7 | 970.2 | 969.7 | 975.6 | 976.7 | 998.1 | 1032.1 | 1067.0 | 1107.6 | 1151.9 |
| 17.5° | 995.4 | 991.0 | 960.8 | 942.3 | 938.5 | 939.5 | 955.3 | 992.6 | 1029.8 | 1076.3 | 1129.4 |
| 20° | 1067.6 | 1050.7 | 980.1 | 935.1 | 922.6 | 922.6 | 931.9 | 961.9 | 1003.0 | 1057.2 | 1124.0 |
| 22.5° | 1239.0 | 1212.7 | 1062.2 | 982.2 | 937.9 | 933.5 | 926.4 | 949.4 | 994.9 | 1060.0 | 1146.4 |
| 25° | 1454.7 | 1442.1 | 1212.7 | 1107.6 | 1016.3 | 1002.0 | 954.9 | 963.2 | 1011.9 | 1089.6 | 1207.9 |
| 27.5° | 1654.6 | 1632.7 | 1410.3 | 1290.0 | 1160.7 | 1138.8 | 1039.2 | 1005.8 | 1052.4 | 1144.4 | 1296.6 |
| 30° | 1771.2 | 1756.5 | 1613.5 | 1498.6 | 1344.8 | 1316.7 | 1173.8 | 1090.2 | 1124.6 | 1234.7 | 1422.5 |
| 32.5° | 1898.3 | 1889.4 | 1817.2 | 1712.7 | 1543.9 | 1511.7 | 1347.9 | 1227.5 | 1235.2 | 1354.6 | 1574.1 |
| 35° | 2021.5 | 2033.0 | 1991.9 | 1915.2 | 1758.6 | 1728.5 | 1581.7 | 1407.1 | 1371.5 | 1489.3 | 1736.2 |
| 37.5° | 2169.2 | 2172.0 | 2146.3 | 2096.5 | 1984.1 | 1959.6 | 1838.7 | 1598.8 | 1519.9 | 1632.7 | 1892.8 |
| 40° | 2464.4 | 2421.1 | 2320.4 | 2280.9 | 2214.1 | 2198.8 | 2060.8 | 1774.5 | 1657.9 | 1780.0 | 2040.6 |
| 42.5° | 2783.6 | 2716.2 | 2558.6 | 2494.0 | 2467.1 | 2452.9 | 2245.9 | 1891.7 | 1787.1 | 1927.3 | 2185.7 |
| 45° | 3040.9 | 2986.1 | 2831.7 | 2751.9 | 2755.1 | 2732.1 | 2407.5 | 1996.3 | 1927.3 | 2075.2 | 2347.8 |
| 47.5° | 3294.4 | 3202.9 | 3030.0 | 3018.5 | 3056.8 | 3022.8 | 2561.8 | 2100.9 | 2073.5 | 2236.2 | 2509.9 |
| 50° | 3310.9 | 3227.6 | 3157.5 | 3249.4 | 3315.3 | 3273.1 | 2702.0 | 2237.7 | 2225.1 | 2431.1 | 2719.0 |
| 52.5° | 3111.0 | 3099.0 | 3205.7 | 3360.6 | 3469.7 | 3431.9 | 2816.5 | 2378.4 | 2380.1 | 2674.7 | 2973.6 |
| 55° | 3038.2 | 3022.8 | 3151.0 | 3341.5 | 3488.7 | 3466.3 | 2901.9 | 2537.3 | 2551.9 | 2970.2 | 3246.8 |
| 57.5° | 3160.9 | 3122.5 | 3147.8 | 3305.4 | 3443.9 | 3430.7 | 2990.5 | 2713.5 | 2740.3 | 3310.9 | 3499.2 |
| 60° | 3541.4 | 3463.1 | 3329.5 | 3359.0 | 3445.5 | 3437.9 | 3117.6 | 2910.1 | 2955.0 | 3665.7 | 3659.1 |
| 62.5° | 4111.4 | 4022.6 | 3750.6 | 3619.1 | 3600.0 | 3585.1 | 3327.3 | 3151.6 | 3174.0 | 3921.9 | 3566.0 |
| 65° | 4736.7 | 4641.4 | 4317.8 | 4102.6 | 3989.8 | 3958.0 | 3665.7 | 3442.8 | 3302.1 | 3921.3 | 3203.5 |
| 67.5° | 5438.5 | 5337.8 | 5015.2 | 4810.0 | 4687.9 | 4633.6 | 4214.8 | 3678.2 | 3260.5 | 3589.5 | 2563.6 |
| 70° | 6157.4 | 6061.7 | 5913.7 | 5985.4 | 6039.1 | 5956.5 | 5079.8 | 3756.5 | 2961.5 | 2814.2 | 1721.4 |
| 72.5° | 5775.8 | 5768.1 | 5880.3 | 6560.4 | 7594.6 | 7611.1 | 5943.8 | 3535.3 | 2288.2 | 1672.6 | 917.7 |
| 73° | 5421.5 | 5453.8 | 5661.8 | 6475.5 | 7727.7 | 7733.1 | 5960.9 | 3420.8 | 2100.9 | 1441.2 | 806.0 |
| 75° | 2808.8 | 3027.7 | 3799.8 | 5250.8 | 7155.4 | 7181.3 | 5254.5 | 2589.8 | 1252.1 | 800.5 | 543.1 |
| 77.5° | 752.3 | 742.4 | 1224.3 | 2558.1 | 4770.4 | 4736.7 | 3320.1 | 1253.9 | 600.1 | 502.1 | 381.2 |
| 80° | 257.9 | 261.1 | 416.6 | 935.8 | 2226.8 | 2306.2 | 1441.2 | 547.0 | 394.7 | 349.9 | 269.9 |
| 82.5° | 131.4 | 135.7 | 217.8 | 398.0 | 931.4 | 911.6 | 463.7 | 322.0 | 264.5 | 212.4 | 151.2 |
| 85° | 70.1 | 72.3 | 120.0 | 206.4 | 341.6 | 345.5 | 163.1 | 171.9 | 168.2 | 120.5 | 74.5 |
| 87.5° | 34.5 | 35.7 | 57.5 | 90.9 | 126.5 | 122.1 | 57.0 | 74.5 | 82.6 | 67.9 | 41.1 |
| 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° | 1305.2 | 1305.2 | 1305.2 | 1305.2 | 1305.2 | 1305.2 | 1305.2 | 1305.2 | 1305.2 | 1305.2 | 1305.2 |
| 2.5° | 1296.6 | 1296.6 | 1303.6 | 1315.7 | 1324.5 | 1332.6 | 1338.1 | 1346.9 | 1351.8 | 1351.3 | 1350.7 |
| 5° | 1287.8 | 1293.2 | 1307.5 | 1322.2 | 1332.0 | 1338.7 | 1338.7 | 1342.4 | 1342.4 | 1340.9 | 1338.7 |
| 7.5° | 1267.5 | 1276.9 | 1297.6 | 1310.7 | 1313.5 | 1306.3 | 1292.1 | 1281.3 | 1267.5 | 1260.4 | 1257.6 |
| 10° | 1235.2 | 1247.2 | 1273.5 | 1279.5 | 1265.4 | 1240.1 | 1205.6 | 1176.2 | 1149.8 | 1137.8 | 1133.9 |
| 12.5° | 1203.5 | 1219.3 | 1244.0 | 1234.7 | 1200.8 | 1151.4 | 1098.3 | 1057.8 | 1028.2 | 1016.7 | 1012.8 |
| 15° | 1177.1 | 1196.4 | 1215.4 | 1186.5 | 1127.4 | 1058.9 | 1000.4 | 962.5 | 940.0 | 931.4 | 929.1 |
| 17.5° | 1159.6 | 1182.1 | 1188.6 | 1134.5 | 1052.4 | 975.6 | 923.6 | 899.1 | 889.1 | 885.3 | 884.2 |
| 20° | 1160.7 | 1185.9 | 1170.0 | 1084.1 | 980.1 | 902.8 | 868.4 | 861.2 | 861.2 | 861.2 | 860.7 |
| 22.5° | 1190.9 | 1212.7 | 1162.3 | 1037.1 | 910.5 | 841.5 | 826.8 | 832.8 | 837.2 | 837.2 | 836.6 |
| 25° | 1253.2 | 1265.4 | 1167.8 | 991.5 | 845.3 | 788.4 | 789.0 | 800.5 | 804.3 | 804.3 | 803.3 |
| 27.5° | 1348.5 | 1338.7 | 1177.7 | 941.2 | 781.3 | 740.3 | 747.8 | 758.3 | 761.0 | 759.3 | 758.9 |
| 30° | 1467.9 | 1428.5 | 1185.9 | 882.0 | 721.1 | 695.4 | 701.9 | 708.0 | 705.8 | 701.9 | 701.3 |
| 32.5° | 1601.5 | 1519.9 | 1181.0 | 815.8 | 668.0 | 648.8 | 652.7 | 655.9 | 652.7 | 643.4 | 643.4 |
| 35° | 1734.0 | 1602.5 | 1154.1 | 743.5 | 625.8 | 603.9 | 603.4 | 613.7 | 613.3 | 602.3 | 602.9 |
| 37.5° | 1850.1 | 1667.8 | 1102.2 | 677.3 | 589.6 | 571.1 | 573.3 | 579.9 | 583.1 | 568.3 | 566.7 |
| 40° | 1951.4 | 1712.7 | 1028.7 | 620.9 | 560.6 | 561.8 | 555.7 | 545.4 | 541.5 | 534.9 | 533.9 |
| 42.5° | 2046.6 | 1743.9 | 951.0 | 573.7 | 545.9 | 558.4 | 538.3 | 513.7 | 503.2 | 509.2 | 513.0 |
| 45° | 2140.2 | 1779.0 | 876.0 | 534.9 | 527.2 | 548.7 | 520.7 | 493.3 | 481.3 | 483.9 | 487.8 |
| 47.5° | 2254.7 | 1827.6 | 785.7 | 493.3 | 498.7 | 530.5 | 509.8 | 480.1 | 462.1 | 451.2 | 447.9 |
| 50° | 2405.2 | 1898.3 | 668.5 | 448.4 | 468.6 | 510.9 | 500.4 | 461.0 | 441.2 | 419.4 | 413.8 |
| 52.5° | 2593.5 | 1965.0 | 550.2 | 412.3 | 444.0 | 493.9 | 485.2 | 444.7 | 420.4 | 394.3 | 389.9 |
| 55° | 2781.4 | 1974.4 | 448.4 | 381.2 | 416.2 | 470.9 | 466.5 | 431.5 | 397.5 | 376.1 | 371.8 |
| 57.5° | 2912.8 | 1886.3 | 380.0 | 354.8 | 389.2 | 442.3 | 449.5 | 415.6 | 378.4 | 361.8 | 359.1 |
| 60° | 2915.0 | 1675.3 | 338.4 | 337.3 | 369.1 | 417.7 | 431.9 | 397.0 | 366.2 | 355.3 | 353.2 |
| 62.5° | 2683.3 | 1350.2 | 311.5 | 324.1 | 354.2 | 397.5 | 418.9 | 386.5 | 363.5 | 359.1 | 356.9 |
| 65° | 2249.1 | 997.6 | 290.2 | 312.2 | 340.5 | 380.5 | 407.9 | 383.2 | 362.5 | 360.8 | 359.1 |
| 67.5° | 1660.6 | 683.9 | 272.1 | 296.8 | 325.2 | 363.1 | 397.5 | 378.4 | 355.9 | 362.5 | 360.3 |
| 70° | 1044.6 | 456.6 | 255.2 | 279.3 | 305.0 | 342.8 | 383.8 | 369.6 | 347.6 | 343.8 | 336.8 |
| 72.5° | 589.6 | 330.1 | 234.8 | 256.7 | 278.7 | 315.9 | 365.3 | 354.8 | 329.0 | 313.7 | 306.6 |
| 73° | 532.8 | 312.6 | 230.0 | 251.3 | 272.6 | 310.5 | 360.8 | 350.3 | 323.6 | 306.6 | 300.0 |
| 75° | 389.9 | 255.7 | 207.5 | 228.9 | 247.5 | 285.2 | 340.0 | 328.5 | 299.4 | 279.3 | 274.8 |
| 77.5° | 282.5 | 197.1 | 178.6 | 197.6 | 214.1 | 250.2 | 308.7 | 295.6 | 267.2 | 256.2 | 251.9 |
| 80° | 203.6 | 149.5 | 147.9 | 166.5 | 180.6 | 217.4 | 275.4 | 261.8 | 234.4 | 266.6 | 259.5 |
| 82.5° | 121.5 | 95.8 | 108.4 | 129.3 | 144.0 | 182.4 | 239.3 | 223.4 | 197.1 | 199.3 | 169.7 |
| 85° | 58.0 | 54.2 | 67.4 | 84.9 | 95.3 | 124.9 | 199.3 | 186.7 | 157.7 | 129.3 | 126.5 |
| 87.5° | 25.7 | 24.7 | 32.2 | 37.8 | 50.9 | 75.0 | 136.4 | 121.0 | 114.4 | 68.5 | 53.7 |
| 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)