

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: P196075

Luminaire Tested: **NVN-AF-01-LED-U-SL2-1200-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196075  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: NVN-AF-01-LED-U-SL2-1200-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5592.5 lumens  
Efficiency: N/A  
Efficacy: 83.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B1 - U0 - G2

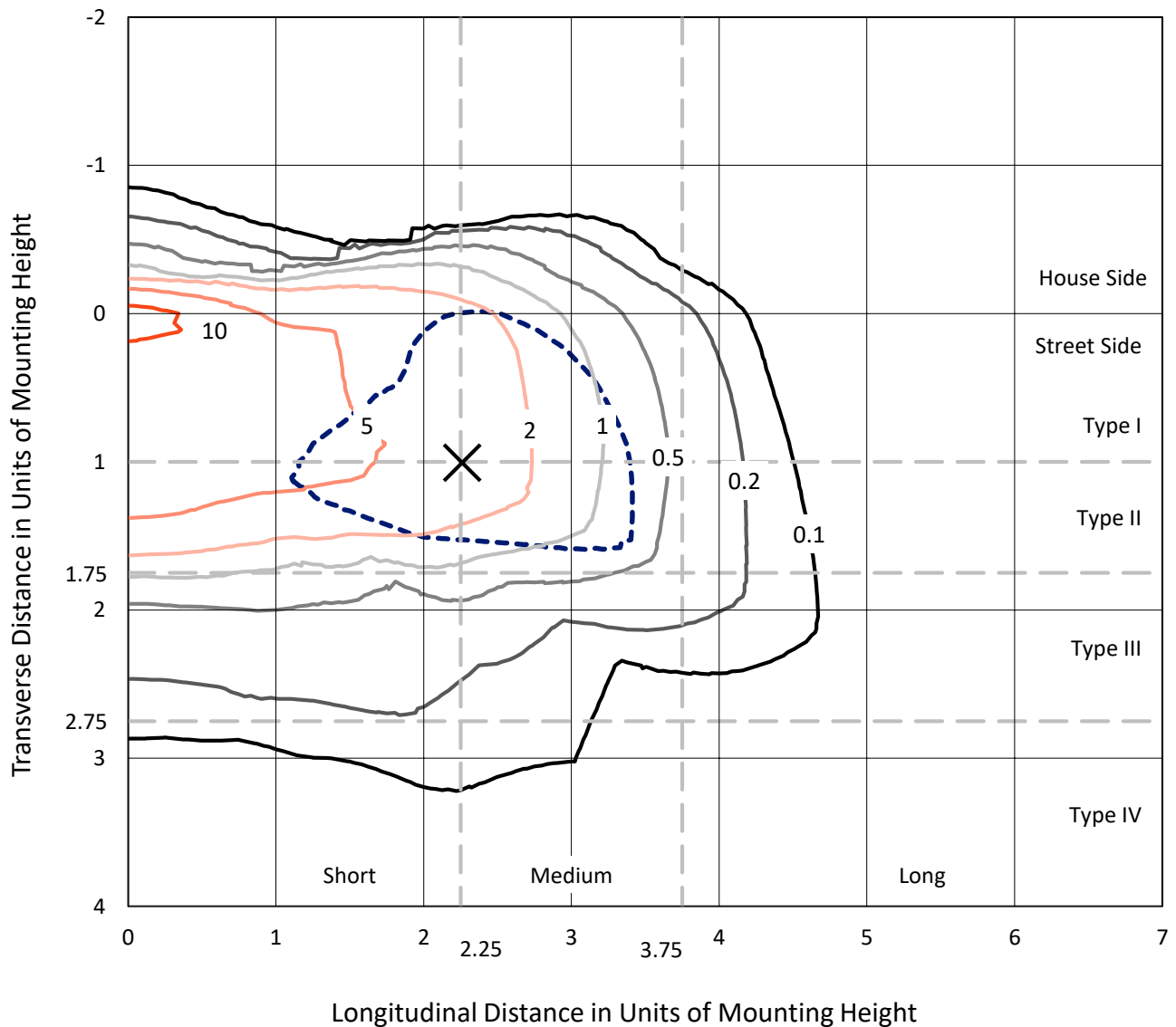
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

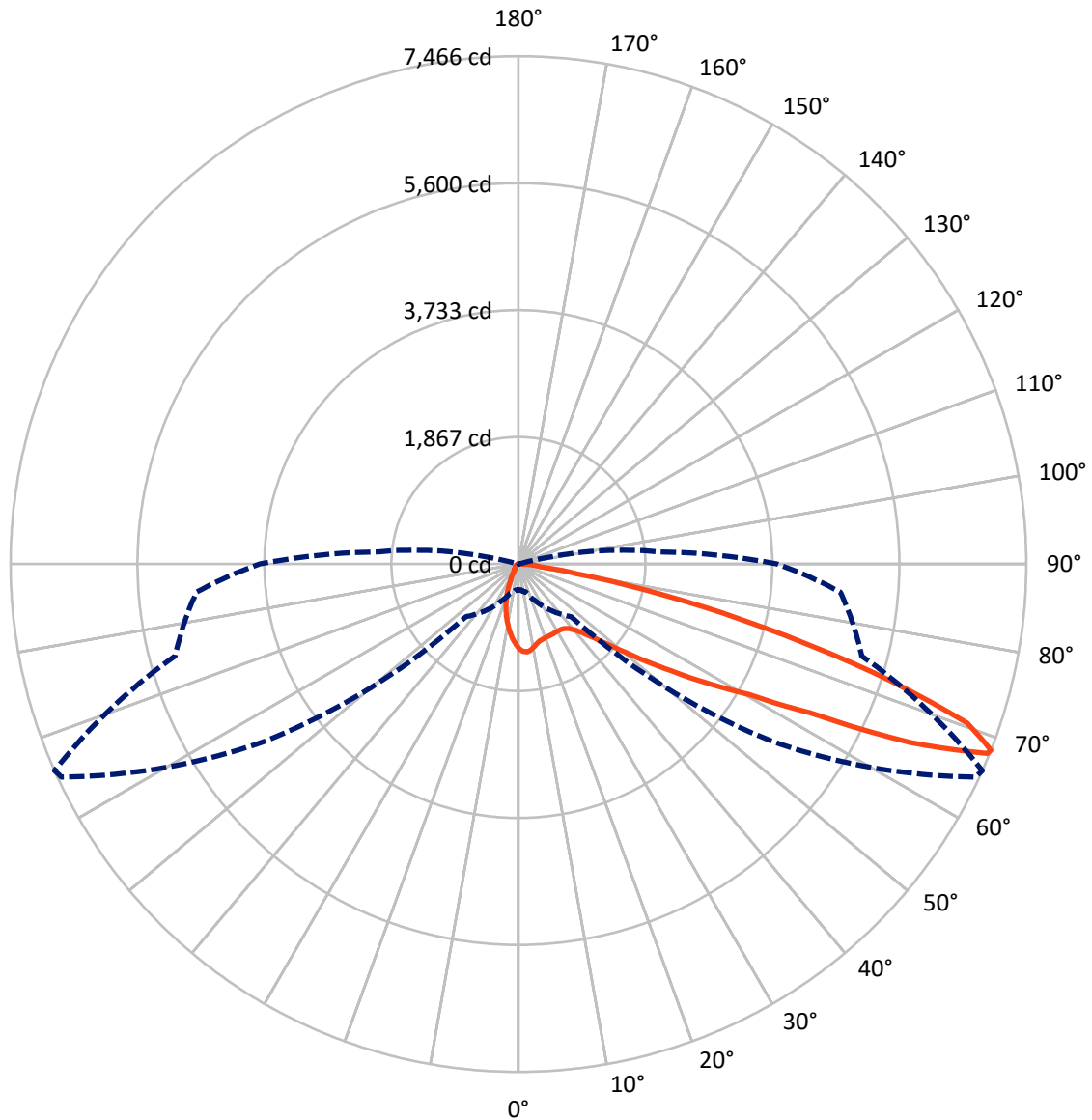
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.5 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral      - - - Horizontal Cone Through 68-Deg Vertical

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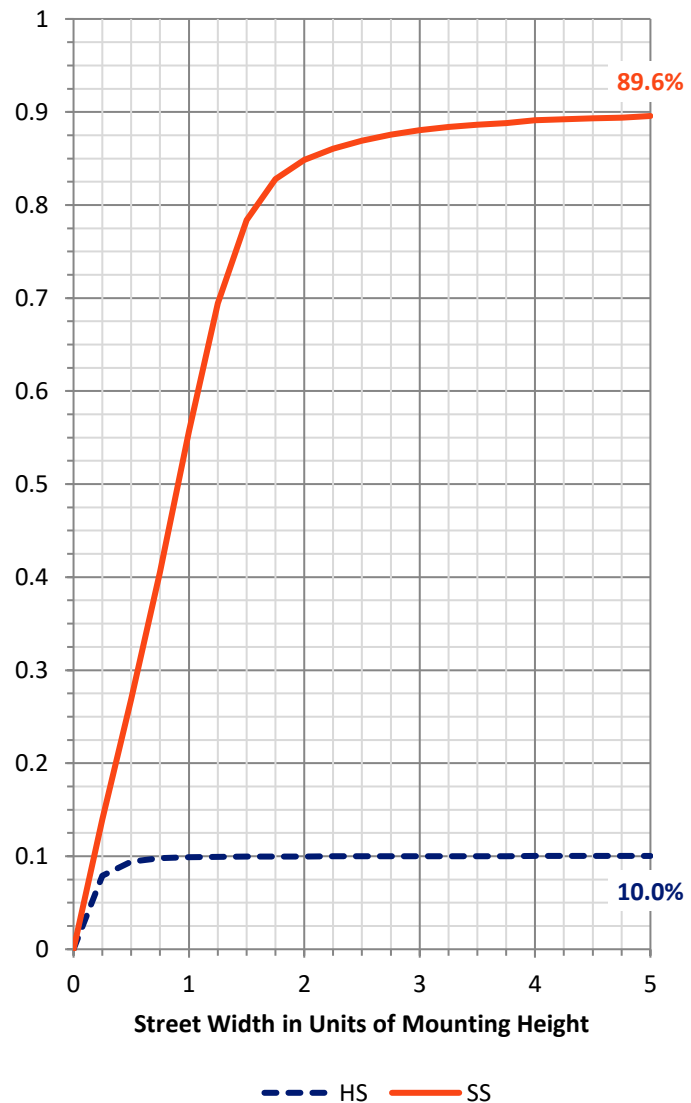
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 566.5    | 0.0    | 566.5  |
|                    | % Fixture | 10.1     | 0.0    | 10.1   |
| <b>Street Side</b> | Lumens    | 5026.0   | 0.0    | 5026.0 |
|                    | % Fixture | 89.9     | 0.0    | 89.9   |
| <b>Total</b>       | Lumens    | 5592.5   | 0.0    | 5592.5 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 102.1  | 1.8       |
| 10°-20°   | 219.8  | 3.9       |
| 20°-30°   | 318.5  | 5.7       |
| 30°-40°   | 487.5  | 8.7       |
| 40°-50°   | 833.9  | 14.9      |
| 50°-60°   | 1304.4 | 23.3      |
| 60°-70°   | 1502.0 | 26.9      |
| 70°-80°   | 751.6  | 13.4      |
| 80°-90°   | 72.8   | 1.3       |
| 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°    | 5592.5 | 100.0     |
| 0°-180°   | 5592.5 | 100.0     |

**Coefficient of Utilization**



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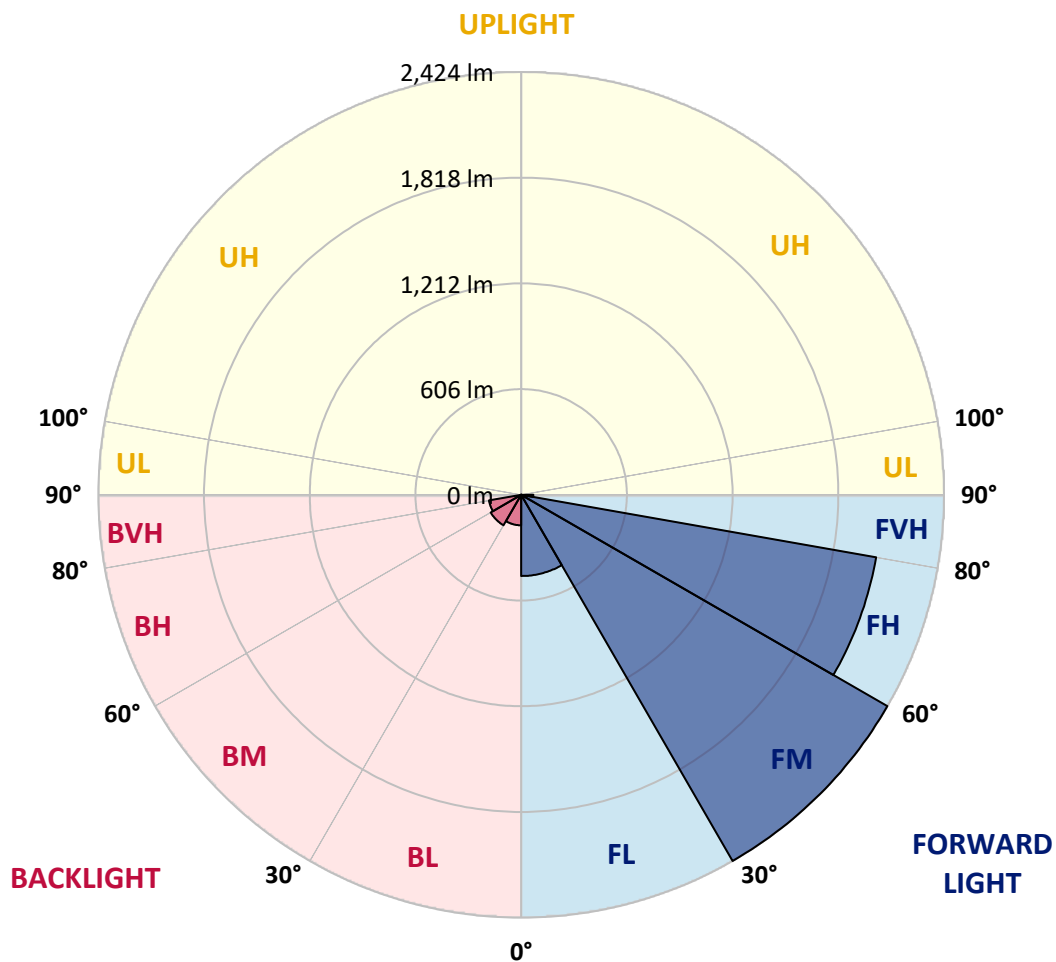
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 465.5  | 8.3       |                         |      |         |
| FM   | (30°-60°)   | 2424.0 | 43.3      |                         |      |         |
| FH   | (60°-80°)   | 2066.4 | 36.9      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 70.0   | 1.3       |                         |      | G1/100  |
| BL   | (0°-30°)    | 174.8  | 3.1       | B1/500                  |      |         |
| BM   | (30°-60°)   | 201.7  | 3.6       | B0/220                  |      |         |
| BH   | (60°-80°)   | 187.2  | 3.3       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 2.8    | 0.0       |                         |      | G0/10   |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G2**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 66°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1246.0 | 1246.0 | 1246.0 | 1246.0 | 1246.0 | 1246.0 | 1246.0 | 1246.0 | 1246.0 | 1246.0 | 1246.0 |
| 2.5°  | 1310.5 | 1311.3 | 1310.9 | 1312.2 | 1311.3 | 1304.8 | 1297.7 | 1282.8 | 1284.1 | 1264.9 | 1243.3 |
| 5°    | 1218.3 | 1225.8 | 1233.2 | 1240.6 | 1258.6 | 1274.5 | 1293.3 | 1297.7 | 1297.7 | 1281.0 | 1249.4 |
| 7.5°  | 1124.3 | 1124.7 | 1133.1 | 1143.2 | 1167.4 | 1196.3 | 1240.2 | 1279.7 | 1280.6 | 1285.0 | 1250.4 |
| 10°   | 1053.6 | 1055.9 | 1061.5 | 1072.6 | 1096.7 | 1125.2 | 1174.3 | 1236.3 | 1241.1 | 1273.6 | 1241.6 |
| 12.5° | 998.8  | 1001.4 | 1007.6 | 1020.3 | 1042.3 | 1071.6 | 1123.5 | 1194.2 | 1200.7 | 1262.6 | 1238.9 |
| 15°   | 956.7  | 960.1  | 964.9  | 977.7  | 1001.4 | 1032.6 | 1089.2 | 1166.1 | 1173.9 | 1258.2 | 1247.3 |
| 17.5° | 939.1  | 939.1  | 938.7  | 947.5  | 971.1  | 1002.7 | 1062.0 | 1151.1 | 1161.3 | 1261.7 | 1261.3 |
| 20°   | 946.5  | 945.2  | 936.0  | 933.9  | 948.3  | 979.9  | 1040.4 | 1141.5 | 1152.9 | 1268.4 | 1278.5 |
| 22.5° | 986.0  | 983.4  | 962.8  | 945.6  | 941.2  | 962.3  | 1026.0 | 1134.9 | 1148.5 | 1282.0 | 1301.3 |
| 25°   | 1069.9 | 1062.0 | 1033.5 | 994.8  | 960.1  | 958.0  | 1015.9 | 1131.4 | 1145.8 | 1297.7 | 1326.3 |
| 27.5° | 1178.7 | 1176.6 | 1131.0 | 1079.1 | 1012.4 | 972.4  | 1012.8 | 1128.7 | 1143.2 | 1309.2 | 1346.5 |
| 30°   | 1314.0 | 1314.9 | 1262.2 | 1194.6 | 1093.6 | 1013.2 | 1022.4 | 1127.4 | 1142.3 | 1310.1 | 1355.3 |
| 32.5° | 1453.6 | 1454.5 | 1410.5 | 1338.1 | 1204.7 | 1083.5 | 1049.8 | 1133.5 | 1147.1 | 1306.5 | 1354.8 |
| 35°   | 1587.9 | 1589.3 | 1563.0 | 1504.6 | 1353.1 | 1181.0 | 1101.1 | 1154.6 | 1164.3 | 1308.8 | 1354.0 |
| 37.5° | 1757.8 | 1763.2 | 1730.6 | 1676.2 | 1539.2 | 1324.1 | 1184.9 | 1197.3 | 1205.1 | 1326.8 | 1360.5 |
| 40°   | 2047.6 | 2040.6 | 1947.5 | 1855.3 | 1741.2 | 1498.4 | 1306.1 | 1270.5 | 1273.2 | 1373.3 | 1385.6 |
| 42.5° | 2385.2 | 2376.4 | 2217.0 | 2058.2 | 1948.8 | 1708.6 | 1461.1 | 1382.9 | 1382.5 | 1451.4 | 1440.0 |
| 45°   | 2675.8 | 2670.6 | 2502.9 | 2290.8 | 2178.9 | 1940.9 | 1652.1 | 1545.0 | 1539.6 | 1586.6 | 1539.2 |
| 47.5° | 2882.2 | 2877.8 | 2750.9 | 2538.5 | 2445.0 | 2196.5 | 1890.4 | 1765.7 | 1754.8 | 1763.6 | 1700.3 |
| 50°   | 2902.4 | 2897.5 | 2853.2 | 2716.7 | 2755.7 | 2571.4 | 2185.0 | 2055.1 | 2041.0 | 2027.4 | 1944.0 |
| 52.5° | 2713.6 | 2713.2 | 2736.4 | 2727.7 | 2973.5 | 3053.8 | 2546.3 | 2412.8 | 2396.2 | 2361.5 | 2278.5 |
| 55°   | 2327.7 | 2325.5 | 2413.8 | 2541.9 | 2968.7 | 3551.7 | 3097.3 | 2838.7 | 2816.8 | 2747.4 | 2638.5 |
| 57.5° | 1700.8 | 1689.4 | 1873.7 | 2145.5 | 2760.1 | 3769.5 | 3972.3 | 3367.8 | 3331.3 | 3111.4 | 2943.6 |
| 60°   | 939.1  | 943.5  | 1180.5 | 1502.3 | 2266.2 | 3726.4 | 4777.5 | 3984.6 | 3888.8 | 3425.2 | 3256.3 |
| 62.5° | 526.4  | 537.4  | 713.8  | 976.4  | 1444.8 | 3377.4 | 5209.5 | 5046.1 | 4815.6 | 3791.4 | 3651.3 |
| 65°   | 398.2  | 404.8  | 493.5  | 753.4  | 910.9  | 2360.2 | 5278.4 | 6530.5 | 6331.6 | 4346.3 | 4280.4 |
| 67.5° | 374.9  | 380.2  | 423.7  | 624.7  | 829.7  | 1224.0 | 4759.5 | 7408.5 | 7433.6 | 5103.2 | 4767.8 |
| 68°   | 377.6  | 384.1  | 427.6  | 601.0  | 828.5  | 1095.0 | 4538.2 | 7412.9 | 7466.0 | 5225.2 | 4751.1 |
| 70°   | 346.8  | 348.6  | 452.1  | 589.6  | 803.0  | 862.7  | 3283.1 | 6904.9 | 7000.3 | 5370.6 | 4313.0 |
| 72.5° | 132.6  | 133.0  | 202.9  | 510.6  | 841.2  | 867.5  | 1653.8 | 5457.5 | 5462.4 | 4673.9 | 3362.4 |
| 75°   | 68.9   | 58.0   | 63.6   | 159.8  | 803.4  | 845.6  | 829.7  | 3726.4 | 3703.2 | 3161.0 | 2060.3 |
| 77.5° | 47.5   | 40.4   | 42.6   | 55.3   | 334.1  | 845.2  | 599.2  | 2142.9 | 2138.1 | 1344.8 | 587.9  |
| 80°   | 26.8   | 23.2   | 25.5   | 46.5   | 117.2  | 793.3  | 558.4  | 921.1  | 868.0  | 236.2  | 95.2   |
| 82.5° | 13.6   | 11.5   | 13.6   | 39.1   | 72.8   | 499.2  | 543.1  | 361.3  | 321.8  | 56.2   | 61.9   |
| 85°   | 3.5    | 3.5    | 6.5    | 27.2   | 45.2   | 163.8  | 486.9  | 260.8  | 234.5  | 24.6   | 43.9   |
| 87.5° | 0.9    | 0.4    | 2.7    | 10.1   | 16.3   | 35.6   | 270.0  | 145.4  | 125.1  | 12.7   | 25.5   |
| 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°    | 1246.0 | 1246.0 | 1246.0 | 1246.0 | 1246.0 | 1246.0 | 1246.0 | 1246.0 | 1246.0 | 1246.0 | 1246.0 |
| 2.5°  | 1234.5 | 1222.2 | 1198.1 | 1170.9 | 1151.5 | 1130.5 | 1118.2 | 1103.3 | 1091.9 | 1081.8 | 1089.2 |
| 5°    | 1230.1 | 1206.5 | 1152.9 | 1092.7 | 1042.3 | 994.0  | 958.0  | 923.7  | 897.8  | 881.6  | 888.1  |
| 7.5°  | 1218.7 | 1183.7 | 1096.7 | 1002.7 | 920.1  | 842.5  | 779.3  | 722.6  | 678.7  | 655.0  | 662.5  |
| 10°   | 1199.4 | 1149.8 | 1033.0 | 902.7  | 787.2  | 677.4  | 583.5  | 499.2  | 435.5  | 405.7  | 412.7  |
| 12.5° | 1185.4 | 1119.9 | 967.2  | 806.1  | 654.2  | 498.3  | 373.6  | 277.0  | 227.4  | 197.5  | 200.2  |
| 15°   | 1179.3 | 1096.7 | 905.7  | 704.2  | 508.8  | 320.1  | 201.9  | 146.2  | 129.1  | 123.0  | 123.4  |
| 17.5° | 1180.1 | 1078.3 | 847.3  | 598.4  | 362.2  | 183.9  | 123.8  | 111.5  | 108.8  | 107.5  | 107.5  |
| 20°   | 1182.3 | 1059.8 | 786.8  | 488.2  | 231.8  | 118.6  | 103.2  | 99.2   | 97.9   | 96.2   | 96.6   |
| 22.5° | 1188.9 | 1045.8 | 725.7  | 377.6  | 142.7  | 96.6   | 91.3   | 87.8   | 85.6   | 83.0   | 83.4   |
| 25°   | 1199.0 | 1035.2 | 665.5  | 271.8  | 100.6  | 84.3   | 79.5   | 74.7   | 70.7   | 67.6   | 68.0   |
| 27.5° | 1205.1 | 1020.3 | 601.5  | 185.3  | 83.4   | 73.8   | 67.2   | 60.6   | 56.2   | 53.6   | 53.1   |
| 30°   | 1200.7 | 996.1  | 528.6  | 121.6  | 73.8   | 63.6   | 55.8   | 48.3   | 43.9   | 41.7   | 41.7   |
| 32.5° | 1188.9 | 964.9  | 448.3  | 88.7   | 65.4   | 54.8   | 45.2   | 38.7   | 35.6   | 34.3   | 34.7   |
| 35°   | 1175.3 | 932.5  | 362.6  | 75.1   | 58.8   | 46.5   | 36.9   | 31.6   | 30.3   | 29.9   | 29.9   |
| 37.5° | 1167.8 | 904.4  | 280.5  | 68.0   | 52.7   | 38.7   | 30.3   | 27.2   | 25.9   | 25.9   | 25.9   |
| 40°   | 1176.2 | 882.9  | 207.7  | 62.8   | 46.5   | 32.0   | 25.5   | 23.2   | 22.8   | 22.8   | 22.8   |
| 42.5° | 1211.7 | 875.4  | 151.9  | 58.4   | 40.4   | 26.8   | 22.0   | 20.2   | 19.7   | 20.2   | 20.2   |
| 45°   | 1281.0 | 891.7  | 115.0  | 54.0   | 34.7   | 22.0   | 18.9   | 17.6   | 17.6   | 18.0   | 18.0   |
| 47.5° | 1398.7 | 933.3  | 94.4   | 49.6   | 28.9   | 18.4   | 16.3   | 15.3   | 15.3   | 15.9   | 15.9   |
| 50°   | 1581.4 | 1010.7 | 84.7   | 44.8   | 24.1   | 15.9   | 13.6   | 13.2   | 13.2   | 13.6   | 14.0   |
| 52.5° | 1858.8 | 1157.7 | 79.9   | 40.0   | 19.7   | 13.2   | 11.5   | 10.9   | 11.5   | 11.9   | 11.9   |
| 55°   | 2167.4 | 1346.0 | 74.2   | 35.1   | 16.7   | 10.9   | 9.2    | 9.2    | 9.6    | 10.5   | 10.5   |
| 57.5° | 2455.0 | 1527.8 | 68.9   | 28.9   | 14.5   | 8.8    | 7.5    | 7.5    | 8.4    | 9.2    | 9.2    |
| 60°   | 2758.8 | 1706.1 | 61.9   | 23.2   | 12.3   | 7.1    | 6.1    | 6.1    | 7.5    | 8.4    | 8.8    |
| 62.5° | 3134.2 | 1913.2 | 52.7   | 18.4   | 9.6    | 5.3    | 4.4    | 5.7    | 7.1    | 8.4    | 8.4    |
| 65°   | 3676.8 | 2171.0 | 41.2   | 14.5   | 7.5    | 4.0    | 3.5    | 5.3    | 6.5    | 7.9    | 8.4    |
| 67.5° | 3873.9 | 2138.1 | 31.2   | 11.9   | 5.7    | 3.1    | 3.1    | 4.8    | 6.5    | 7.9    | 7.9    |
| 68°   | 3801.9 | 2066.1 | 29.9   | 11.5   | 5.3    | 3.1    | 3.1    | 4.8    | 6.5    | 7.9    | 7.9    |
| 70°   | 3312.8 | 1688.9 | 24.6   | 8.8    | 4.4    | 2.7    | 2.7    | 4.4    | 6.5    | 7.5    | 7.9    |
| 72.5° | 2480.5 | 1122.2 | 21.1   | 5.7    | 4.0    | 2.7    | 2.1    | 4.4    | 6.1    | 7.5    | 7.5    |
| 75°   | 1422.9 | 465.9  | 18.0   | 4.4    | 3.5    | 2.1    | 2.1    | 4.0    | 6.1    | 7.5    | 7.5    |
| 77.5° | 402.1  | 108.8  | 14.5   | 3.5    | 3.1    | 2.1    | 1.7    | 4.0    | 5.7    | 7.1    | 7.1    |
| 80°   | 73.8   | 32.5   | 11.5   | 3.1    | 2.7    | 2.1    | 1.7    | 4.0    | 5.7    | 7.1    | 7.1    |
| 82.5° | 48.7   | 15.3   | 8.4    | 3.1    | 2.7    | 2.1    | 1.7    | 3.5    | 5.3    | 6.5    | 6.5    |
| 85°   | 36.4   | 10.9   | 5.3    | 3.1    | 2.7    | 2.1    | 1.7    | 3.5    | 5.3    | 6.5    | 6.5    |
| 87.5° | 20.2   | 4.8    | 4.0    | 3.5    | 3.1    | 2.1    | 1.7    | 3.1    | 4.8    | 6.1    | 6.1    |
| 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)