

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: P197331

Luminaire Tested: **NVN-AF-03-LED-U-T4W-8030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197331  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24127)  
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-T4W-8030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9624 lumens  
Efficiency: N/A  
Efficacy: 100.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G2

Input Watts (W): 96  
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

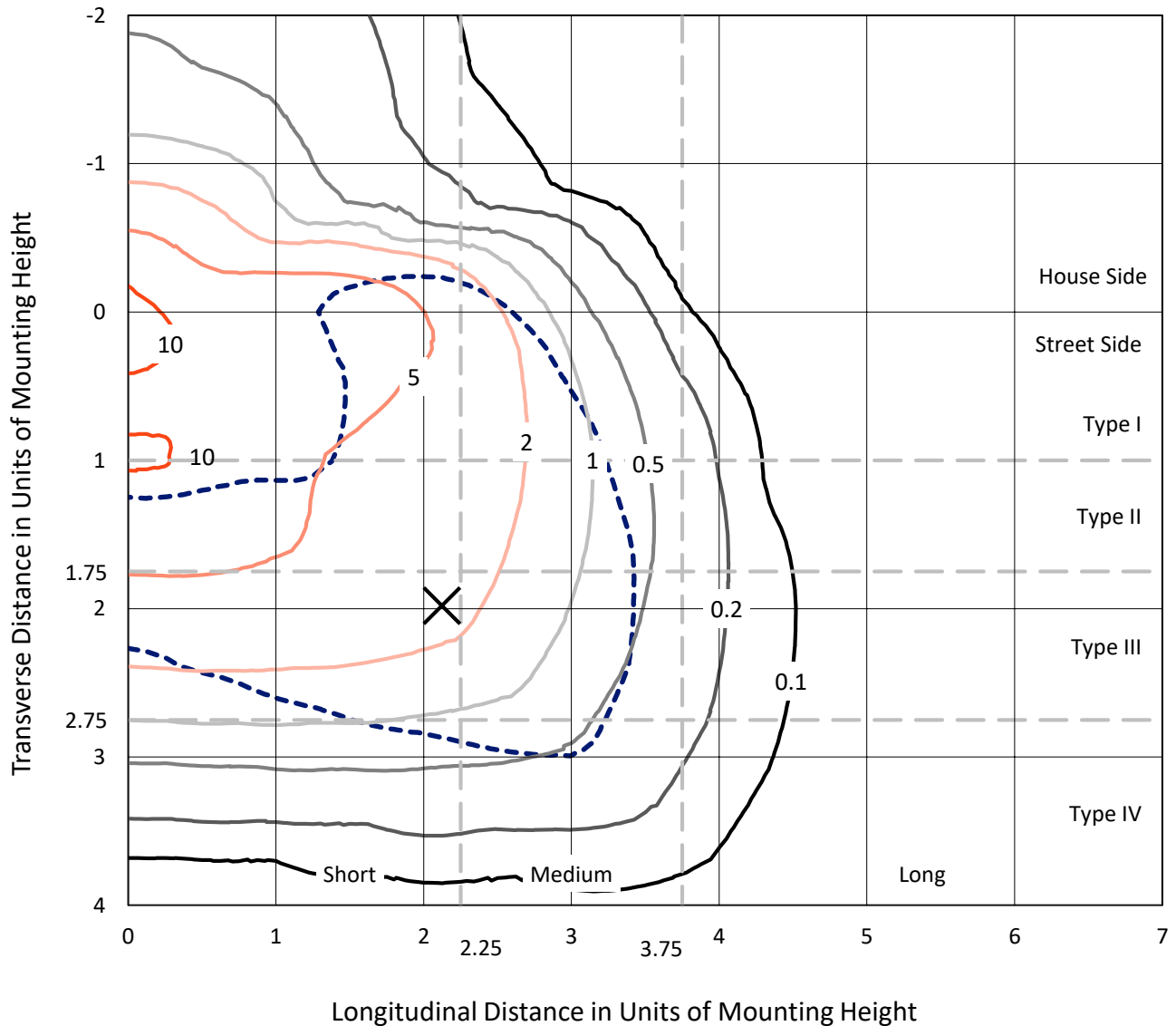


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

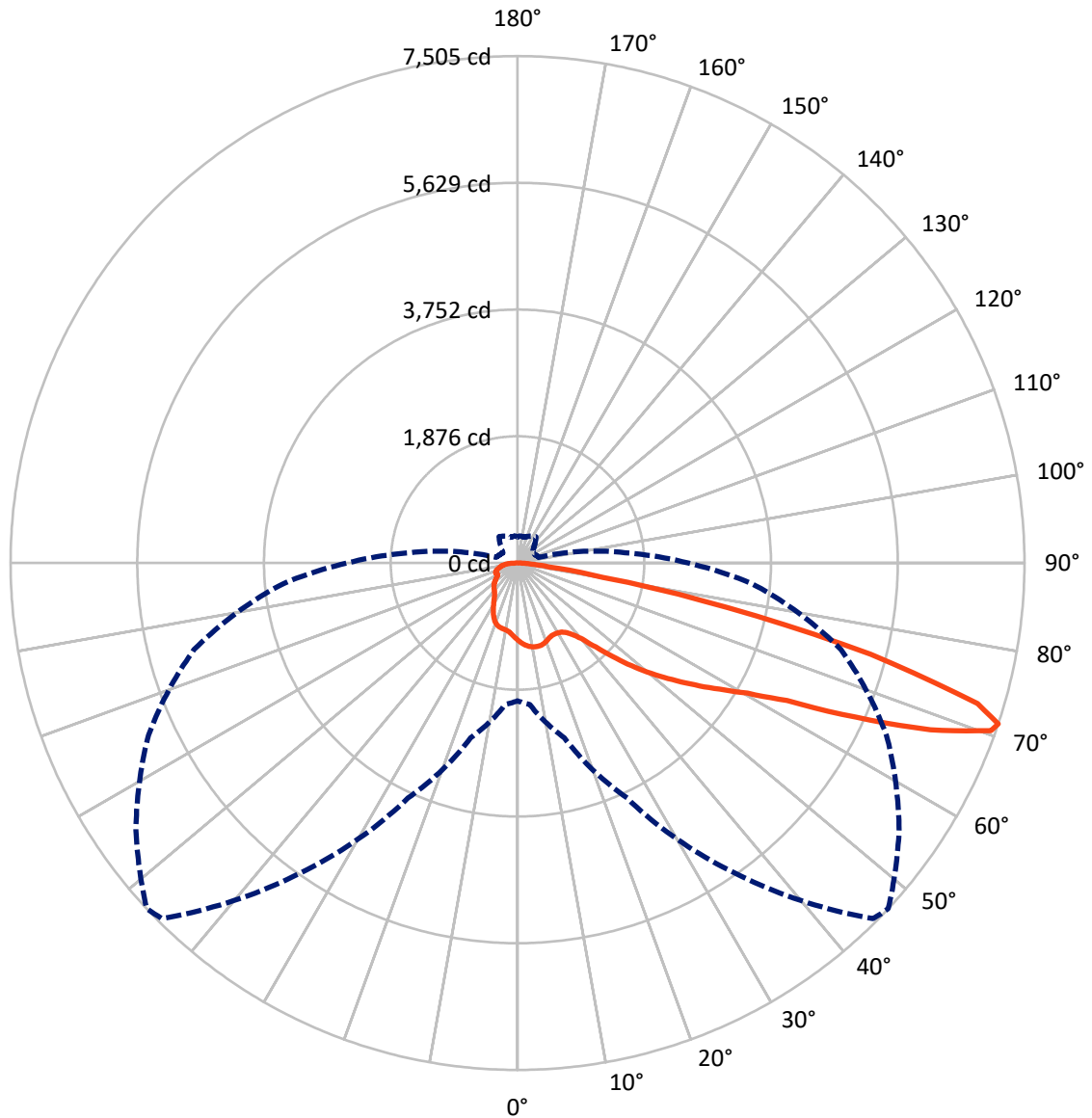


Based on 10 foot mounting height. Maximum calculated value = 13.1 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral      - - - Horizontal Cone Through 71-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 2062.6   | 0.0    | 2062.6 |
|                    | % Fixture | 21.4     | 0.0    | 21.4   |
| <b>Street Side</b> | Lumens    | 7561.4   | 0.0    | 7561.4 |
|                    | % Fixture | 78.6     | 0.0    | 78.6   |
| <b>Total</b>       | Lumens    | 9624.0   | 0.0    | 9624.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 109.3  | 1.1       |
| 10°-20°   | 319.7  | 3.3       |
| 20°-30°   | 475.0  | 4.9       |
| 30°-40°   | 682.1  | 7.1       |
| 40°-50°   | 1209.4 | 12.6      |
| 50°-60°   | 2069.4 | 21.5      |
| 60°-70°   | 2937.8 | 30.5      |
| 70°-80°   | 1609.0 | 16.7      |
| 80°-90°   | 212.4  | 2.2       |
| 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°    | 9624.0 | 100.0     |
| 0°-180°   | 9624.0 | 100.0     |



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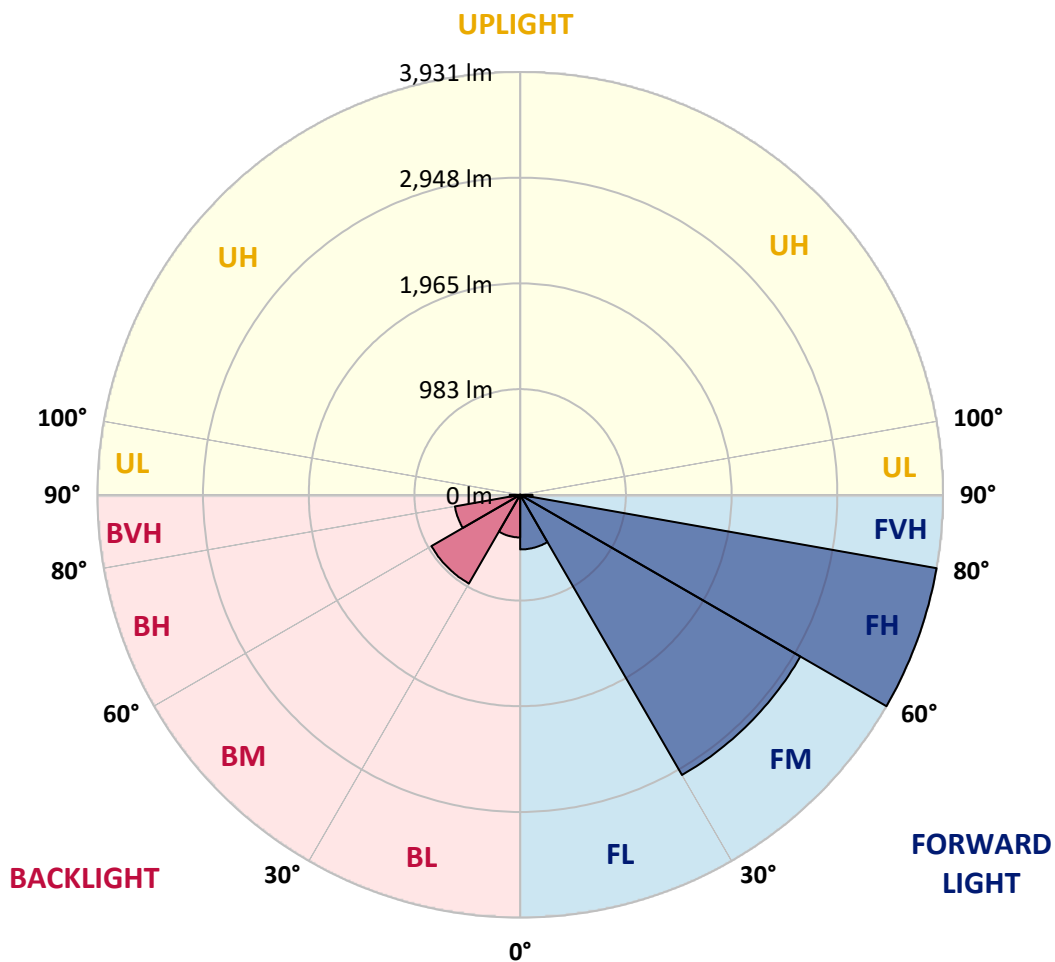
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 507.9  | 5.3       |                         |      |         |
| FM   | (30°-60°)   | 3007.8 | 31.3      |                         |      |         |
| FH   | (60°-80°)   | 3930.5 | 40.8      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 115.2  | 1.2       |                         |      | G2/225  |
| BL   | (0°-30°)    | 396.1  | 4.1       | B1/500                  |      |         |
| BM   | (30°-60°)   | 953.0  | 9.9       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 616.3  | 6.4       | B2/1000                 |      | G2/1000 |
| BVH  | (80°-90°)   | 97.2   | 1.0       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B2-U0-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 47°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1144.5 | 1144.5 | 1144.5 | 1144.5 | 1144.5 | 1144.5 | 1144.5 | 1144.5 | 1144.5 | 1144.5 | 1144.5 |
| 2.5°  | 1214.3 | 1211.8 | 1213.1 | 1208.7 | 1198.1 | 1186.9 | 1186.9 | 1175.0 | 1162.5 | 1150.1 | 1136.3 |
| 5°    | 1289.8 | 1286.0 | 1282.9 | 1269.2 | 1248.6 | 1225.5 | 1221.8 | 1198.1 | 1172.5 | 1146.9 | 1122.0 |
| 7.5°  | 1352.8 | 1349.0 | 1339.7 | 1314.7 | 1284.8 | 1250.5 | 1246.1 | 1214.9 | 1181.3 | 1145.7 | 1110.8 |
| 10°   | 1397.7 | 1395.2 | 1377.1 | 1345.3 | 1310.4 | 1269.8 | 1262.3 | 1230.5 | 1190.6 | 1146.3 | 1102.0 |
| 12.5° | 1422.6 | 1418.9 | 1397.0 | 1359.6 | 1318.5 | 1277.3 | 1269.8 | 1239.3 | 1193.7 | 1145.1 | 1093.3 |
| 15°   | 1412.6 | 1410.8 | 1390.2 | 1352.1 | 1311.0 | 1275.4 | 1269.2 | 1238.0 | 1191.9 | 1140.7 | 1085.2 |
| 17.5° | 1370.2 | 1374.6 | 1358.4 | 1321.0 | 1287.3 | 1262.3 | 1255.5 | 1226.2 | 1182.5 | 1130.1 | 1072.7 |
| 20°   | 1311.6 | 1316.6 | 1308.5 | 1270.4 | 1251.1 | 1234.9 | 1231.1 | 1207.4 | 1166.9 | 1114.5 | 1057.8 |
| 22.5° | 1249.2 | 1253.6 | 1254.2 | 1218.7 | 1212.4 | 1206.2 | 1203.1 | 1186.2 | 1153.2 | 1105.2 | 1047.8 |
| 25°   | 1206.2 | 1211.2 | 1212.4 | 1181.3 | 1185.0 | 1186.9 | 1186.2 | 1174.4 | 1150.7 | 1105.2 | 1049.0 |
| 27.5° | 1195.0 | 1197.5 | 1196.2 | 1167.5 | 1174.4 | 1185.0 | 1185.6 | 1183.1 | 1160.7 | 1117.6 | 1066.5 |
| 30°   | 1233.6 | 1234.9 | 1219.3 | 1176.3 | 1183.1 | 1196.8 | 1197.5 | 1196.2 | 1181.9 | 1150.1 | 1105.8 |
| 32.5° | 1400.8 | 1399.5 | 1345.9 | 1234.9 | 1211.2 | 1216.2 | 1218.0 | 1229.3 | 1230.5 | 1203.7 | 1162.5 |
| 35°   | 1655.2 | 1654.6 | 1592.3 | 1402.7 | 1291.0 | 1264.8 | 1267.3 | 1284.8 | 1300.4 | 1282.3 | 1258.6 |
| 37.5° | 1935.3 | 1937.2 | 1899.1 | 1642.2 | 1463.2 | 1354.0 | 1351.5 | 1364.6 | 1392.7 | 1398.9 | 1402.0 |
| 40°   | 2245.9 | 2255.2 | 2253.4 | 1917.2 | 1704.5 | 1506.2 | 1481.2 | 1466.3 | 1520.5 | 1554.8 | 1599.1 |
| 42.5° | 2600.8 | 2598.3 | 2599.5 | 2219.1 | 1980.2 | 1745.7 | 1699.5 | 1629.7 | 1692.7 | 1751.9 | 1849.2 |
| 45°   | 2905.7 | 2915.7 | 2923.2 | 2540.3 | 2288.9 | 2019.5 | 1972.7 | 1845.5 | 1902.2 | 1990.8 | 2139.2 |
| 47.5° | 3212.6 | 3195.1 | 3208.8 | 2897.6 | 2632.6 | 2331.9 | 2271.4 | 2099.9 | 2152.9 | 2277.7 | 2503.5 |
| 50°   | 3570.0 | 3561.8 | 3499.5 | 3364.1 | 3047.9 | 2648.8 | 2569.6 | 2365.6 | 2443.0 | 2609.5 | 2953.1 |
| 52.5° | 3890.5 | 3846.9 | 3798.2 | 3730.9 | 3456.4 | 2969.3 | 2868.9 | 2641.9 | 2784.1 | 2990.6 | 3511.3 |
| 55°   | 4007.8 | 3978.5 | 4037.1 | 4124.4 | 3888.7 | 3296.2 | 3183.9 | 2964.4 | 3168.9 | 3426.5 | 4168.1 |
| 57.5° | 4132.5 | 4142.5 | 4274.7 | 4451.2 | 4297.8 | 3644.8 | 3523.2 | 3346.0 | 3591.2 | 3914.2 | 4902.1 |
| 60°   | 4194.9 | 4234.8 | 4498.6 | 4829.8 | 4687.0 | 4027.1 | 3910.5 | 3784.5 | 4059.5 | 4453.1 | 5634.3 |
| 62.5° | 4205.5 | 4259.1 | 4632.7 | 4962.6 | 5222.7 | 4612.7 | 4478.0 | 4341.4 | 4644.6 | 5048.7 | 6164.5 |
| 65°   | 4010.9 | 4093.2 | 4620.9 | 5126.0 | 5711.0 | 5591.3 | 5505.9 | 5267.6 | 5427.9 | 5573.2 | 6254.9 |
| 67.5° | 3439.0 | 3528.8 | 4163.7 | 5058.7 | 6102.7 | 6606.7 | 6590.4 | 6238.7 | 6032.9 | 5775.9 | 5584.4 |
| 70°   | 2524.0 | 2596.4 | 3206.3 | 4324.6 | 5931.8 | 7403.7 | 7432.4 | 6868.0 | 6201.9 | 5345.6 | 4152.5 |
| 71°   | 2041.3 | 2103.7 | 2678.7 | 3839.4 | 5598.8 | 7444.9 | 7504.8 | 6896.0 | 6026.0 | 4957.0 | 3476.4 |
| 72.5° | 1270.4 | 1305.4 | 1778.7 | 2897.6 | 4821.1 | 7020.8 | 7121.8 | 6536.8 | 5472.2 | 4189.9 | 2457.3 |
| 75°   | 479.6  | 493.3  | 659.9  | 1277.9 | 2877.7 | 5274.5 | 5396.7 | 4940.2 | 3844.4 | 2391.8 | 1028.5 |
| 77.5° | 257.6  | 264.4  | 327.4  | 531.4  | 1153.2 | 3023.6 | 3180.8 | 2817.8 | 1844.2 | 837.0  | 420.4  |
| 80°   | 172.8  | 177.1  | 226.4  | 315.0  | 530.1  | 1151.3 | 1282.3 | 1131.4 | 690.4  | 477.7  | 299.4  |
| 82.5° | 111.6  | 114.1  | 154.0  | 207.1  | 342.4  | 404.8  | 462.1  | 482.7  | 431.0  | 342.4  | 180.9  |
| 85°   | 73.6   | 75.5   | 101.7  | 132.2  | 212.1  | 199.6  | 204.6  | 267.6  | 293.8  | 225.8  | 92.3   |
| 87.5° | 42.4   | 43.7   | 61.1   | 68.0   | 95.4   | 74.8   | 81.1   | 127.2  | 174.6  | 147.2  | 53.0   |
| 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°    | 1144.5 | 1144.5 | 1144.5 | 1144.5 | 1144.5 | 1144.5 | 1144.5 | 1144.5 | 1144.5 | 1144.5 | 1144.5 |
| 2.5°  | 1130.1 | 1125.1 | 1113.9 | 1107.0 | 1103.9 | 1102.7 | 1101.4 | 1103.9 | 1103.9 | 1102.7 | 1100.2 |
| 5°    | 1109.5 | 1100.2 | 1081.5 | 1068.4 | 1061.5 | 1059.6 | 1062.1 | 1065.2 | 1067.1 | 1067.1 | 1065.2 |
| 7.5°  | 1094.6 | 1080.8 | 1055.9 | 1037.8 | 1027.2 | 1024.1 | 1030.9 | 1042.2 | 1049.7 | 1053.4 | 1054.0 |
| 10°   | 1082.1 | 1063.4 | 1035.9 | 1017.2 | 1008.5 | 1007.2 | 1016.0 | 1030.3 | 1045.9 | 1052.8 | 1054.0 |
| 12.5° | 1070.9 | 1049.7 | 1019.7 | 1002.3 | 996.0  | 999.1  | 1011.0 | 1024.1 | 1042.2 | 1052.2 | 1052.8 |
| 15°   | 1060.3 | 1038.4 | 1006.6 | 988.5  | 987.3  | 992.3  | 1003.5 | 1014.1 | 1027.8 | 1040.3 | 1040.3 |
| 17.5° | 1047.8 | 1024.1 | 991.0  | 974.2  | 974.2  | 978.6  | 986.0  | 991.7  | 1000.4 | 1012.2 | 1011.6 |
| 20°   | 1032.8 | 1008.5 | 974.8  | 957.4  | 953.6  | 951.1  | 951.1  | 952.4  | 959.8  | 970.4  | 972.3  |
| 22.5° | 1021.6 | 996.6  | 961.1  | 939.9  | 923.0  | 906.8  | 900.0  | 897.5  | 904.3  | 914.3  | 916.8  |
| 25°   | 1021.6 | 996.6  | 956.7  | 921.2  | 880.0  | 848.8  | 835.7  | 832.0  | 838.9  | 848.2  | 851.9  |
| 27.5° | 1038.4 | 1013.5 | 966.7  | 904.3  | 828.9  | 779.0  | 763.4  | 760.3  | 766.5  | 774.0  | 777.7  |
| 30°   | 1077.7 | 1053.4 | 995.4  | 885.0  | 772.1  | 706.6  | 689.2  | 686.0  | 689.2  | 692.3  | 696.7  |
| 32.5° | 1143.2 | 1122.6 | 1042.2 | 867.5  | 714.7  | 641.1  | 619.9  | 614.9  | 616.2  | 616.8  | 620.6  |
| 35°   | 1249.9 | 1240.5 | 1104.5 | 847.0  | 660.5  | 587.5  | 565.7  | 555.7  | 555.1  | 558.2  | 562.6  |
| 37.5° | 1413.3 | 1418.9 | 1185.0 | 817.0  | 615.6  | 549.5  | 527.6  | 517.7  | 512.7  | 518.9  | 523.9  |
| 40°   | 1644.0 | 1657.1 | 1277.9 | 776.5  | 578.8  | 527.0  | 503.9  | 494.6  | 487.7  | 485.8  | 488.3  |
| 42.5° | 1944.0 | 1940.3 | 1372.7 | 724.7  | 538.9  | 512.0  | 487.7  | 477.7  | 466.5  | 452.2  | 449.1  |
| 45°   | 2299.5 | 2245.9 | 1451.9 | 661.1  | 493.3  | 497.7  | 472.8  | 459.0  | 441.6  | 420.4  | 417.9  |
| 47.5° | 2719.2 | 2571.4 | 1500.6 | 593.1  | 450.9  | 479.0  | 455.9  | 434.7  | 409.1  | 395.4  | 393.5  |
| 50°   | 3225.1 | 2952.5 | 1534.9 | 523.9  | 412.9  | 455.3  | 432.2  | 404.1  | 379.2  | 375.5  | 374.8  |
| 52.5° | 3823.8 | 3402.2 | 1577.3 | 461.5  | 382.9  | 424.7  | 408.5  | 379.8  | 359.9  | 361.7  | 361.7  |
| 55°   | 4460.6 | 3867.4 | 1578.5 | 412.3  | 356.7  | 389.2  | 391.0  | 368.0  | 352.4  | 358.6  | 360.5  |
| 57.5° | 5041.2 | 4274.1 | 1454.4 | 377.3  | 331.8  | 361.1  | 385.4  | 372.3  | 360.5  | 382.3  | 384.2  |
| 60°   | 5547.6 | 4587.2 | 1187.5 | 348.6  | 311.2  | 350.5  | 397.9  | 399.2  | 396.7  | 455.9  | 460.3  |
| 62.5° | 5732.9 | 4590.3 | 843.2  | 324.3  | 300.0  | 356.7  | 424.1  | 426.0  | 426.0  | 480.9  | 489.0  |
| 65°   | 5473.4 | 4208.0 | 561.3  | 310.0  | 292.5  | 370.5  | 445.3  | 437.2  | 417.9  | 455.9  | 447.2  |
| 67.5° | 4559.1 | 3275.6 | 410.4  | 300.6  | 281.9  | 371.1  | 464.0  | 443.4  | 410.4  | 442.8  | 427.8  |
| 70°   | 3133.4 | 2084.3 | 343.6  | 291.9  | 269.4  | 354.9  | 474.0  | 441.6  | 399.2  | 412.9  | 392.9  |
| 71°   | 2522.2 | 1663.4 | 326.2  | 288.8  | 264.4  | 345.5  | 475.2  | 439.1  | 393.5  | 402.3  | 384.2  |
| 72.5° | 1661.5 | 1024.7 | 305.0  | 281.9  | 257.0  | 329.3  | 472.1  | 433.5  | 386.1  | 386.7  | 374.8  |
| 75°   | 655.5  | 424.7  | 274.4  | 266.3  | 235.8  | 303.1  | 458.4  | 421.6  | 371.7  | 359.2  | 354.3  |
| 77.5° | 331.2  | 277.5  | 241.4  | 244.5  | 210.8  | 276.3  | 439.1  | 402.3  | 351.8  | 334.9  | 331.2  |
| 80°   | 242.0  | 210.8  | 206.4  | 212.1  | 182.7  | 250.1  | 414.7  | 376.1  | 326.2  | 343.6  | 336.2  |
| 82.5° | 147.2  | 128.5  | 161.5  | 175.3  | 152.8  | 223.3  | 386.1  | 345.5  | 293.8  | 270.7  | 261.9  |
| 85°   | 69.9   | 75.5   | 116.6  | 129.1  | 112.9  | 178.4  | 353.0  | 311.8  | 256.3  | 221.4  | 225.1  |
| 87.5° | 34.3   | 41.8   | 66.7   | 77.3   | 74.2   | 131.0  | 266.3  | 242.0  | 202.1  | 166.5  | 162.8  |
| 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)