

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: P401494

Luminaire Tested: **ENT-SA1D-740-U-SL4-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401494  
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-SA1D-740-U-SL4-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 70 CRI, 4000K, 800mA 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: 4633 lumens  
Efficiency: N/A  
Efficacy: 107.5 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

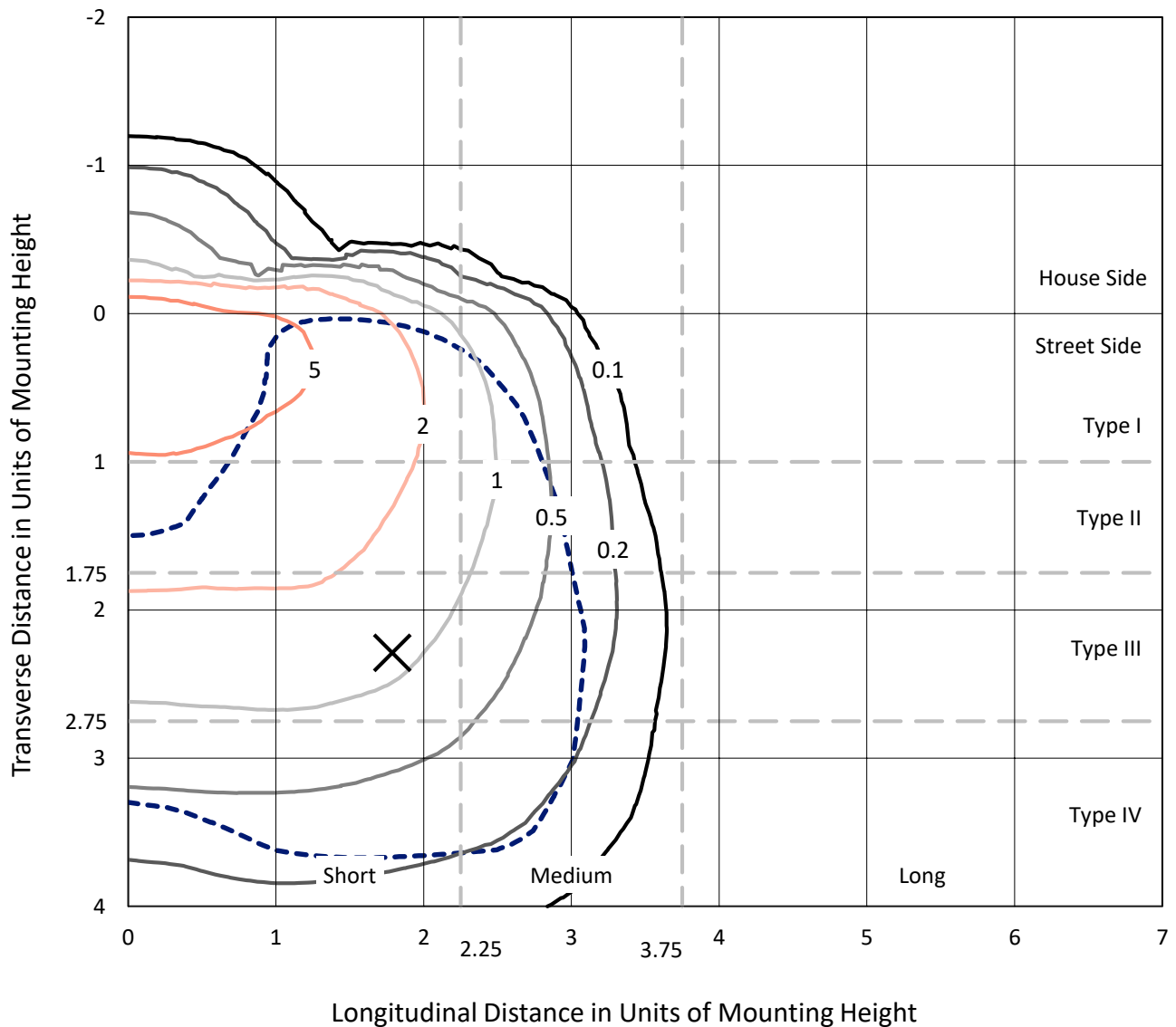
Input Watts (W): 43.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

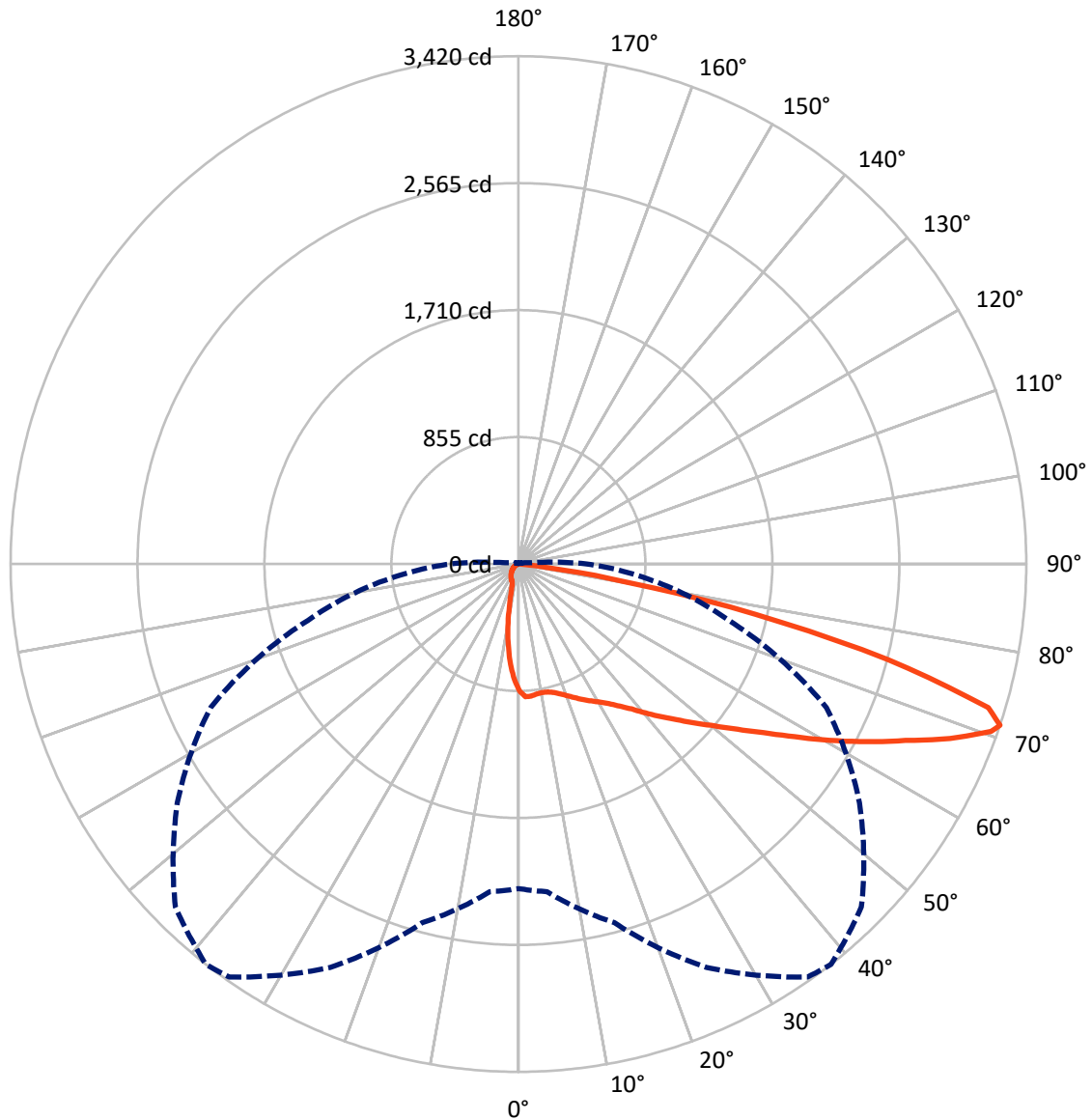


Based on 10 foot mounting height. Maximum calculated value = 8.8 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



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

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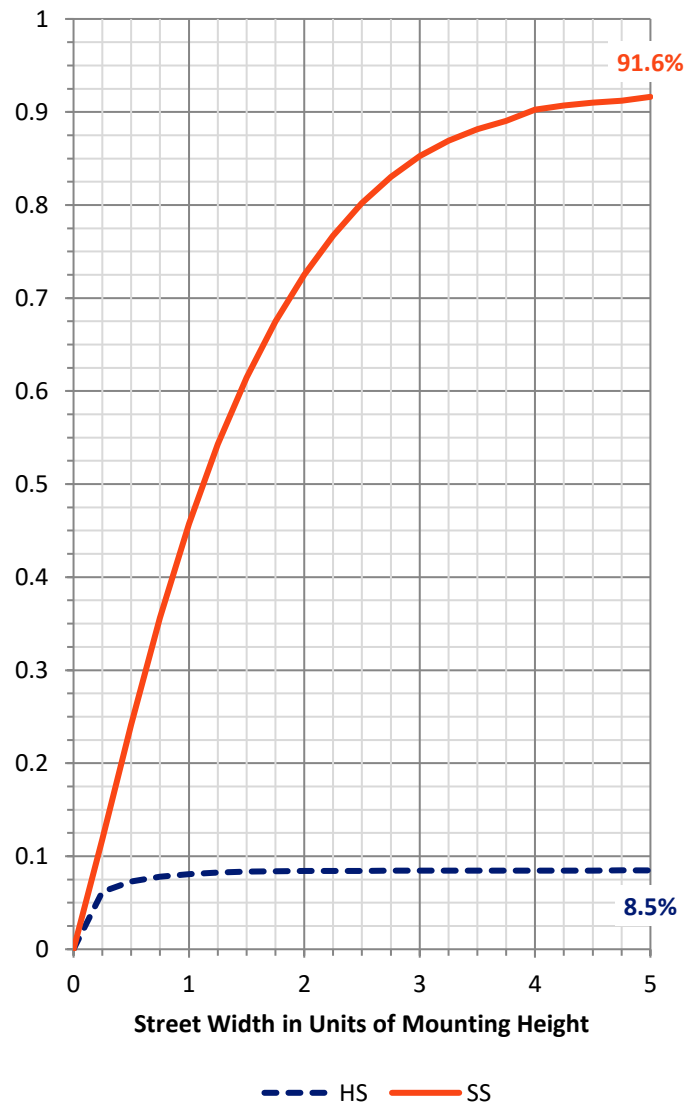
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 395.7    | 0.0    | 395.7  |
|                    | % Fixture | 8.5      | 0.0    | 8.5    |
| <b>Street Side</b> | Lumens    | 4237.2   | 0.0    | 4237.2 |
|                    | % Fixture | 91.5     | 0.0    | 91.5   |
| <b>Total</b>       | Lumens    | 4633.0   | 0.0    | 4633.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 72.1   | 1.6       |
| 10°-20°   | 174.7  | 3.8       |
| 20°-30°   | 280.1  | 6.0       |
| 30°-40°   | 426.1  | 9.2       |
| 40°-50°   | 664.0  | 14.3      |
| 50°-60°   | 971.0  | 21.0      |
| 60°-70°   | 1245.5 | 26.9      |
| 70°-80°   | 761.3  | 16.4      |
| 80°-90°   | 38.2   | 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°    | 4633.0 | 100.0     |
| 0°-180°   | 4633.0 | 100.0     |



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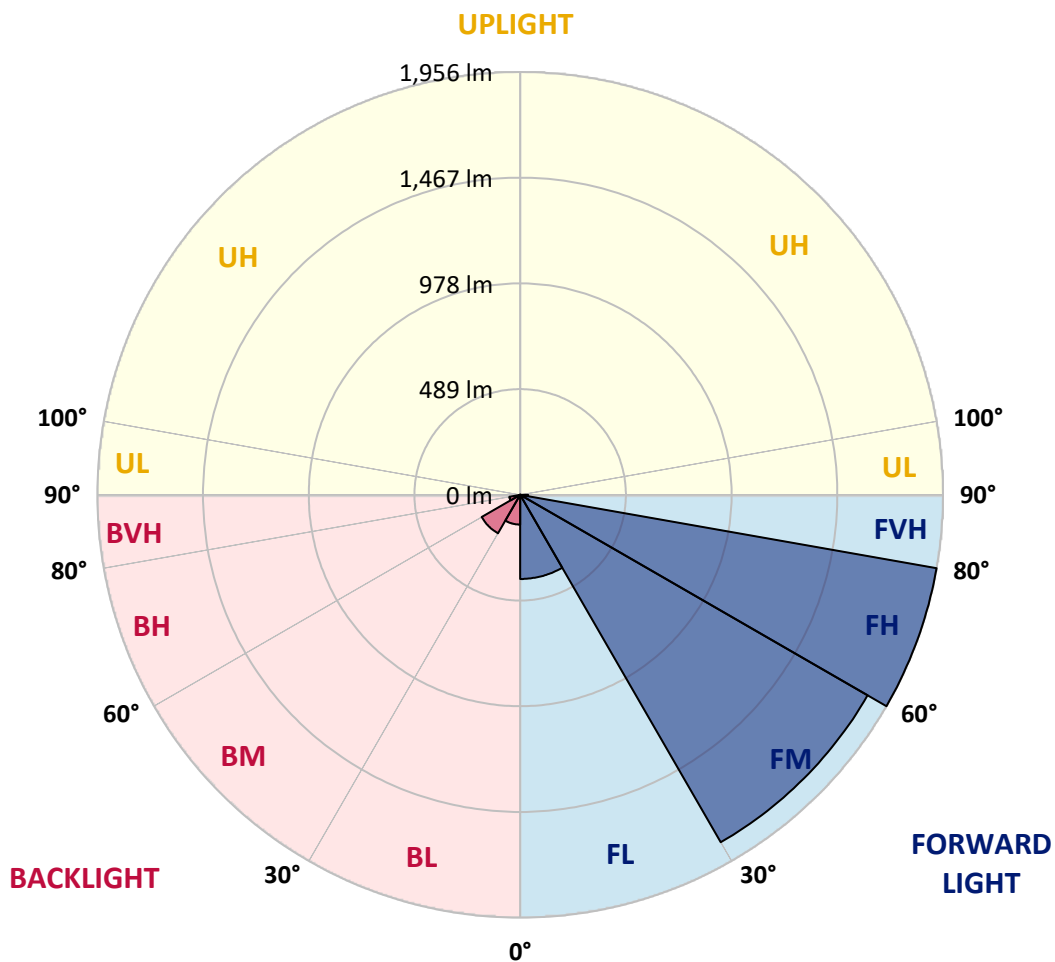
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 389.3  | 8.4       |                         |      |         |
| FM   | (30°-60°)   | 1855.6 | 40.1      |                         |      |         |
| FH   | (60°-80°)   | 1955.9 | 42.2      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 36.5   | 0.8       |                         |      | G1/100  |
| BL   | (0°-30°)    | 137.6  | 3.0       | B1/500                  |      |         |
| BM   | (30°-60°)   | 205.6  | 4.4       | B0/220                  |      |         |
| BH   | (60°-80°)   | 50.9   | 1.1       | B0/110                  |      | G0/110  |
| BVH  | (80°-90°)   | 1.7    | 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°    | 854.1  | 854.1  | 854.1  | 854.1  | 854.1  | 854.1  | 854.1  | 854.1  | 854.1  | 854.1  | 854.1  |
| 2.5°  | 904.7  | 902.3  | 904.7  | 902.3  | 897.5  | 895.0  | 891.8  | 883.0  | 875.0  | 865.3  | 850.9  |
| 5°    | 906.3  | 904.7  | 904.7  | 901.5  | 895.8  | 893.4  | 890.2  | 881.4  | 871.0  | 856.5  | 834.8  |
| 7.5°  | 897.5  | 896.6  | 895.0  | 891.8  | 885.4  | 883.8  | 881.4  | 871.0  | 860.5  | 845.3  | 818.8  |
| 10°   | 883.0  | 884.6  | 883.8  | 883.8  | 881.4  | 879.8  | 878.2  | 866.1  | 854.9  | 837.2  | 809.1  |
| 12.5° | 869.4  | 871.0  | 875.0  | 881.4  | 883.8  | 884.6  | 884.6  | 872.6  | 858.9  | 839.7  | 810.8  |
| 15°   | 860.5  | 863.7  | 875.0  | 887.8  | 895.0  | 897.5  | 899.9  | 887.0  | 871.0  | 850.1  | 819.6  |
| 17.5° | 858.1  | 862.9  | 884.6  | 904.7  | 918.3  | 919.9  | 919.9  | 903.9  | 887.0  | 862.9  | 830.0  |
| 20°   | 866.1  | 872.6  | 900.7  | 928.8  | 945.6  | 947.2  | 944.0  | 923.1  | 903.1  | 876.6  | 838.9  |
| 22.5° | 890.2  | 895.8  | 928.0  | 960.9  | 976.9  | 978.5  | 971.3  | 942.4  | 920.7  | 899.1  | 850.9  |
| 25°   | 932.0  | 935.2  | 969.7  | 1001.0 | 1009.8 | 1012.2 | 1000.2 | 965.7  | 940.8  | 920.7  | 867.7  |
| 27.5° | 987.4  | 989.0  | 1020.3 | 1043.5 | 1045.2 | 1044.3 | 1031.5 | 995.4  | 970.5  | 953.6  | 893.4  |
| 30°   | 1045.2 | 1047.6 | 1073.2 | 1088.5 | 1082.1 | 1078.9 | 1067.6 | 1029.1 | 1006.6 | 993.8  | 930.4  |
| 32.5° | 1098.9 | 1101.3 | 1129.4 | 1137.5 | 1123.0 | 1120.6 | 1112.6 | 1071.6 | 1052.4 | 1058.8 | 983.3  |
| 35°   | 1151.9 | 1151.9 | 1184.0 | 1188.0 | 1175.2 | 1175.2 | 1175.2 | 1126.2 | 1123.0 | 1144.7 | 1057.2 |
| 37.5° | 1199.3 | 1207.3 | 1241.0 | 1239.4 | 1237.0 | 1238.6 | 1243.4 | 1206.5 | 1217.7 | 1254.7 | 1154.3 |
| 40°   | 1239.4 | 1249.8 | 1294.8 | 1298.8 | 1309.2 | 1318.1 | 1325.3 | 1306.0 | 1332.5 | 1392.7 | 1278.7 |
| 42.5° | 1275.5 | 1287.6 | 1345.4 | 1363.8 | 1392.7 | 1404.8 | 1418.4 | 1413.6 | 1472.2 | 1582.2 | 1437.7 |
| 45°   | 1322.1 | 1334.9 | 1394.3 | 1438.5 | 1478.6 | 1494.7 | 1525.2 | 1546.1 | 1643.2 | 1768.4 | 1609.5 |
| 47.5° | 1383.9 | 1392.7 | 1447.3 | 1517.2 | 1571.7 | 1600.6 | 1648.0 | 1701.8 | 1819.8 | 1965.9 | 1762.8 |
| 50°   | 1468.2 | 1469.0 | 1509.9 | 1600.6 | 1681.7 | 1713.0 | 1794.9 | 1864.7 | 2012.4 | 2140.1 | 1873.6 |
| 52.5° | 1561.3 | 1556.5 | 1588.6 | 1703.4 | 1806.1 | 1848.7 | 1945.0 | 2042.1 | 2190.6 | 2266.1 | 1923.3 |
| 55°   | 1649.6 | 1652.0 | 1672.1 | 1812.6 | 1962.7 | 2003.6 | 2125.6 | 2224.4 | 2353.6 | 2343.2 | 1950.6 |
| 57.5° | 1751.6 | 1750.7 | 1776.4 | 1932.2 | 2145.7 | 2193.1 | 2320.7 | 2401.8 | 2452.3 | 2398.6 | 1955.4 |
| 60°   | 1847.9 | 1845.5 | 1884.8 | 2075.1 | 2340.8 | 2410.6 | 2525.4 | 2522.2 | 2551.1 | 2433.9 | 1951.4 |
| 62.5° | 1933.8 | 1939.4 | 2008.4 | 2241.2 | 2559.1 | 2634.6 | 2692.4 | 2652.2 | 2660.2 | 2474.8 | 1901.7 |
| 65°   | 2038.1 | 2048.6 | 2160.1 | 2442.7 | 2828.8 | 2864.9 | 2887.4 | 2822.4 | 2742.1 | 2441.9 | 1750.7 |
| 67.5° | 2169.8 | 2201.1 | 2358.4 | 2739.7 | 3109.8 | 3134.7 | 3135.5 | 2925.1 | 2738.9 | 2275.7 | 1472.2 |
| 70°   | 2222.0 | 2254.9 | 2505.3 | 2974.9 | 3346.6 | 3377.9 | 3279.9 | 2909.1 | 2523.0 | 1782.1 | 993.8  |
| 71°   | 2185.8 | 2215.5 | 2501.3 | 2997.4 | 3395.5 | 3420.4 | 3267.1 | 2803.9 | 2287.8 | 1468.2 | 769.8  |
| 72.5° | 1924.9 | 2002.0 | 2347.2 | 2856.1 | 3308.0 | 3308.8 | 3059.2 | 2555.9 | 1819.8 | 916.7  | 386.9  |
| 75°   | 1039.5 | 1132.6 | 1720.2 | 2173.8 | 2551.9 | 2571.9 | 2353.6 | 1774.8 | 880.6  | 237.6  | 93.9   |
| 77.5° | 342.8  | 386.1  | 771.4  | 1128.6 | 1600.6 | 1631.9 | 1439.3 | 788.3  | 277.7  | 80.3   | 49.0   |
| 80°   | 215.1  | 219.9  | 260.9  | 474.4  | 712.0  | 738.5  | 592.4  | 319.5  | 125.2  | 44.2   | 33.7   |
| 82.5° | 36.1   | 43.3   | 122.8  | 139.7  | 251.3  | 199.1  | 134.9  | 163.0  | 58.6   | 20.1   | 28.9   |
| 85°   | 0.0    | 0.0    | 0.8    | 0.8    | 4.0    | 0.8    | 0.8    | 32.9   | 3.2    | 3.2    | 15.3   |
| 87.5° | 0.0    | 0.0    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 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°    | 854.1  | 854.1  | 854.1 | 854.1 | 854.1 | 854.1 | 854.1 | 854.1 | 854.1 | 854.1 | 854.1 |
| 2.5°  | 844.5  | 838.0  | 825.2 | 811.6 | 794.7 | 780.3 | 775.4 | 765.0 | 760.2 | 756.2 | 756.2 |
| 5°    | 821.2  | 810.0  | 782.7 | 754.6 | 727.3 | 698.4 | 671.9 | 647.0 | 635.0 | 618.1 | 626.1 |
| 7.5°  | 801.9  | 782.7  | 744.1 | 700.0 | 643.8 | 586.8 | 542.6 | 504.1 | 472.0 | 461.6 | 454.3 |
| 10°   | 788.3  | 764.2  | 708.0 | 640.6 | 558.7 | 477.6 | 409.4 | 346.0 | 309.1 | 286.6 | 286.6 |
| 12.5° | 786.7  | 756.2  | 683.1 | 579.6 | 461.6 | 351.6 | 267.3 | 207.1 | 177.4 | 163.8 | 163.0 |
| 15°   | 792.3  | 755.4  | 660.6 | 524.2 | 372.5 | 244.0 | 167.0 | 140.5 | 133.3 | 131.6 | 131.6 |
| 17.5° | 797.1  | 754.6  | 634.2 | 461.6 | 274.5 | 160.5 | 132.5 | 127.6 | 126.0 | 125.2 | 125.2 |
| 20°   | 801.9  | 750.6  | 603.7 | 390.9 | 194.3 | 130.8 | 123.6 | 121.2 | 120.4 | 119.6 | 119.6 |
| 22.5° | 808.3  | 746.5  | 572.3 | 310.7 | 143.7 | 122.0 | 118.0 | 115.6 | 114.8 | 114.8 | 114.8 |
| 25°   | 817.2  | 744.1  | 533.8 | 235.2 | 123.6 | 115.6 | 111.6 | 110.0 | 110.0 | 109.2 | 109.2 |
| 27.5° | 834.0  | 746.5  | 492.1 | 168.6 | 115.6 | 109.2 | 106.8 | 105.2 | 105.2 | 104.4 | 104.4 |
| 30°   | 857.3  | 753.8  | 439.9 | 131.6 | 109.2 | 102.7 | 100.3 | 99.5  | 98.7  | 98.7  | 98.7  |
| 32.5° | 890.2  | 765.0  | 382.9 | 112.4 | 101.1 | 96.3  | 93.9  | 93.1  | 93.1  | 93.1  | 92.3  |
| 35°   | 940.8  | 788.3  | 313.1 | 102.7 | 93.9  | 89.1  | 86.7  | 86.7  | 86.7  | 85.9  | 86.7  |
| 37.5° | 1017.9 | 826.0  | 242.4 | 94.7  | 85.9  | 81.9  | 80.3  | 79.5  | 79.5  | 79.5  | 79.5  |
| 40°   | 1115.0 | 887.0  | 176.6 | 87.5  | 78.7  | 74.7  | 73.0  | 72.2  | 71.4  | 71.4  | 71.4  |
| 42.5° | 1240.2 | 954.4  | 128.4 | 79.5  | 72.2  | 68.2  | 66.6  | 65.0  | 63.4  | 62.6  | 62.6  |
| 45°   | 1370.3 | 1034.7 | 100.3 | 73.0  | 65.8  | 62.6  | 61.0  | 58.6  | 56.2  | 53.8  | 53.8  |
| 47.5° | 1496.3 | 1096.5 | 85.9  | 65.8  | 60.2  | 57.0  | 55.4  | 52.2  | 48.2  | 45.8  | 45.8  |
| 50°   | 1575.8 | 1115.8 | 77.1  | 59.4  | 54.6  | 52.2  | 49.8  | 45.8  | 40.1  | 37.7  | 37.7  |
| 52.5° | 1600.6 | 1080.5 | 69.0  | 53.8  | 49.8  | 47.4  | 44.2  | 38.5  | 32.9  | 29.7  | 29.7  |
| 55°   | 1610.3 | 1012.2 | 61.0  | 49.8  | 45.0  | 41.7  | 37.7  | 32.1  | 26.5  | 23.3  | 23.3  |
| 57.5° | 1598.2 | 915.9  | 54.6  | 45.0  | 40.1  | 36.9  | 32.1  | 25.7  | 20.1  | 17.7  | 17.7  |
| 60°   | 1557.3 | 776.2  | 49.0  | 40.1  | 35.3  | 31.3  | 26.5  | 20.1  | 15.3  | 12.0  | 12.8  |
| 62.5° | 1446.5 | 600.4  | 42.5  | 33.7  | 30.5  | 26.5  | 20.9  | 15.3  | 9.6   | 8.0   | 8.0   |
| 65°   | 1269.9 | 415.8  | 36.1  | 28.1  | 25.7  | 21.7  | 16.1  | 10.4  | 5.6   | 4.8   | 4.8   |
| 67.5° | 1031.5 | 268.9  | 28.1  | 23.3  | 21.7  | 17.7  | 12.0  | 6.4   | 3.2   | 3.2   | 2.4   |
| 70°   | 647.8  | 133.3  | 22.5  | 17.7  | 17.7  | 13.6  | 8.8   | 4.0   | 2.4   | 2.4   | 2.4   |
| 71°   | 458.4  | 90.7   | 20.1  | 16.1  | 16.1  | 12.8  | 8.0   | 3.2   | 2.4   | 2.4   | 2.4   |
| 72.5° | 207.1  | 57.0   | 16.9  | 14.4  | 13.6  | 10.4  | 7.2   | 3.2   | 3.2   | 3.2   | 3.2   |
| 75°   | 65.0   | 31.3   | 12.0  | 11.2  | 11.2  | 8.8   | 6.4   | 4.0   | 4.0   | 4.0   | 4.0   |
| 77.5° | 43.3   | 24.1   | 8.0   | 7.2   | 8.8   | 8.8   | 6.4   | 4.8   | 4.8   | 4.8   | 4.8   |
| 80°   | 35.3   | 12.8   | 4.8   | 4.8   | 6.4   | 8.0   | 6.4   | 4.8   | 5.6   | 4.8   | 4.8   |
| 82.5° | 34.5   | 6.4    | 1.6   | 2.4   | 4.0   | 4.8   | 4.8   | 4.0   | 4.8   | 4.8   | 4.8   |
| 85°   | 14.4   | 1.6    | 0.8   | 1.6   | 1.6   | 2.4   | 2.4   | 3.2   | 4.0   | 4.0   | 4.0   |
| 87.5° | 0.0    | 0.0    | 0.0   | 0.0   | 0.8   | 0.8   | 1.6   | 1.6   | 2.4   | 3.2   | 3.2   |
| 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)