

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: P677198

Luminaire Tested: **CCW-SA-1F-835-U-SL4-HSS**

Issue Date: 04/25/2023



Test Information

Test Method: LM-79-08
Report Number: P677198
Test Lab: INNOVATION CENTER(G1)
Issue Date: 04/25/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: CCW-SA-1F-835-U-SL4-HSS
Description: INVUE CLEAR CURVE Wall Pack MOUNT Light Square Luminaire @1200mA w/
SL4 distribution lens and House Side Shield
Light Source: (16) 3500K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

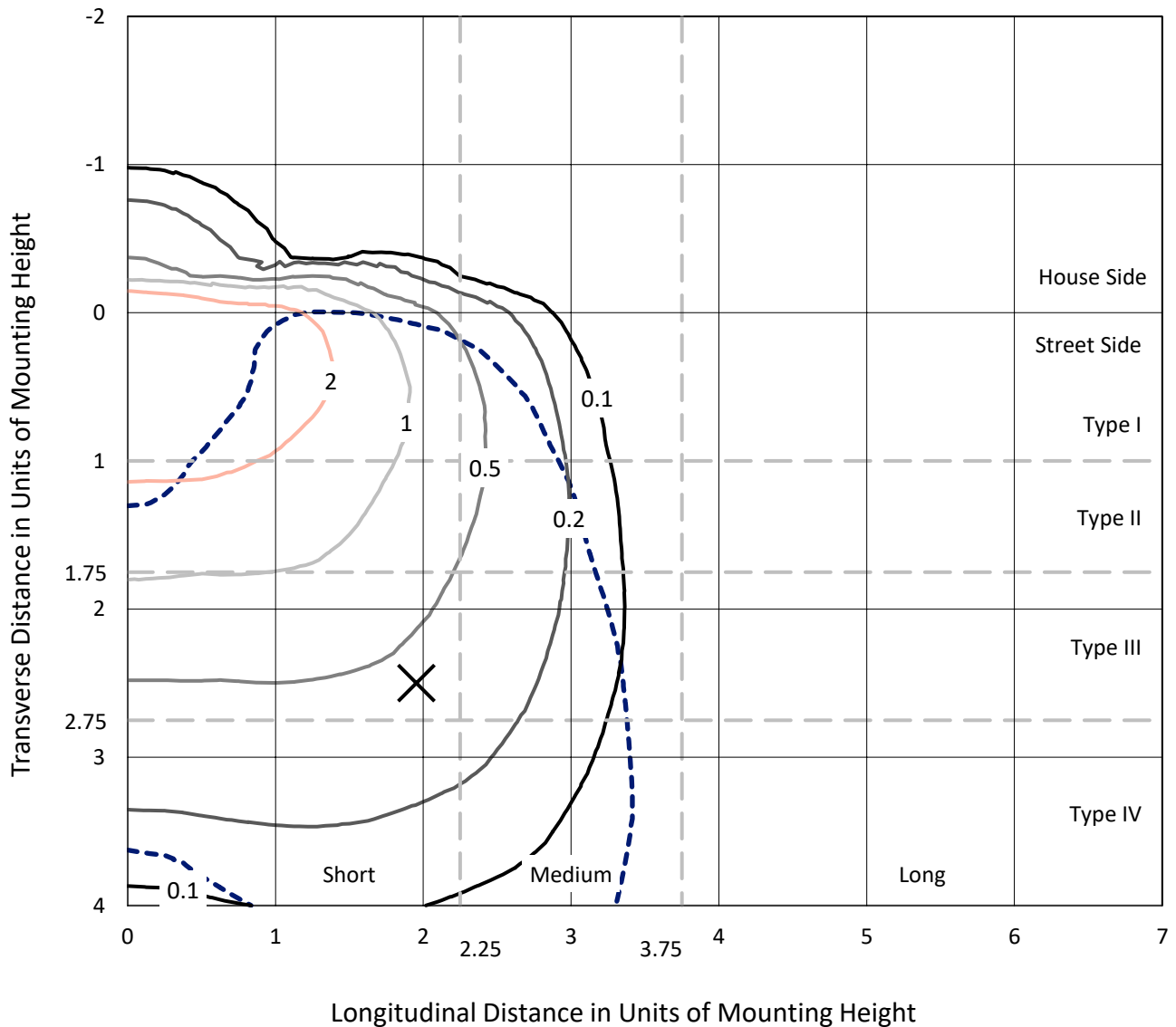
Lumens per Lamp: N/A
Luminaire Lumens: 5103.3 lumens
Efficiency: N/A
Efficacy: 76.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

Input Watts (W): 67
Input Voltage (V): 120
Input Current (A_{in}): 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

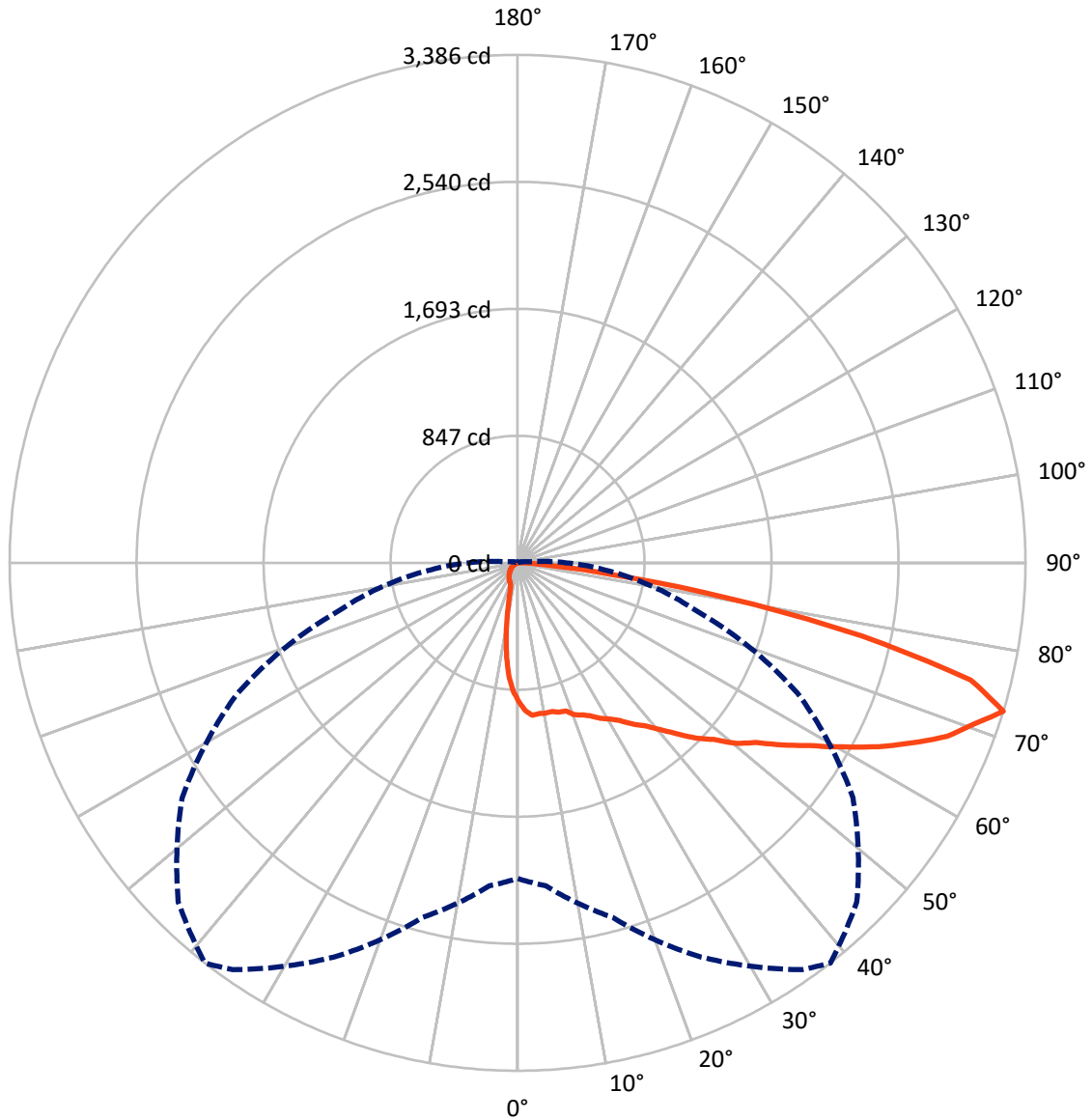
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 4.4 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 427.4 | 0.0 | 427.4 |
| | % Fixture | 8.4 | 0.0 | 8.4 |
| Street Side | Lumens | 4675.9 | 0.0 | 4675.9 |
| | % Fixture | 91.6 | 0.0 | 91.6 |
| Total | Lumens | 5103.3 | 0.0 | 5103.3 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 80.8 | 1.6 |
| 10°-20° | 197.8 | 3.9 |
| 20°-30° | 317.1 | 6.2 |
| 30°-40° | 478.7 | 9.4 |
| 40°-50° | 728.5 | 14.3 |
| 50°-60° | 1025.7 | 20.1 |
| 60°-70° | 1252.9 | 24.6 |
| 70°-80° | 909.8 | 17.8 |
| 80°-90° | 112.0 | 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° | 5103.3 | 100.0 |
| 0°-180° | 5103.3 | 100.0 |

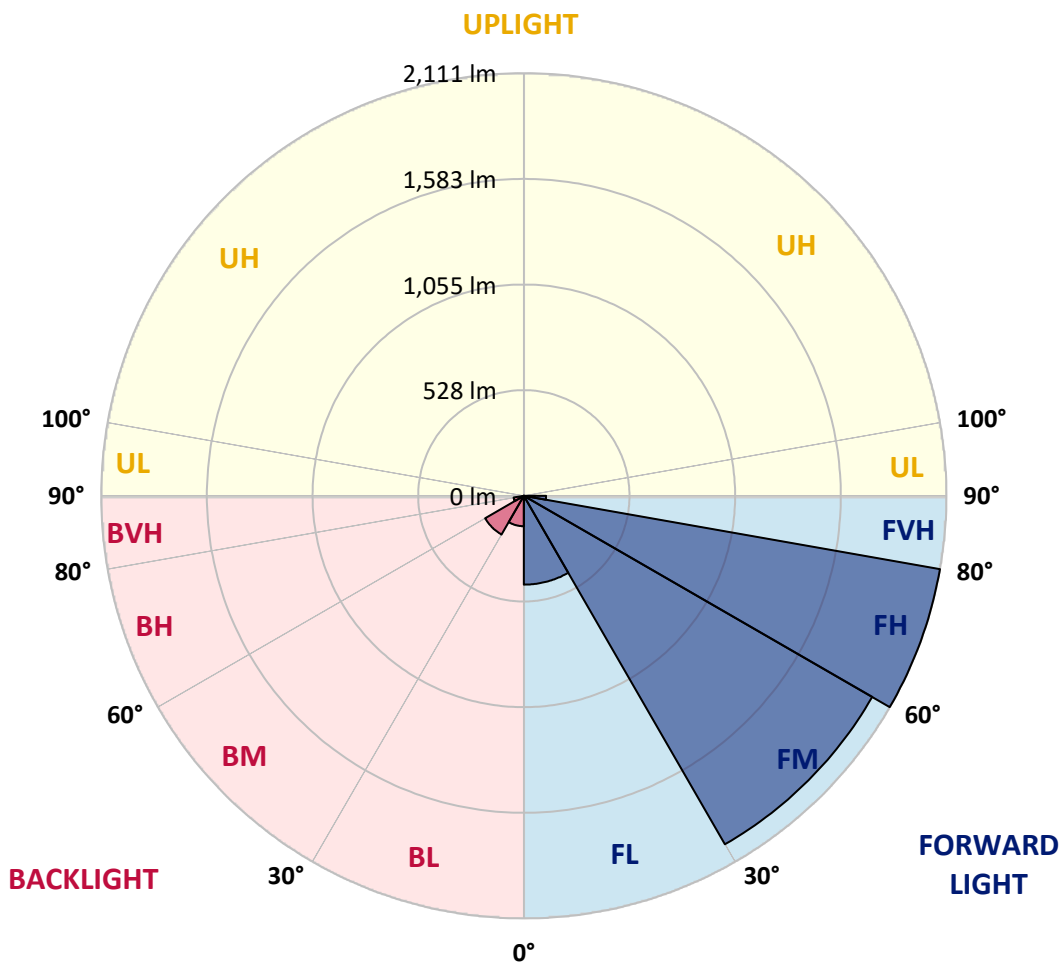


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 443.9 | 8.7 | | | |
| FM (30°-60°) | 2009.7 | 39.4 | | | |
| FH (60°-80°) | 2110.8 | 41.4 | | | G2/5000 |
| FVH (80°-90°) | 111.5 | 2.2 | | | G2/225 |
| BL (0°-30°) | 151.7 | 3.0 | B1/500 | | |
| BM (30°-60°) | 223.3 | 4.4 | B1/1000 | | |
| BH (60°-80°) | 51.8 | 1.0 | B0/110 | | G0/110 |
| BVH (80°-90°) | 0.6 | 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° | 922.9 | 922.9 | 922.9 | 922.9 | 922.9 | 922.9 | 922.9 | 922.9 | 922.9 | 922.9 | 922.9 |
| 2.5° | 1013.8 | 1013.8 | 1023.4 | 1013.8 | 1010.2 | 987.5 | 988.7 | 976.7 | 964.8 | 948.0 | 932.4 |
| 5° | 1025.8 | 1034.2 | 1040.2 | 1031.8 | 1018.6 | 1021.0 | 1029.4 | 1006.7 | 974.3 | 954.0 | 919.3 |
| 7.5° | 1021.0 | 1039.0 | 1034.2 | 1029.4 | 1021.0 | 1015.0 | 1003.1 | 993.5 | 977.9 | 958.8 | 918.1 |
| 10° | 1017.4 | 1023.4 | 1024.6 | 1021.0 | 1003.1 | 1019.8 | 1006.7 | 991.1 | 971.9 | 949.2 | 898.9 |
| 12.5° | 1004.3 | 1004.3 | 1015.0 | 1006.7 | 1009.1 | 1017.4 | 1011.4 | 1007.9 | 987.5 | 968.4 | 924.1 |
| 15° | 989.9 | 994.7 | 1011.4 | 1024.6 | 1036.6 | 1033.0 | 1029.4 | 1018.6 | 1000.7 | 979.1 | 932.4 |
| 17.5° | 993.5 | 995.9 | 1022.2 | 1046.2 | 1040.2 | 1037.8 | 1056.9 | 1034.2 | 1016.2 | 992.3 | 939.6 |
| 20° | 1006.7 | 1013.8 | 1043.8 | 1074.9 | 1080.9 | 1080.9 | 1073.7 | 1060.5 | 1035.4 | 1003.1 | 952.8 |
| 22.5° | 1019.8 | 1022.2 | 1071.3 | 1110.8 | 1116.8 | 1101.2 | 1107.2 | 1068.9 | 1045.0 | 1027.0 | 966.0 |
| 25° | 1070.1 | 1065.3 | 1118.0 | 1149.1 | 1145.5 | 1129.9 | 1124.0 | 1090.4 | 1080.9 | 1048.6 | 994.7 |
| 27.5° | 1138.3 | 1118.0 | 1169.4 | 1188.6 | 1169.4 | 1174.2 | 1157.5 | 1121.6 | 1101.2 | 1082.1 | 1007.9 |
| 30° | 1180.2 | 1192.2 | 1219.7 | 1238.9 | 1206.6 | 1207.7 | 1199.4 | 1159.9 | 1128.7 | 1133.5 | 1052.1 |
| 32.5° | 1244.9 | 1253.2 | 1273.6 | 1282.0 | 1256.8 | 1254.4 | 1246.1 | 1214.9 | 1192.2 | 1187.4 | 1112.0 |
| 35° | 1314.3 | 1329.8 | 1331.0 | 1333.4 | 1310.7 | 1320.3 | 1308.3 | 1264.0 | 1276.0 | 1284.4 | 1183.8 |
| 37.5° | 1382.5 | 1368.1 | 1392.1 | 1402.9 | 1377.7 | 1377.7 | 1381.3 | 1351.4 | 1372.9 | 1398.1 | 1285.6 |
| 40° | 1408.8 | 1414.8 | 1456.7 | 1448.3 | 1478.3 | 1460.3 | 1473.5 | 1466.3 | 1484.3 | 1541.7 | 1429.2 |
| 42.5° | 1436.4 | 1443.6 | 1499.8 | 1515.4 | 1551.3 | 1557.3 | 1576.4 | 1577.6 | 1630.3 | 1724.8 | 1566.8 |
| 45° | 1489.0 | 1477.1 | 1553.7 | 1592.0 | 1650.6 | 1667.4 | 1690.1 | 1709.3 | 1791.9 | 1903.2 | 1723.6 |
| 47.5° | 1536.9 | 1520.2 | 1607.5 | 1684.1 | 1756.0 | 1759.6 | 1821.8 | 1842.1 | 1940.3 | 2067.2 | 1879.3 |
| 50° | 1603.9 | 1609.9 | 1647.0 | 1778.7 | 1851.7 | 1893.6 | 1936.7 | 2003.7 | 2112.7 | 2247.9 | 1991.8 |
| 52.5° | 1673.4 | 1667.4 | 1729.6 | 1858.9 | 1973.8 | 1989.4 | 2086.3 | 2161.7 | 2280.2 | 2382.0 | 2042.0 |
| 55° | 1758.4 | 1765.5 | 1789.5 | 1959.5 | 2105.5 | 2142.6 | 2251.5 | 2330.5 | 2459.8 | 2439.4 | 2058.8 |
| 57.5° | 1843.3 | 1836.2 | 1890.0 | 2072.0 | 2270.7 | 2298.2 | 2443.0 | 2489.7 | 2577.1 | 2477.7 | 2016.9 |
| 60° | 1927.1 | 1940.3 | 1963.0 | 2198.8 | 2451.4 | 2492.1 | 2607.0 | 2631.0 | 2650.1 | 2495.7 | 1984.6 |
| 62.5° | 2022.9 | 1991.8 | 2062.4 | 2332.9 | 2614.2 | 2699.2 | 2790.2 | 2695.6 | 2678.8 | 2463.4 | 1910.4 |
| 65° | 2070.8 | 2080.3 | 2172.5 | 2486.1 | 2830.9 | 2893.1 | 2905.1 | 2783.0 | 2696.8 | 2391.6 | 1841.0 |
| 67.5° | 2145.0 | 2158.1 | 2275.5 | 2642.9 | 3053.5 | 3088.2 | 3045.1 | 2862.0 | 2681.2 | 2298.2 | 1590.8 |
| 70° | 2154.6 | 2186.9 | 2413.1 | 2806.9 | 3193.5 | 3223.5 | 3189.9 | 2914.6 | 2555.5 | 1930.7 | 1177.8 |
| 72.5° | 2104.3 | 2161.7 | 2446.6 | 2900.3 | 3310.8 | 3386.2 | 3198.3 | 2729.1 | 2060.0 | 1231.7 | 603.3 |
| 75° | 1589.6 | 1637.5 | 2239.5 | 2761.4 | 3102.6 | 3120.5 | 2808.1 | 2082.7 | 1173.0 | 420.1 | 154.4 |
| 77.5° | 823.5 | 906.1 | 1495.0 | 2110.3 | 2364.0 | 2344.9 | 1954.7 | 1226.9 | 403.4 | 110.1 | 62.2 |
| 80° | 472.8 | 493.2 | 653.5 | 1185.0 | 1486.6 | 1413.6 | 1080.9 | 529.1 | 177.2 | 55.1 | 40.7 |
| 82.5° | 233.4 | 262.1 | 351.9 | 530.3 | 743.3 | 611.7 | 405.8 | 317.2 | 99.3 | 29.9 | 35.9 |
| 85° | 50.3 | 52.7 | 179.5 | 253.8 | 301.6 | 198.7 | 138.8 | 266.9 | 35.9 | 18.0 | 34.7 |
| 87.5° | 35.9 | 34.7 | 50.3 | 113.7 | 83.8 | 51.5 | 82.6 | 140.0 | 8.4 | 8.4 | 7.2 |
| 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° | 922.9 | 922.9 | 922.9 | 922.9 | 922.9 | 922.9 | 922.9 | 922.9 | 922.9 | 922.9 | 922.9 |
| 2.5° | 922.9 | 912.1 | 900.1 | 877.4 | 871.4 | 867.8 | 847.5 | 846.3 | 842.7 | 834.3 | 830.7 |
| 5° | 897.7 | 879.8 | 857.0 | 833.1 | 813.9 | 779.2 | 737.3 | 715.8 | 689.5 | 690.7 | 682.3 |
| 7.5° | 894.1 | 860.6 | 828.3 | 778.0 | 717.0 | 652.4 | 587.7 | 545.8 | 515.9 | 497.9 | 501.5 |
| 10° | 877.4 | 852.2 | 799.6 | 706.2 | 608.1 | 509.9 | 427.3 | 365.1 | 329.2 | 301.6 | 310.0 |
| 12.5° | 884.6 | 835.5 | 761.3 | 636.8 | 496.7 | 375.9 | 272.9 | 213.1 | 186.7 | 177.2 | 179.5 |
| 15° | 879.8 | 835.5 | 738.5 | 561.4 | 390.2 | 255.0 | 177.2 | 158.0 | 153.2 | 153.2 | 150.8 |
| 17.5° | 894.1 | 845.1 | 700.2 | 487.2 | 280.1 | 170.0 | 152.0 | 148.4 | 144.8 | 144.8 | 144.8 |
| 20° | 914.5 | 849.9 | 673.9 | 404.6 | 197.5 | 149.6 | 142.4 | 140.0 | 138.8 | 138.8 | 137.7 |
| 22.5° | 915.7 | 845.1 | 624.8 | 313.6 | 152.0 | 141.2 | 135.3 | 134.1 | 134.1 | 131.7 | 131.7 |
| 25° | 922.9 | 849.9 | 572.2 | 235.8 | 141.2 | 132.9 | 128.1 | 126.9 | 128.1 | 126.9 | 125.7 |
| 27.5° | 940.8 | 858.2 | 519.5 | 172.4 | 132.9 | 125.7 | 122.1 | 120.9 | 120.9 | 120.9 | 118.5 |
| 30° | 963.6 | 858.2 | 460.8 | 142.4 | 125.7 | 118.5 | 114.9 | 113.7 | 112.5 | 112.5 | 112.5 |
| 32.5° | 1011.4 | 885.8 | 389.0 | 126.9 | 116.1 | 110.1 | 106.5 | 106.5 | 105.3 | 105.3 | 104.1 |
| 35° | 1071.3 | 904.9 | 316.0 | 117.3 | 107.7 | 101.7 | 98.2 | 98.2 | 97.0 | 97.0 | 95.8 |
| 37.5° | 1145.5 | 952.8 | 241.8 | 110.1 | 99.3 | 93.4 | 89.8 | 89.8 | 89.8 | 88.6 | 88.6 |
| 40° | 1250.8 | 1001.9 | 179.5 | 100.5 | 91.0 | 85.0 | 82.6 | 81.4 | 80.2 | 80.2 | 77.8 |
| 42.5° | 1363.4 | 1077.3 | 134.1 | 93.4 | 83.8 | 79.0 | 75.4 | 71.8 | 71.8 | 68.2 | 68.2 |
| 45° | 1485.4 | 1143.1 | 108.9 | 85.0 | 76.6 | 70.6 | 67.0 | 64.6 | 61.0 | 58.7 | 58.7 |
| 47.5° | 1605.1 | 1183.8 | 95.8 | 75.4 | 69.4 | 64.6 | 61.0 | 56.3 | 51.5 | 50.3 | 49.1 |
| 50° | 1702.1 | 1195.8 | 85.0 | 68.2 | 63.4 | 58.7 | 53.9 | 47.9 | 43.1 | 40.7 | 39.5 |
| 52.5° | 1702.1 | 1129.9 | 76.6 | 61.0 | 57.5 | 52.7 | 46.7 | 39.5 | 33.5 | 31.1 | 29.9 |
| 55° | 1702.1 | 1025.8 | 68.2 | 56.3 | 51.5 | 47.9 | 39.5 | 32.3 | 26.3 | 22.7 | 21.5 |
| 57.5° | 1677.0 | 900.1 | 61.0 | 50.3 | 45.5 | 40.7 | 33.5 | 25.1 | 19.2 | 15.6 | 15.6 |
| 60° | 1607.5 | 768.5 | 52.7 | 44.3 | 39.5 | 33.5 | 26.3 | 18.0 | 12.0 | 8.4 | 8.4 |
| 62.5° | 1519.0 | 611.7 | 45.5 | 37.1 | 32.3 | 27.5 | 20.3 | 12.0 | 4.8 | 2.4 | 2.4 |
| 65° | 1364.6 | 451.3 | 39.5 | 31.1 | 25.1 | 20.3 | 13.2 | 4.8 | 0.0 | 0.0 | 0.0 |
| 67.5° | 1126.4 | 301.6 | 31.1 | 25.1 | 21.5 | 14.4 | 8.4 | 1.2 | 0.0 | 0.0 | 0.0 |
| 70° | 792.4 | 171.2 | 23.9 | 18.0 | 15.6 | 9.6 | 2.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| 72.5° | 325.6 | 75.4 | 16.8 | 13.2 | 10.8 | 4.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 88.6 | 33.5 | 10.8 | 7.2 | 6.0 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 51.5 | 22.7 | 4.8 | 2.4 | 2.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 40.7 | 10.8 | 2.4 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 40.7 | 6.0 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 34.7 | 2.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 4.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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 |

(END OF REPORT)