

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: P158447

Luminaire Tested: **VST-F04-LED-E-U-SL3-7060**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P158447  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33713)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: VST-F04-LED-E-U-SL3-7060  
Description: VENTUS LED SITE/ROADWAY LUMINAIRE  
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL  
Light Source: (28) 5700K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10222.1 lumens  
Efficiency: N/A  
Efficacy: 100.0 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G2

Input Watts (W): 102.2  
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



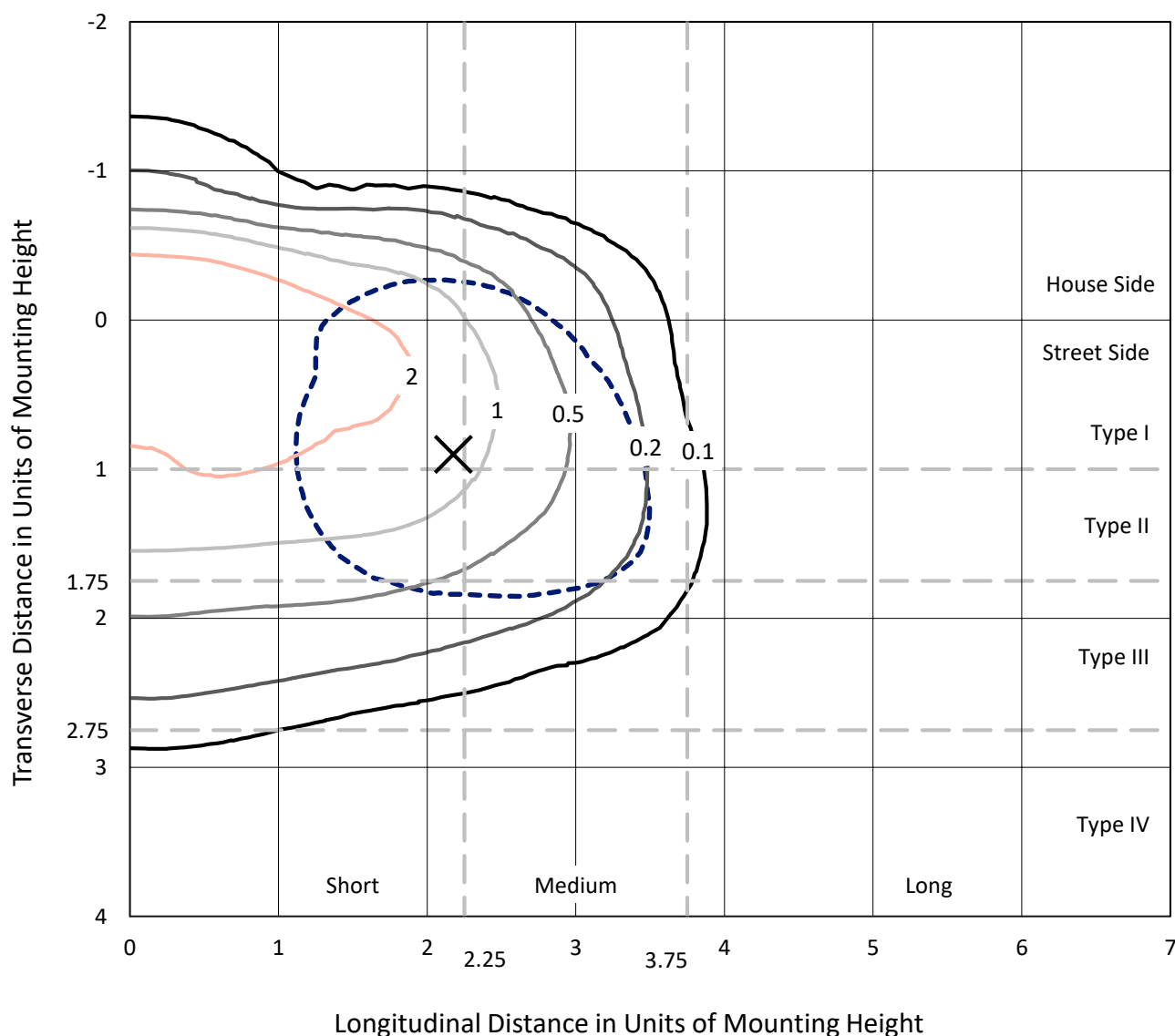
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CATALOG NUMBER: VST-F04-LED-E-U-SL3-7060

## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

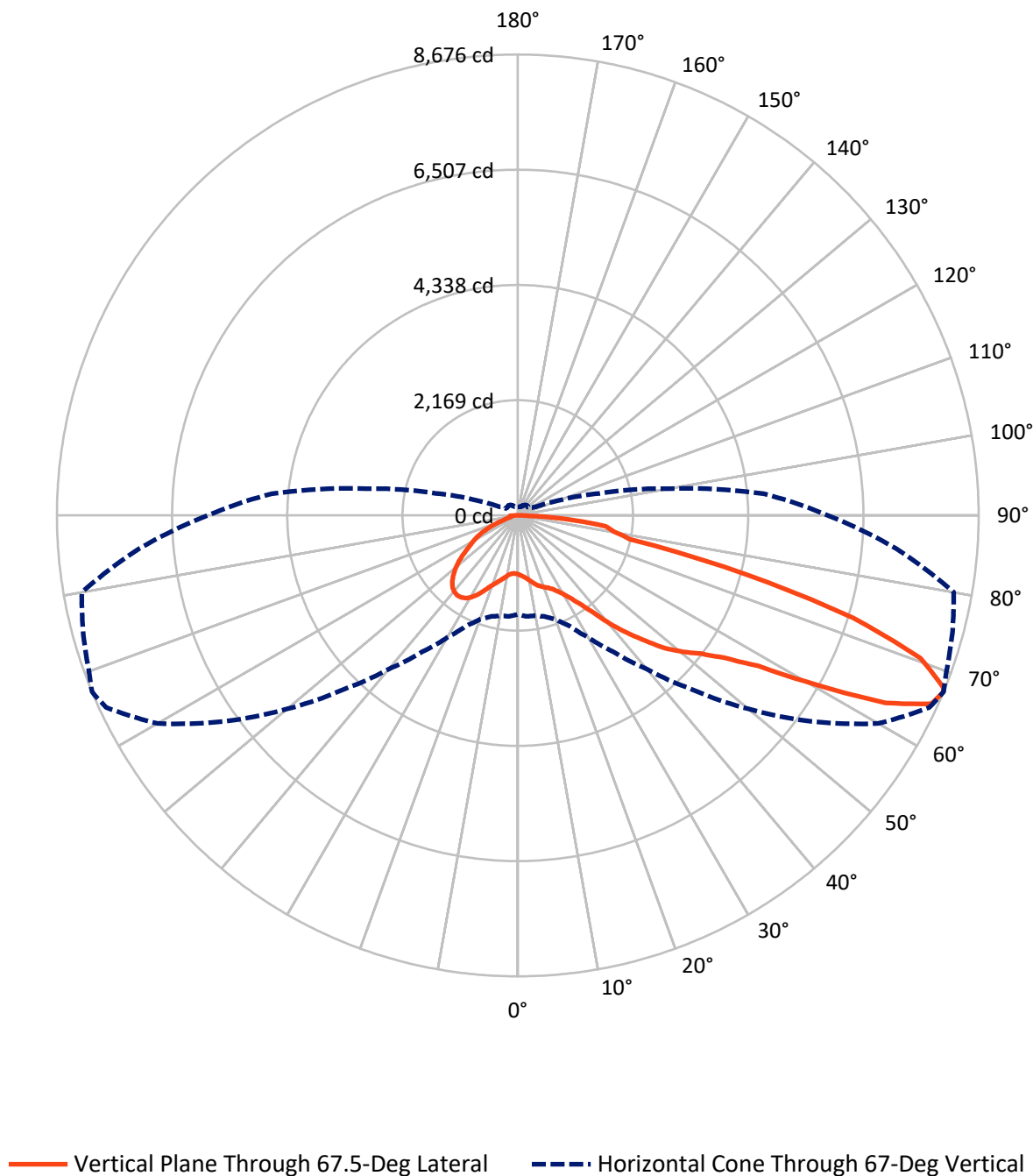


Based on 20 foot mounting height. Maximum calculated value = 3.5 fc  
 Type III - Short - Semi-Cutoff

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## Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 2452.3   | 0.0    | 2452.3  |
|                    | % Fixture | 24.0     | 0.0    | 24.0    |
| <b>Street Side</b> | Lumens    | 7769.8   | 0.0    | 7769.8  |
|                    | % Fixture | 76.0     | 0.0    | 76.0    |
| <b>Total</b>       | Lumens    | 10222.1  | 0.0    | 10222.1 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 110.1   | 1.1       |
| 10°-20°   | 375.2   | 3.7       |
| 20°-30°   | 669.8   | 6.6       |
| 30°-40°   | 981.6   | 9.6       |
| 40°-50°   | 1516.8  | 14.8      |
| 50°-60°   | 2208.7  | 21.6      |
| 60°-70°   | 2877.2  | 28.1      |
| 70°-80°   | 1287.9  | 12.6      |
| 80°-90°   | 194.7   | 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°    | 10222.1 | 100.0     |
| 0°-180°   | 10222.1 | 100.0     |

**Coefficient of Utilization**



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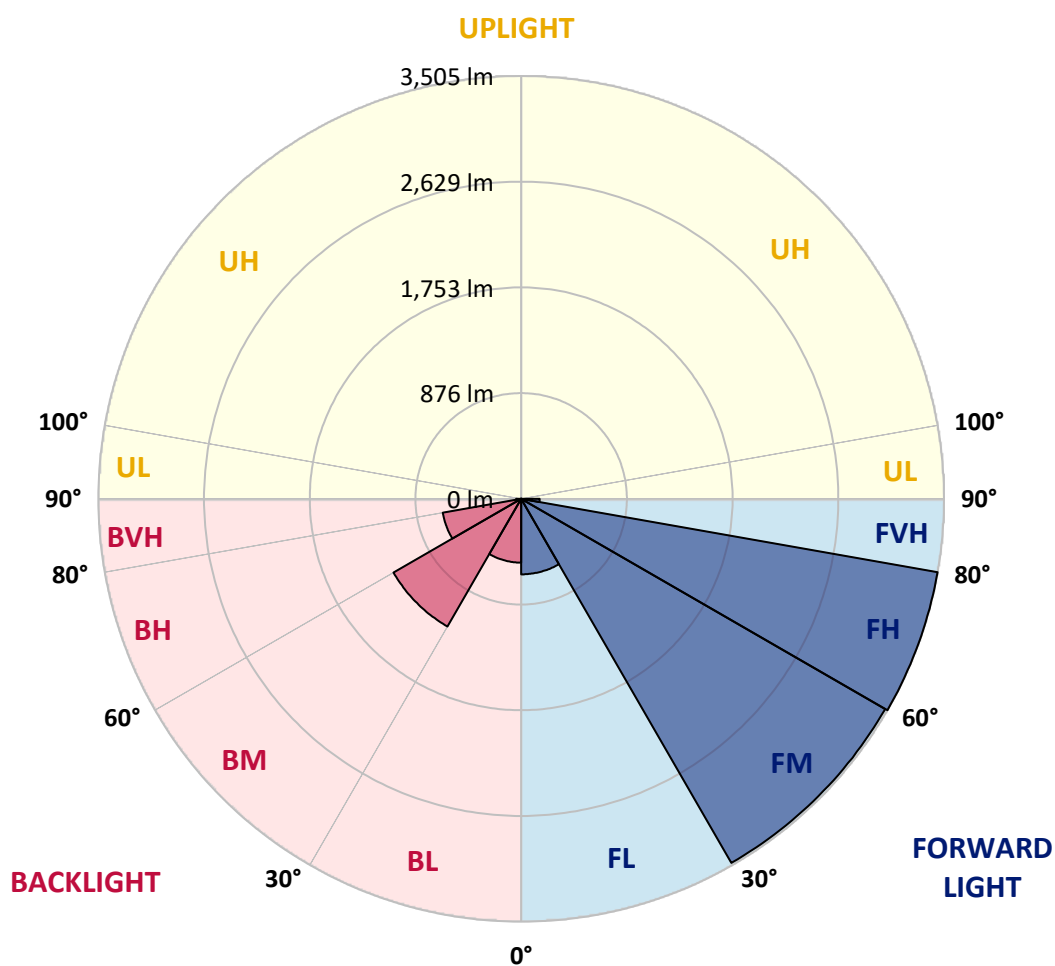
CATALOG NUMBER: VST-F04-LED-E-U-SL3-7060

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 626.3  | 6.1       |                         |      |         |
| FM   | (30°-60°)   | 3485.2 | 34.1      |                         |      |         |
| FH   | (60°-80°)   | 3505.3 | 34.3      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 152.9  | 1.5       |                         |      | G2/225  |
| BL   | (0°-30°)    | 528.8  | 5.2       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 1221.9 | 12.0      | B2/2500                 |      |         |
| BH   | (60°-80°)   | 659.8  | 6.5       | B2/1000                 |      | G2/1000 |
| BVH  | (80°-90°)   | 41.8   | 0.4       |                         |      | 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 III Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 25°    | 30°    | 35°    | 40°    | 45°    | 50°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1108.0 | 1108.0 | 1108.0 | 1108.0 | 1108.0 | 1108.0 | 1108.0 | 1108.0 | 1108.0 | 1108.0 | 1108.0 |
| 2.5°  | 1151.3 | 1154.1 | 1154.7 | 1154.1 | 1154.7 | 1152.0 | 1151.3 | 1147.3 | 1149.3 | 1143.9 | 1142.5 |
| 5°    | 1213.7 | 1215.7 | 1217.1 | 1211.7 | 1213.0 | 1210.3 | 1206.9 | 1202.8 | 1197.4 | 1190.0 | 1185.2 |
| 7.5°  | 1274.7 | 1278.1 | 1277.4 | 1275.4 | 1270.6 | 1267.9 | 1261.1 | 1255.0 | 1245.5 | 1236.7 | 1230.6 |
| 10°   | 1356.7 | 1356.0 | 1356.0 | 1344.5 | 1337.7 | 1331.6 | 1319.4 | 1309.9 | 1300.4 | 1287.6 | 1280.8 |
| 12.5° | 1451.5 | 1446.8 | 1444.8 | 1436.6 | 1422.4 | 1411.6 | 1393.9 | 1375.7 | 1358.7 | 1345.2 | 1334.3 |
| 15°   | 1543.0 | 1543.0 | 1537.6 | 1524.7 | 1511.2 | 1497.0 | 1471.9 | 1445.4 | 1417.7 | 1396.0 | 1385.1 |
| 17.5° | 1626.4 | 1618.9 | 1614.2 | 1597.2 | 1583.0 | 1560.0 | 1532.2 | 1503.7 | 1469.2 | 1438.7 | 1417.7 |
| 20°   | 1687.4 | 1681.3 | 1671.1 | 1650.1 | 1625.7 | 1598.6 | 1566.1 | 1532.9 | 1495.6 | 1462.4 | 1438.7 |
| 22.5° | 1722.6 | 1715.2 | 1699.6 | 1671.8 | 1638.6 | 1600.6 | 1562.7 | 1531.5 | 1497.6 | 1472.6 | 1452.9 |
| 25°   | 1740.9 | 1733.5 | 1712.4 | 1675.9 | 1631.1 | 1581.0 | 1537.6 | 1507.1 | 1487.5 | 1481.4 | 1478.7 |
| 27.5° | 1740.2 | 1734.1 | 1711.8 | 1669.8 | 1612.2 | 1554.6 | 1507.8 | 1482.0 | 1480.0 | 1503.7 | 1521.3 |
| 30°   | 1722.6 | 1718.5 | 1698.2 | 1656.2 | 1595.9 | 1535.6 | 1492.2 | 1478.7 | 1499.7 | 1549.8 | 1593.2 |
| 32.5° | 1705.0 | 1703.0 | 1688.7 | 1650.8 | 1599.3 | 1548.5 | 1518.6 | 1520.0 | 1563.4 | 1640.6 | 1710.4 |
| 35°   | 1707.0 | 1709.7 | 1707.7 | 1687.4 | 1654.8 | 1628.4 | 1614.2 | 1644.0 | 1711.8 | 1805.3 | 1898.8 |
| 37.5° | 1724.6 | 1734.8 | 1747.7 | 1749.7 | 1750.4 | 1746.3 | 1776.1 | 1839.2 | 1938.1 | 2060.1 | 2206.5 |
| 40°   | 1763.3 | 1774.8 | 1812.1 | 1844.6 | 1886.6 | 1936.8 | 1997.1 | 2084.5 | 2207.1 | 2357.6 | 2537.2 |
| 42.5° | 1883.2 | 1899.5 | 1945.6 | 2005.9 | 2083.1 | 2161.7 | 2251.9 | 2371.1 | 2521.6 | 2680.1 | 2868.5 |
| 45°   | 2039.8 | 2073.6 | 2124.5 | 2191.6 | 2307.4 | 2417.9 | 2534.5 | 2667.9 | 2827.9 | 3026.4 | 3216.2 |
| 47.5° | 2234.9 | 2268.8 | 2342.7 | 2414.5 | 2551.4 | 2689.0 | 2816.4 | 2956.0 | 3129.4 | 3332.7 | 3542.8 |
| 50°   | 2405.7 | 2444.3 | 2510.1 | 2607.0 | 2765.5 | 2934.3 | 3075.2 | 3226.3 | 3372.0 | 3586.2 | 3798.3 |
| 52.5° | 2539.9 | 2567.7 | 2630.7 | 2719.5 | 2896.3 | 3081.3 | 3259.5 | 3427.6 | 3600.4 | 3814.6 | 4011.1 |
| 55°   | 2556.8 | 2582.6 | 2644.2 | 2745.9 | 2925.5 | 3130.8 | 3336.1 | 3535.4 | 3780.0 | 4013.8 | 4274.0 |
| 57.5° | 2483.6 | 2504.6 | 2567.0 | 2657.8 | 2832.6 | 3066.4 | 3326.0 | 3581.4 | 3894.5 | 4210.3 | 4528.1 |
| 60°   | 2379.9 | 2401.0 | 2449.7 | 2522.3 | 2680.1 | 2932.2 | 3235.2 | 3584.8 | 4000.9 | 4457.0 | 4924.6 |
| 62.5° | 2266.1 | 2284.4 | 2323.7 | 2375.2 | 2514.1 | 2746.6 | 3093.5 | 3562.5 | 4087.6 | 4702.3 | 5423.3 |
| 65°   | 2074.3 | 2118.4 | 2135.3 | 2188.2 | 2327.1 | 2546.6 | 2899.7 | 3411.3 | 4052.4 | 4811.4 | 5736.4 |
| 67°   | 1862.2 | 1906.9 | 1915.7 | 1969.3 | 2080.4 | 2291.2 | 2650.3 | 3131.5 | 3773.2 | 4623.0 | 5667.3 |
| 67.5° | 1794.4 | 1832.4 | 1845.9 | 1899.5 | 2004.5 | 2203.1 | 2543.9 | 3030.5 | 3687.8 | 4520.0 | 5583.9 |
| 70°   | 1319.4 | 1361.4 | 1376.3 | 1398.7 | 1473.9 | 1639.3 | 1864.9 | 2287.1 | 2940.4 | 3688.5 | 4710.4 |
| 72.5° | 706.1  | 740.0  | 754.2  | 787.4  | 826.1  | 916.2  | 1089.0 | 1391.9 | 1804.6 | 2468.0 | 3351.0 |
| 75°   | 477.8  | 491.3  | 501.5  | 524.5  | 564.5  | 636.3  | 712.2  | 818.6  | 1068.0 | 1392.6 | 1906.9 |
| 77.5° | 272.4  | 278.5  | 279.9  | 283.9  | 315.8  | 384.2  | 508.9  | 689.2  | 883.7  | 1009.0 | 1219.8 |
| 80°   | 117.9  | 130.1  | 139.6  | 133.5  | 131.5  | 145.7  | 182.3  | 271.7  | 532.6  | 845.7  | 1003.6 |
| 82.5° | 63.7   | 69.1   | 77.3   | 77.9   | 82.0   | 86.7   | 94.2   | 111.8  | 157.2  | 317.1  | 691.9  |
| 85°   | 33.2   | 34.6   | 46.1   | 52.9   | 56.2   | 59.0   | 60.3   | 67.1   | 77.3   | 98.3   | 172.1  |
| 87.5° | 4.7    | 6.8    | 8.1    | 10.8   | 12.2   | 12.9   | 14.9   | 19.0   | 22.4   | 27.1   | 46.1   |
| 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):**

|       | 55°    | 60°    | 65°    | 67.5°  | 70°    | 75°    | 80°    | 85°    | 90°    | 95°    | 100°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1108.0 | 1108.0 | 1108.0 | 1108.0 | 1108.0 | 1108.0 | 1108.0 | 1108.0 | 1108.0 | 1108.0 | 1108.0 |
| 2.5°  | 1136.4 | 1135.1 | 1131.0 | 1128.3 | 1125.6 | 1122.9 | 1119.5 | 1116.8 | 1112.0 | 1108.7 | 1104.6 |
| 5°    | 1178.5 | 1170.3 | 1164.9 | 1157.4 | 1156.1 | 1147.3 | 1138.5 | 1134.4 | 1126.3 | 1119.5 | 1111.4 |
| 7.5°  | 1221.1 | 1211.7 | 1202.8 | 1196.7 | 1193.4 | 1181.2 | 1172.4 | 1162.2 | 1152.7 | 1143.9 | 1134.4 |
| 10°   | 1271.3 | 1261.8 | 1252.3 | 1248.3 | 1242.2 | 1230.6 | 1223.2 | 1210.3 | 1200.8 | 1190.0 | 1177.1 |
| 12.5° | 1323.5 | 1316.7 | 1309.9 | 1304.5 | 1301.8 | 1296.4 | 1285.5 | 1274.7 | 1261.8 | 1251.0 | 1236.1 |
| 15°   | 1369.6 | 1364.8 | 1362.1 | 1360.7 | 1360.7 | 1357.4 | 1347.2 | 1337.0 | 1323.5 | 1311.3 | 1295.0 |
| 17.5° | 1402.1 | 1400.0 | 1402.1 | 1404.1 | 1406.8 | 1404.1 | 1402.1 | 1390.6 | 1381.7 | 1366.8 | 1350.6 |
| 20°   | 1421.1 | 1425.1 | 1435.3 | 1442.1 | 1448.2 | 1452.9 | 1454.9 | 1445.4 | 1433.9 | 1423.1 | 1412.2 |
| 22.5° | 1441.4 | 1452.9 | 1470.5 | 1480.7 | 1490.9 | 1507.8 | 1511.9 | 1505.1 | 1496.3 | 1489.5 | 1478.0 |
| 25°   | 1475.3 | 1492.2 | 1522.7 | 1539.0 | 1553.2 | 1578.3 | 1581.7 | 1583.0 | 1581.0 | 1575.6 | 1561.3 |
| 27.5° | 1528.1 | 1561.3 | 1602.0 | 1623.0 | 1638.6 | 1671.1 | 1684.0 | 1684.0 | 1678.6 | 1684.7 | 1684.7 |
| 30°   | 1620.3 | 1664.3 | 1717.2 | 1729.4 | 1753.8 | 1782.2 | 1803.3 | 1806.0 | 1806.6 | 1819.5 | 1838.5 |
| 32.5° | 1761.9 | 1803.9 | 1862.9 | 1876.4 | 1897.4 | 1924.6 | 1948.3 | 1945.6 | 1951.7 | 1979.4 | 2004.5 |
| 35°   | 1967.9 | 2010.6 | 2049.2 | 2067.5 | 2077.0 | 2101.4 | 2110.2 | 2125.1 | 2143.4 | 2178.0 | 2174.6 |
| 37.5° | 2272.9 | 2310.8 | 2316.2 | 2327.8 | 2316.2 | 2321.0 | 2327.8 | 2345.4 | 2394.2 | 2425.3 | 2375.2 |
| 40°   | 2640.2 | 2703.2 | 2697.1 | 2683.5 | 2657.8 | 2623.2 | 2635.4 | 2662.5 | 2715.4 | 2688.3 | 2553.4 |
| 42.5° | 2986.4 | 3051.5 | 3039.3 | 3023.7 | 2966.8 | 2953.9 | 2952.6 | 2974.9 | 3003.4 | 2926.1 | 2693.0 |
| 45°   | 3327.3 | 3393.7 | 3372.7 | 3363.9 | 3326.0 | 3298.2 | 3321.2 | 3322.6 | 3315.1 | 3149.8 | 2815.0 |
| 47.5° | 3679.0 | 3740.0 | 3726.5 | 3733.9 | 3694.6 | 3676.3 | 3678.3 | 3668.9 | 3599.1 | 3339.5 | 2909.9 |
| 50°   | 3963.0 | 4045.0 | 4053.1 | 4036.1 | 4015.1 | 3987.4 | 4058.5 | 4032.8 | 3877.6 | 3523.8 | 3001.4 |
| 52.5° | 4183.9 | 4294.3 | 4336.3 | 4325.5 | 4308.6 | 4312.0 | 4445.5 | 4474.6 | 4217.8 | 3756.3 | 3102.3 |
| 55°   | 4445.5 | 4619.6 | 4688.1 | 4728.7 | 4711.1 | 4778.9 | 5084.5 | 5099.4 | 4690.8 | 4059.9 | 3233.8 |
| 57.5° | 4822.9 | 5072.3 | 5288.5 | 5346.1 | 5401.6 | 5621.9 | 6117.9 | 5966.8 | 5304.7 | 4519.3 | 3400.5 |
| 60°   | 5396.9 | 5943.1 | 6294.1 | 6478.4 | 6608.5 | 6916.2 | 7387.9 | 7005.0 | 6069.8 | 5066.2 | 3609.9 |
| 62.5° | 6200.6 | 6998.9 | 7585.7 | 7770.7 | 7824.3 | 8001.1 | 8342.7 | 7610.1 | 6486.6 | 5311.5 | 3628.2 |
| 65°   | 6799.0 | 7756.5 | 8459.2 | 8554.1 | 8490.4 | 8493.8 | 8583.2 | 7578.3 | 6331.4 | 5097.4 | 3313.8 |
| 67°   | 6759.7 | 7831.7 | 8551.4 | 8676.1 | 8588.0 | 8472.1 | 8332.5 | 7146.6 | 5832.6 | 4648.8 | 2901.7 |
| 67.5° | 6699.4 | 7759.2 | 8511.4 | 8642.9 | 8562.2 | 8430.1 | 8226.1 | 6979.2 | 5677.4 | 4509.2 | 2817.7 |
| 70°   | 5791.3 | 6843.7 | 7856.8 | 8041.8 | 8075.7 | 7955.1 | 7382.4 | 5884.8 | 4609.4 | 3668.2 | 2188.2 |
| 72.5° | 4507.8 | 5445.0 | 6447.3 | 6607.9 | 6738.0 | 6390.3 | 5373.2 | 4064.6 | 3359.8 | 2643.6 | 1584.4 |
| 75°   | 2976.3 | 3929.8 | 4435.3 | 4459.0 | 4293.0 | 3649.2 | 2625.3 | 2035.7 | 1873.7 | 1553.9 | 980.6  |
| 77.5° | 1592.5 | 2310.8 | 2325.1 | 2152.9 | 2074.3 | 1546.4 | 627.5  | 346.3  | 385.6  | 437.8  | 390.3  |
| 80°   | 1187.9 | 1471.9 | 1705.7 | 1833.7 | 1871.7 | 1326.2 | 324.6  | 183.6  | 160.6  | 146.4  | 144.3  |
| 82.5° | 1071.4 | 1421.7 | 1593.9 | 1663.7 | 1646.0 | 1091.0 | 182.3  | 123.3  | 102.3  | 111.1  | 126.7  |
| 85°   | 420.1  | 759.0  | 998.2  | 966.3  | 811.8  | 406.6  | 99.6   | 66.4   | 66.4   | 96.2   | 124.7  |
| 87.5° | 86.1   | 155.9  | 211.4  | 201.9  | 181.6  | 78.6   | 48.8   | 40.0   | 40.7   | 77.9   | 117.9  |
| 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):**

|       | 105°   | 110°   | 115°   | 120°   | 125°   | 130°   | 135°   | 140°   | 145°   | 150°   | 155°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1108.0 | 1108.0 | 1108.0 | 1108.0 | 1108.0 | 1108.0 | 1108.0 | 1108.0 | 1108.0 | 1108.0 | 1108.0 |
| 2.5°  | 1100.5 | 1096.5 | 1093.7 | 1091.0 | 1088.3 | 1087.0 | 1084.9 | 1084.9 | 1080.9 | 1079.5 | 1078.2 |
| 5°    | 1105.3 | 1098.5 | 1093.7 | 1087.6 | 1082.9 | 1078.8 | 1073.4 | 1072.1 | 1067.3 | 1063.9 | 1062.6 |
| 7.5°  | 1125.6 | 1115.4 | 1105.3 | 1097.8 | 1091.0 | 1082.2 | 1076.1 | 1070.7 | 1066.0 | 1062.6 | 1058.5 |
| 10°   | 1164.2 | 1153.4 | 1139.1 | 1125.6 | 1116.8 | 1103.2 | 1093.7 | 1084.3 | 1078.8 | 1074.8 | 1069.3 |
| 12.5° | 1221.1 | 1205.6 | 1188.6 | 1172.4 | 1157.4 | 1139.8 | 1130.3 | 1118.8 | 1112.0 | 1108.7 | 1104.6 |
| 15°   | 1279.4 | 1262.5 | 1241.5 | 1225.9 | 1208.9 | 1195.4 | 1186.6 | 1176.4 | 1171.0 | 1166.9 | 1164.2 |
| 17.5° | 1339.1 | 1319.4 | 1304.5 | 1288.9 | 1280.8 | 1270.6 | 1259.1 | 1246.2 | 1230.6 | 1221.1 | 1208.3 |
| 20°   | 1400.0 | 1385.1 | 1376.3 | 1367.5 | 1358.0 | 1343.8 | 1320.8 | 1294.3 | 1265.2 | 1237.4 | 1211.0 |
| 22.5° | 1471.2 | 1462.4 | 1461.0 | 1452.9 | 1433.3 | 1399.4 | 1356.7 | 1307.2 | 1257.7 | 1211.7 | 1175.7 |
| 25°   | 1571.5 | 1571.5 | 1564.7 | 1531.5 | 1485.4 | 1424.4 | 1352.6 | 1281.5 | 1215.7 | 1152.7 | 1105.3 |
| 27.5° | 1697.5 | 1692.8 | 1659.6 | 1591.1 | 1508.5 | 1413.6 | 1317.4 | 1227.2 | 1143.2 | 1074.1 | 1013.1 |
| 30°   | 1836.5 | 1803.3 | 1732.1 | 1624.4 | 1500.3 | 1378.4 | 1260.4 | 1156.1 | 1057.2 | 972.4  | 900.6  |
| 32.5° | 1980.8 | 1900.2 | 1772.1 | 1624.4 | 1471.9 | 1325.5 | 1189.3 | 1061.2 | 948.0  | 853.2  | 767.8  |
| 35°   | 2111.6 | 1964.5 | 1781.6 | 1597.9 | 1416.3 | 1247.6 | 1089.7 | 944.7  | 809.1  | 706.8  | 613.3  |
| 37.5° | 2230.2 | 2007.2 | 1771.4 | 1546.4 | 1335.7 | 1137.8 | 952.8  | 792.9  | 639.7  | 540.8  | 460.8  |
| 40°   | 2307.4 | 2016.0 | 1729.4 | 1465.8 | 1220.5 | 989.4  | 784.7  | 605.8  | 484.5  | 394.4  | 340.9  |
| 42.5° | 2355.5 | 1999.1 | 1661.6 | 1355.3 | 1065.3 | 803.0  | 588.9  | 434.4  | 344.3  | 294.1  | 273.8  |
| 45°   | 2382.7 | 1955.1 | 1561.3 | 1204.2 | 877.6  | 610.6  | 418.1  | 313.8  | 265.0  | 247.3  | 240.6  |
| 47.5° | 2381.3 | 1883.9 | 1436.0 | 1029.4 | 670.2  | 425.6  | 296.1  | 244.6  | 231.1  | 225.7  | 224.3  |
| 50°   | 2367.1 | 1796.5 | 1288.9 | 839.6  | 483.8  | 296.8  | 234.5  | 219.6  | 216.2  | 212.8  | 211.4  |
| 52.5° | 2347.4 | 1688.1 | 1126.3 | 654.6  | 343.6  | 237.2  | 212.8  | 208.7  | 206.0  | 202.6  | 201.3  |
| 55°   | 2310.8 | 1554.6 | 950.1  | 492.7  | 269.0  | 214.1  | 205.3  | 204.0  | 200.6  | 195.8  | 193.1  |
| 57.5° | 2266.1 | 1419.0 | 781.3  | 384.9  | 237.9  | 208.7  | 204.0  | 201.9  | 197.2  | 191.8  | 186.4  |
| 60°   | 2249.8 | 1307.2 | 649.2  | 324.6  | 230.4  | 210.8  | 207.4  | 204.7  | 197.9  | 189.7  | 183.6  |
| 62.5° | 2148.2 | 1181.2 | 554.3  | 300.9  | 234.5  | 219.6  | 218.2  | 214.1  | 204.0  | 194.5  | 185.0  |
| 65°   | 1885.3 | 998.9  | 469.6  | 284.6  | 242.6  | 234.5  | 235.8  | 229.7  | 219.6  | 206.7  | 189.7  |
| 67°   | 1594.5 | 814.5  | 391.0  | 269.0  | 248.7  | 250.1  | 254.8  | 250.1  | 237.2  | 218.9  | 195.8  |
| 67.5° | 1517.3 | 767.8  | 371.4  | 264.3  | 250.1  | 254.1  | 259.5  | 256.2  | 243.3  | 222.3  | 198.6  |
| 70°   | 1127.6 | 540.8  | 277.2  | 239.2  | 250.1  | 266.3  | 278.5  | 281.9  | 267.7  | 238.5  | 204.0  |
| 72.5° | 794.2  | 349.0  | 212.8  | 207.4  | 227.0  | 248.7  | 271.7  | 283.3  | 267.0  | 235.1  | 196.5  |
| 75°   | 477.1  | 218.2  | 172.8  | 176.2  | 191.1  | 213.5  | 231.8  | 236.5  | 216.2  | 195.8  | 170.1  |
| 77.5° | 220.9  | 145.0  | 135.5  | 140.3  | 154.5  | 164.7  | 164.7  | 155.2  | 139.6  | 127.4  | 122.0  |
| 80°   | 130.1  | 118.6  | 117.9  | 126.7  | 136.2  | 128.8  | 117.2  | 104.4  | 96.2   | 92.2   | 90.1   |
| 82.5° | 122.0  | 126.7  | 134.9  | 136.9  | 129.4  | 111.1  | 96.9   | 84.0   | 80.0   | 77.9   | 75.9   |
| 85°   | 143.7  | 153.8  | 140.3  | 129.4  | 114.5  | 93.5   | 75.9   | 65.1   | 63.0   | 61.0   | 58.3   |
| 87.5° | 132.8  | 126.7  | 110.5  | 94.9   | 78.6   | 56.9   | 41.3   | 37.3   | 40.0   | 39.3   | 37.9   |
| 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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|-------|--------|--------|--------|--------|--------|
| 0°    | 1108.0 | 1108.0 | 1108.0 | 1108.0 | 1108.0 |
| 2.5°  | 1078.8 | 1078.8 | 1076.1 | 1074.8 | 1078.2 |
| 5°    | 1059.9 | 1060.5 | 1058.5 | 1057.8 | 1058.5 |
| 7.5°  | 1055.8 | 1055.1 | 1053.8 | 1052.4 | 1053.8 |
| 10°   | 1068.0 | 1067.3 | 1065.3 | 1066.6 | 1064.6 |
| 12.5° | 1104.6 | 1108.7 | 1108.0 | 1109.3 | 1112.0 |
| 15°   | 1164.2 | 1163.5 | 1161.5 | 1162.9 | 1164.9 |
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| 20°   | 1190.0 | 1174.4 | 1166.3 | 1161.5 | 1160.2 |
| 22.5° | 1141.9 | 1119.5 | 1102.6 | 1098.5 | 1095.1 |
| 25°   | 1063.2 | 1035.5 | 1013.8 | 1009.0 | 1000.2 |
| 27.5° | 971.8  | 934.5  | 908.7  | 903.3  | 898.6  |
| 30°   | 851.8  | 809.1  | 779.3  | 760.3  | 766.4  |
| 32.5° | 705.4  | 664.8  | 630.2  | 599.7  | 595.0  |
| 35°   | 544.8  | 500.1  | 469.6  | 456.1  | 447.3  |
| 37.5° | 406.6  | 369.3  | 349.0  | 336.1  | 336.8  |
| 40°   | 311.0  | 291.4  | 280.6  | 271.7  | 272.4  |
| 42.5° | 259.5  | 250.7  | 248.0  | 244.0  | 241.9  |
| 45°   | 235.1  | 232.4  | 233.1  | 229.0  | 227.7  |
| 47.5° | 221.6  | 219.6  | 220.2  | 217.5  | 216.9  |
| 50°   | 210.8  | 209.4  | 210.1  | 208.0  | 207.4  |
| 52.5° | 199.9  | 200.6  | 199.9  | 198.6  | 198.6  |
| 55°   | 190.4  | 189.7  | 191.1  | 189.1  | 189.1  |
| 57.5° | 183.0  | 182.3  | 182.3  | 181.6  | 181.6  |
| 60°   | 178.9  | 176.2  | 175.5  | 175.5  | 176.2  |
| 62.5° | 176.9  | 172.1  | 171.4  | 171.4  | 172.1  |
| 65°   | 177.5  | 170.1  | 167.4  | 166.7  | 166.0  |
| 67°   | 178.2  | 167.4  | 162.0  | 159.3  | 158.6  |
| 67.5° | 178.9  | 166.0  | 159.9  | 157.2  | 155.9  |
| 70°   | 174.8  | 156.5  | 147.7  | 143.0  | 141.6  |
| 72.5° | 164.7  | 145.0  | 134.2  | 128.1  | 126.7  |
| 75°   | 146.4  | 131.5  | 122.0  | 115.2  | 112.5  |
| 77.5° | 113.2  | 106.4  | 103.0  | 98.9   | 97.6   |
| 80°   | 88.1   | 84.7   | 83.4   | 80.6   | 80.0   |
| 82.5° | 73.2   | 69.8   | 67.8   | 64.4   | 62.3   |
| 85°   | 56.9   | 52.9   | 51.5   | 48.8   | 47.4   |
| 87.5° | 37.3   | 35.2   | 34.6   | 31.2   | 29.8   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)