

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: INVUE

Report Number: P401795

Luminaire Tested: **ENT-SA1F-727-U-SL4-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401795  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1F-727-U-SL4-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 70 CRI, 2700K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5343 lumens  
Efficiency: N/A  
Efficacy: 80.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 66.1  
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: 25 FT

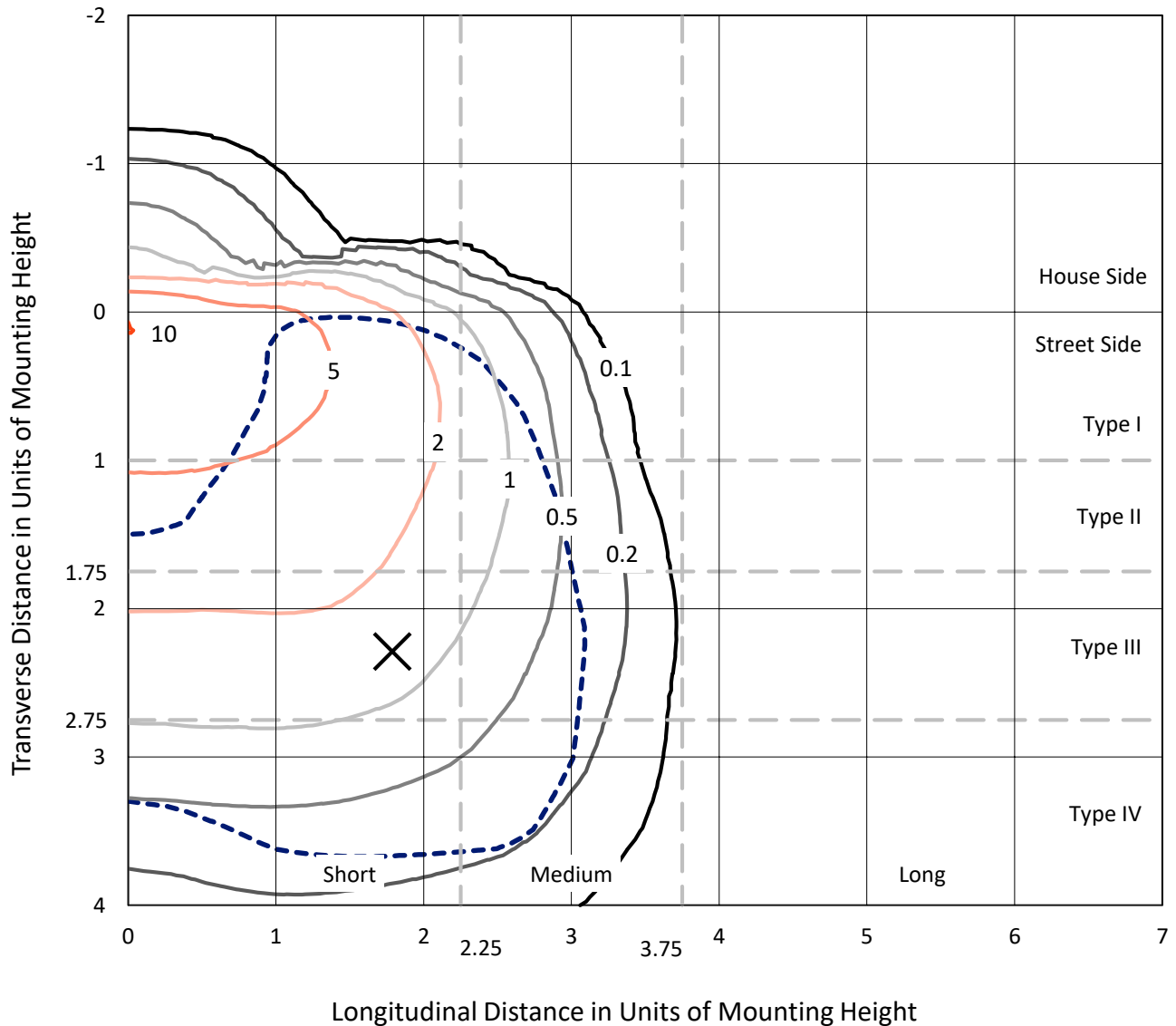


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

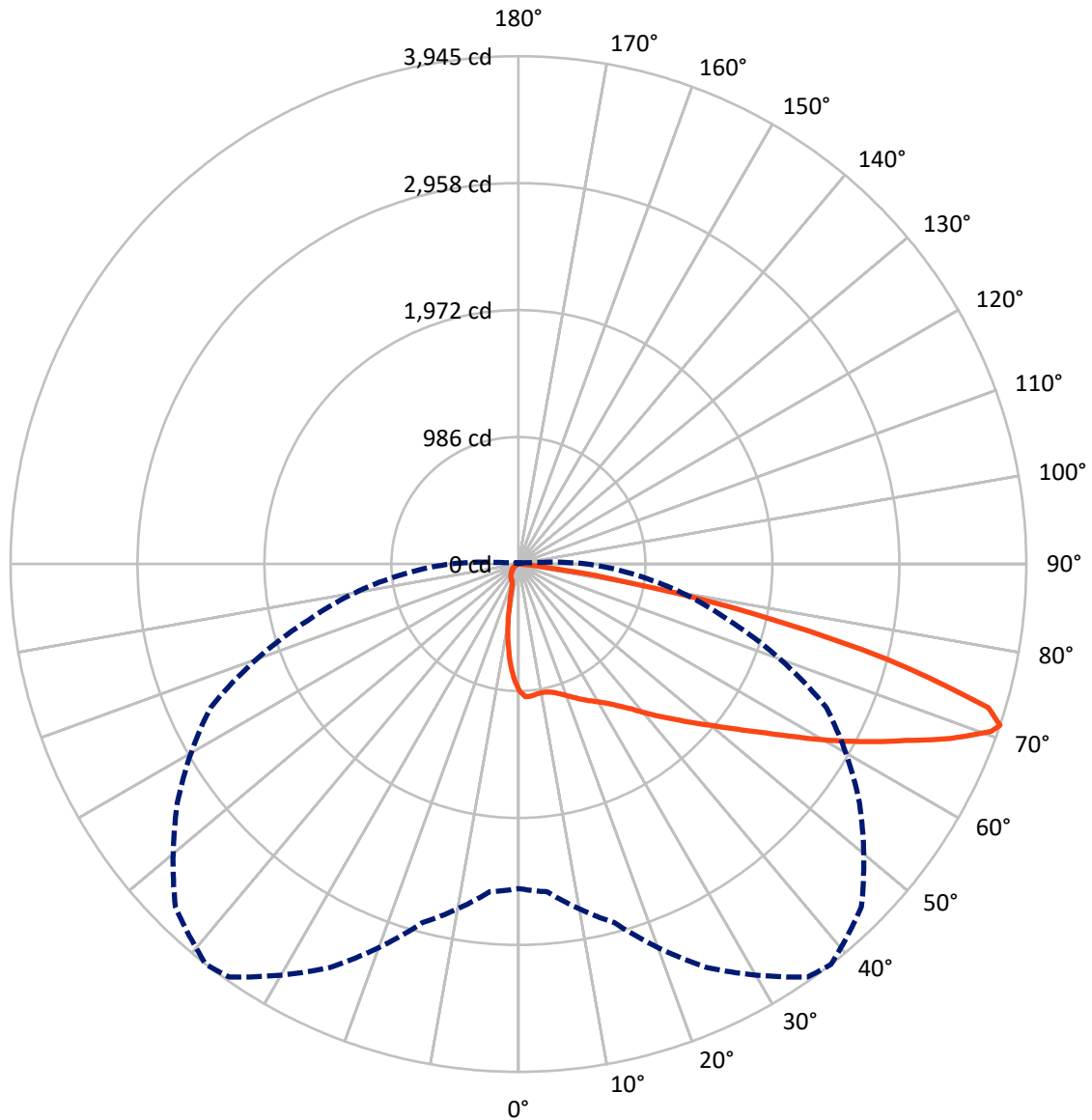


Based on 10 foot mounting height. Maximum calculated value = 10.1 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral    - - - Horizontal Cone Through 71-Deg Vertical

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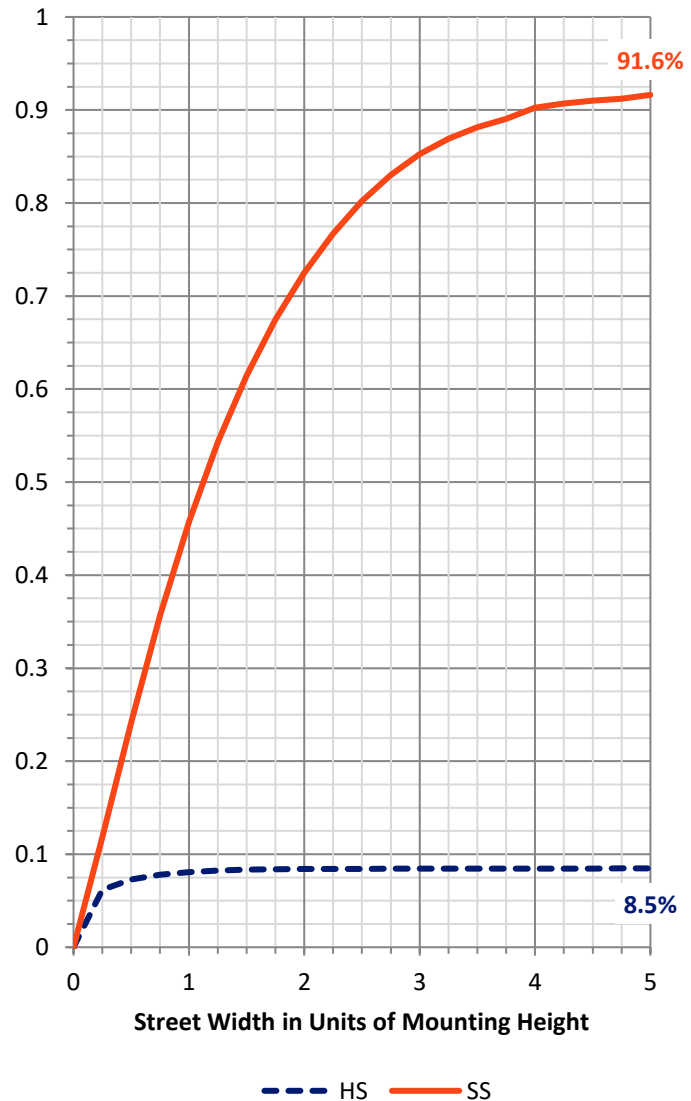
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 456.4    | 0.0    | 456.4  |
|                    | % Fixture | 8.5      | 0.0    | 8.5    |
| <b>Street Side</b> | Lumens    | 4886.6   | 0.0    | 4886.6 |
|                    | % Fixture | 91.5     | 0.0    | 91.5   |
| <b>Total</b>       | Lumens    | 5343.0   | 0.0    | 5343.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 83.2   | 1.6       |
| 10°-20°   | 201.4  | 3.8       |
| 20°-30°   | 323.0  | 6.0       |
| 30°-40°   | 491.4  | 9.2       |
| 40°-50°   | 765.8  | 14.3      |
| 50°-60°   | 1119.8 | 21.0      |
| 60°-70°   | 1436.3 | 26.9      |
| 70°-80°   | 877.9  | 16.4      |
| 80°-90°   | 44.1   | 0.8       |
| 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°    | 5343.0 | 100.0     |
| 0°-180°   | 5343.0 | 100.0     |

**Coefficient of Utilization**



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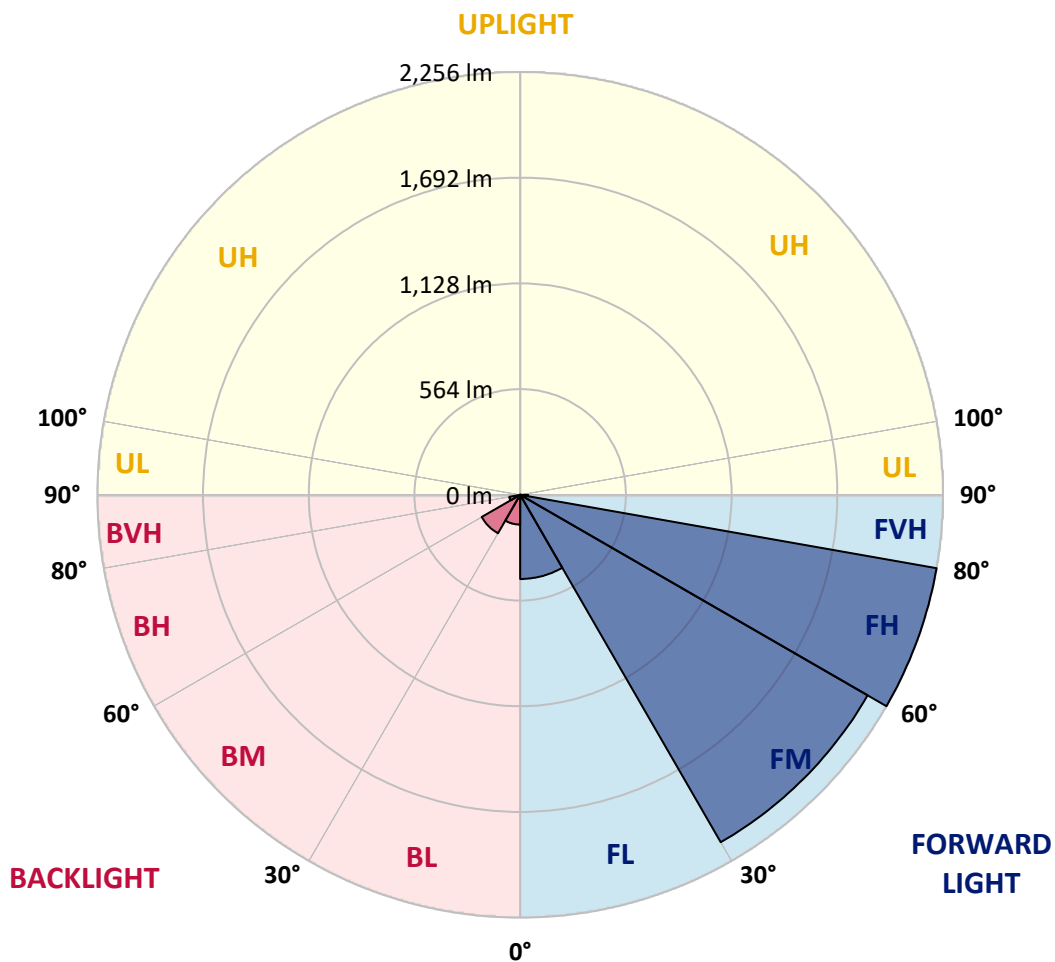
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 448.9  | 8.4       |                         |      |         |
| FM   | (30°-60°)   | 2139.9 | 40.1      |                         |      |         |
| FH   | (60°-80°)   | 2255.6 | 42.2      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 42.1   | 0.8       |                         |      | G1/100  |
| BL   | (0°-30°)    | 158.7  | 3.0       | B1/500                  |      |         |
| BM   | (30°-60°)   | 237.1  | 4.4       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 58.7   | 1.1       | B0/110                  |      | G0/110  |
| BVH  | (80°-90°)   | 2.0    | 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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 38°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 985.0  | 985.0  | 985.0  | 985.0  | 985.0  | 985.0  | 985.0  | 985.0  | 985.0  | 985.0  | 985.0  |
| 2.5°  | 1043.3 | 1040.5 | 1043.3 | 1040.5 | 1035.0 | 1032.2 | 1028.5 | 1018.3 | 1009.1 | 998.0  | 981.3  |
| 5°    | 1045.2 | 1043.3 | 1043.3 | 1039.6 | 1033.1 | 1030.4 | 1026.7 | 1016.5 | 1004.4 | 987.8  | 962.8  |
| 7.5°  | 1035.0 | 1034.1 | 1032.2 | 1028.5 | 1021.1 | 1019.2 | 1016.5 | 1004.4 | 992.4  | 974.8  | 944.3  |
| 10°   | 1018.3 | 1020.2 | 1019.2 | 1019.2 | 1016.5 | 1014.6 | 1012.8 | 998.9  | 985.9  | 965.6  | 933.2  |
| 12.5° | 1002.6 | 1004.4 | 1009.1 | 1016.5 | 1019.2 | 1020.2 | 1020.2 | 1006.3 | 990.5  | 968.3  | 935.0  |
| 15°   | 992.4  | 996.1  | 1009.1 | 1023.9 | 1032.2 | 1035.0 | 1037.8 | 1022.9 | 1004.4 | 980.4  | 945.2  |
| 17.5° | 989.6  | 995.2  | 1020.2 | 1043.3 | 1059.1 | 1060.9 | 1060.9 | 1042.4 | 1022.9 | 995.2  | 957.2  |
| 20°   | 998.9  | 1006.3 | 1038.7 | 1071.1 | 1090.5 | 1092.4 | 1088.7 | 1064.6 | 1041.5 | 1010.9 | 967.4  |
| 22.5° | 1026.7 | 1033.1 | 1070.2 | 1108.1 | 1126.6 | 1128.5 | 1120.2 | 1086.8 | 1061.8 | 1036.8 | 981.3  |
| 25°   | 1074.8 | 1078.5 | 1118.3 | 1154.4 | 1164.6 | 1167.4 | 1153.5 | 1113.7 | 1085.0 | 1061.8 | 1000.7 |
| 27.5° | 1138.7 | 1140.5 | 1176.6 | 1203.5 | 1205.3 | 1204.4 | 1189.6 | 1147.9 | 1119.2 | 1099.8 | 1030.4 |
| 30°   | 1205.3 | 1208.1 | 1237.7 | 1255.3 | 1247.9 | 1244.2 | 1231.2 | 1186.8 | 1160.9 | 1146.1 | 1072.9 |
| 32.5° | 1267.3 | 1270.1 | 1302.5 | 1311.8 | 1295.1 | 1292.3 | 1283.1 | 1235.9 | 1213.7 | 1221.1 | 1134.0 |
| 35°   | 1328.4 | 1328.4 | 1365.5 | 1370.1 | 1355.3 | 1355.3 | 1355.3 | 1298.8 | 1295.1 | 1320.1 | 1219.2 |
| 37.5° | 1383.1 | 1392.3 | 1431.2 | 1429.4 | 1426.6 | 1428.4 | 1434.0 | 1391.4 | 1404.4 | 1446.9 | 1331.2 |
| 40°   | 1429.4 | 1441.4 | 1493.2 | 1497.9 | 1509.9 | 1520.1 | 1528.4 | 1506.2 | 1536.7 | 1606.2 | 1474.7 |
| 42.5° | 1471.0 | 1484.9 | 1551.5 | 1572.8 | 1606.2 | 1620.1 | 1635.8 | 1630.2 | 1697.8 | 1824.6 | 1658.0 |
| 45°   | 1524.7 | 1539.5 | 1608.0 | 1658.9 | 1705.2 | 1723.7 | 1758.9 | 1783.0 | 1895.0 | 2039.4 | 1856.1 |
| 47.5° | 1596.0 | 1606.2 | 1669.1 | 1749.7 | 1812.6 | 1845.9 | 1900.6 | 1962.6 | 2098.7 | 2267.1 | 2032.9 |
| 50°   | 1693.2 | 1694.1 | 1741.3 | 1845.9 | 1939.4 | 1975.5 | 2070.0 | 2150.5 | 2320.8 | 2468.0 | 2160.7 |
| 52.5° | 1800.6 | 1795.0 | 1832.0 | 1964.4 | 2082.9 | 2132.0 | 2243.1 | 2355.1 | 2526.4 | 2613.4 | 2218.1 |
| 55°   | 1902.4 | 1905.2 | 1928.3 | 2090.3 | 2263.4 | 2310.7 | 2451.4 | 2565.2 | 2714.3 | 2702.2 | 2249.6 |
| 57.5° | 2020.0 | 2019.0 | 2048.7 | 2228.3 | 2474.5 | 2529.1 | 2676.3 | 2769.8 | 2828.2 | 2766.1 | 2255.1 |
| 60°   | 2131.1 | 2128.3 | 2173.6 | 2393.1 | 2699.5 | 2780.0 | 2912.4 | 2908.7 | 2942.0 | 2806.9 | 2250.5 |
| 62.5° | 2230.1 | 2236.6 | 2316.2 | 2584.7 | 2951.3 | 3038.3 | 3104.9 | 3058.7 | 3067.9 | 2854.1 | 2193.1 |
| 65°   | 2350.5 | 2362.5 | 2491.2 | 2817.0 | 3262.3 | 3304.0 | 3329.9 | 3254.9 | 3162.3 | 2816.1 | 2019.0 |
| 67.5° | 2502.3 | 2538.4 | 2719.8 | 3159.6 | 3586.3 | 3615.0 | 3616.0 | 3373.4 | 3158.6 | 2624.5 | 1697.8 |
| 70°   | 2562.5 | 2600.4 | 2889.2 | 3430.8 | 3859.4 | 3895.5 | 3782.6 | 3354.9 | 2909.6 | 2055.2 | 1146.1 |
| 71°   | 2520.8 | 2555.1 | 2884.6 | 3456.7 | 3915.9 | 3944.6 | 3767.8 | 3233.6 | 2638.4 | 1693.2 | 887.8  |
| 72.5° | 2219.9 | 2308.8 | 2706.9 | 3293.8 | 3815.0 | 3815.9 | 3528.0 | 2947.6 | 2098.7 | 1057.2 | 446.2  |
| 75°   | 1198.8 | 1306.2 | 1983.9 | 2506.9 | 2942.9 | 2966.1 | 2714.3 | 2046.8 | 1015.5 | 274.0  | 108.3  |
| 77.5° | 395.3  | 445.3  | 889.6  | 1301.6 | 1845.9 | 1882.0 | 1659.9 | 909.1  | 320.3  | 92.6   | 56.5   |
| 80°   | 248.1  | 253.7  | 300.9  | 547.1  | 821.1  | 851.7  | 683.2  | 368.4  | 144.4  | 50.9   | 38.9   |
| 82.5° | 41.7   | 50.0   | 141.6  | 161.1  | 289.8  | 229.6  | 155.5  | 187.9  | 67.6   | 23.1   | 33.3   |
| 85°   | 0.0    | 0.0    | 0.9    | 0.9    | 4.6    | 0.9    | 0.9    | 38.0   | 3.7    | 3.7    | 17.6   |
| 87.5° | 0.0    | 0.0    | 0.9    | 0.9    | 0.9    | 0.9    | 0.9    | 0.9    | 0.0    | 0.0    | 0.0    |
| 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°    | 985.0  | 985.0  | 985.0 | 985.0 | 985.0 | 985.0 | 985.0 | 985.0 | 985.0 | 985.0 | 985.0 |
| 2.5°  | 973.9  | 966.5  | 951.7 | 935.9 | 916.5 | 899.8 | 894.3 | 882.2 | 876.7 | 872.1 | 872.1 |
| 5°    | 947.0  | 934.1  | 902.6 | 870.2 | 838.7 | 805.4 | 774.8 | 746.2 | 732.3 | 712.8 | 722.1 |
| 7.5°  | 924.8  | 902.6  | 858.2 | 807.2 | 742.4 | 676.7 | 625.8 | 581.4 | 544.3 | 532.3 | 524.0 |
| 10°   | 909.1  | 881.3  | 816.5 | 738.7 | 644.3 | 550.8 | 472.1 | 399.0 | 356.4 | 330.5 | 330.5 |
| 12.5° | 907.2  | 872.1  | 787.8 | 668.4 | 532.3 | 405.5 | 308.3 | 238.8 | 204.6 | 188.9 | 187.9 |
| 15°   | 913.7  | 871.1  | 761.9 | 604.5 | 429.5 | 281.4 | 192.6 | 162.0 | 153.7 | 151.8 | 151.8 |
| 17.5° | 919.3  | 870.2  | 731.3 | 532.3 | 316.6 | 185.1 | 152.7 | 147.2 | 145.3 | 144.4 | 144.4 |
| 20°   | 924.8  | 865.6  | 696.2 | 450.8 | 224.0 | 150.9 | 142.6 | 139.8 | 138.9 | 137.9 | 137.9 |
| 22.5° | 932.2  | 860.9  | 660.1 | 358.3 | 165.7 | 140.7 | 136.1 | 133.3 | 132.4 | 132.4 | 132.4 |
| 25°   | 942.4  | 858.2  | 615.6 | 271.2 | 142.6 | 133.3 | 128.7 | 126.8 | 126.8 | 125.9 | 125.9 |
| 27.5° | 961.8  | 860.9  | 567.5 | 194.4 | 133.3 | 125.9 | 123.1 | 121.3 | 121.3 | 120.3 | 120.3 |
| 30°   | 988.7  | 869.3  | 507.3 | 151.8 | 125.9 | 118.5 | 115.7 | 114.8 | 113.9 | 113.9 | 113.9 |
| 32.5° | 1026.7 | 882.2  | 441.6 | 129.6 | 116.6 | 111.1 | 108.3 | 107.4 | 107.4 | 107.4 | 106.5 |
| 35°   | 1085.0 | 909.1  | 361.0 | 118.5 | 108.3 | 102.8 | 100.0 | 100.0 | 100.0 | 99.1  | 100.0 |
| 37.5° | 1173.8 | 952.6  | 279.6 | 109.2 | 99.1  | 94.4  | 92.6  | 91.6  | 91.6  | 91.6  | 91.6  |
| 40°   | 1285.9 | 1022.9 | 203.7 | 100.9 | 90.7  | 86.1  | 84.2  | 83.3  | 82.4  | 82.4  | 82.4  |
| 42.5° | 1430.3 | 1100.7 | 148.1 | 91.6  | 83.3  | 78.7  | 76.8  | 75.0  | 73.1  | 72.2  | 72.2  |
| 45°   | 1580.2 | 1193.3 | 115.7 | 84.2  | 75.9  | 72.2  | 70.4  | 67.6  | 64.8  | 62.0  | 62.0  |
| 47.5° | 1725.6 | 1264.6 | 99.1  | 75.9  | 69.4  | 65.7  | 63.9  | 60.2  | 55.5  | 52.8  | 52.8  |
| 50°   | 1817.2 | 1286.8 | 88.9  | 68.5  | 63.0  | 60.2  | 57.4  | 52.8  | 46.3  | 43.5  | 43.5  |
| 52.5° | 1845.9 | 1246.1 | 79.6  | 62.0  | 57.4  | 54.6  | 50.9  | 44.4  | 38.0  | 34.3  | 34.3  |
| 55°   | 1857.0 | 1167.4 | 70.4  | 57.4  | 51.8  | 48.1  | 43.5  | 37.0  | 30.5  | 26.8  | 26.8  |
| 57.5° | 1843.2 | 1056.3 | 63.0  | 51.8  | 46.3  | 42.6  | 37.0  | 29.6  | 23.1  | 20.4  | 20.4  |
| 60°   | 1795.9 | 895.2  | 56.5  | 46.3  | 40.7  | 36.1  | 30.5  | 23.1  | 17.6  | 13.9  | 14.8  |
| 62.5° | 1668.2 | 692.5  | 49.1  | 38.9  | 35.2  | 30.5  | 24.1  | 17.6  | 11.1  | 9.3   | 9.3   |
| 65°   | 1464.5 | 479.5  | 41.7  | 32.4  | 29.6  | 25.0  | 18.5  | 12.0  | 6.5   | 5.6   | 5.6   |
| 67.5° | 1189.6 | 310.1  | 32.4  | 26.8  | 25.0  | 20.4  | 13.9  | 7.4   | 3.7   | 3.7   | 2.8   |
| 70°   | 747.1  | 153.7  | 25.9  | 20.4  | 20.4  | 15.7  | 10.2  | 4.6   | 2.8   | 2.8   | 2.8   |
| 71°   | 528.6  | 104.6  | 23.1  | 18.5  | 18.5  | 14.8  | 9.3   | 3.7   | 2.8   | 2.8   | 2.8   |
| 72.5° | 238.8  | 65.7   | 19.4  | 16.7  | 15.7  | 12.0  | 8.3   | 3.7   | 3.7   | 3.7   | 3.7   |
| 75°   | 75.0   | 36.1   | 13.9  | 13.0  | 13.0  | 10.2  | 7.4   | 4.6   | 4.6   | 4.6   | 4.6   |
| 77.5° | 50.0   | 27.8   | 9.3   | 8.3   | 10.2  | 10.2  | 7.4   | 5.6   | 5.6   | 5.6   | 5.6   |
| 80°   | 40.7   | 14.8   | 5.6   | 5.6   | 7.4   | 9.3   | 7.4   | 5.6   | 6.5   | 5.6   | 5.6   |
| 82.5° | 39.8   | 7.4    | 1.9   | 2.8   | 4.6   | 5.6   | 5.6   | 4.6   | 5.6   | 5.6   | 5.6   |
| 85°   | 16.7   | 1.9    | 0.9   | 1.9   | 1.9   | 2.8   | 2.8   | 3.7   | 4.6   | 4.6   | 4.6   |
| 87.5° | 0.0    | 0.0    | 0.0   | 0.0   | 0.9   | 0.9   | 1.9   | 1.9   | 2.8   | 3.7   | 3.7   |
| 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)