

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: P401831

Luminaire Tested: **ENC-SA1F-735-U-SL4-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401831
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: ENC-SA1F-735-U-SL4-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 3500K, 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: 6001 lumens
Efficiency: N/A
Efficacy: 90.8 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

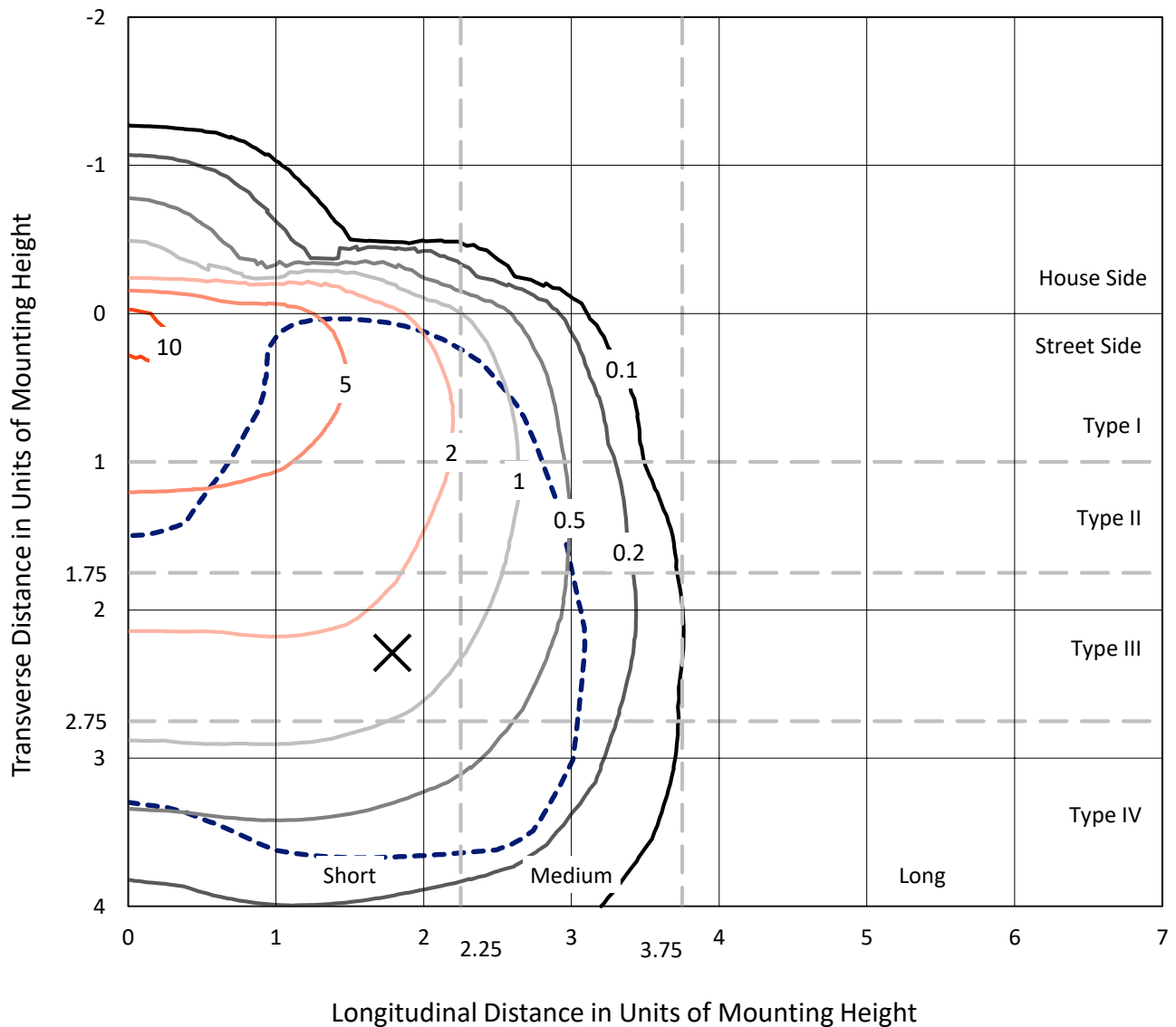
Input Watts (W): 66.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

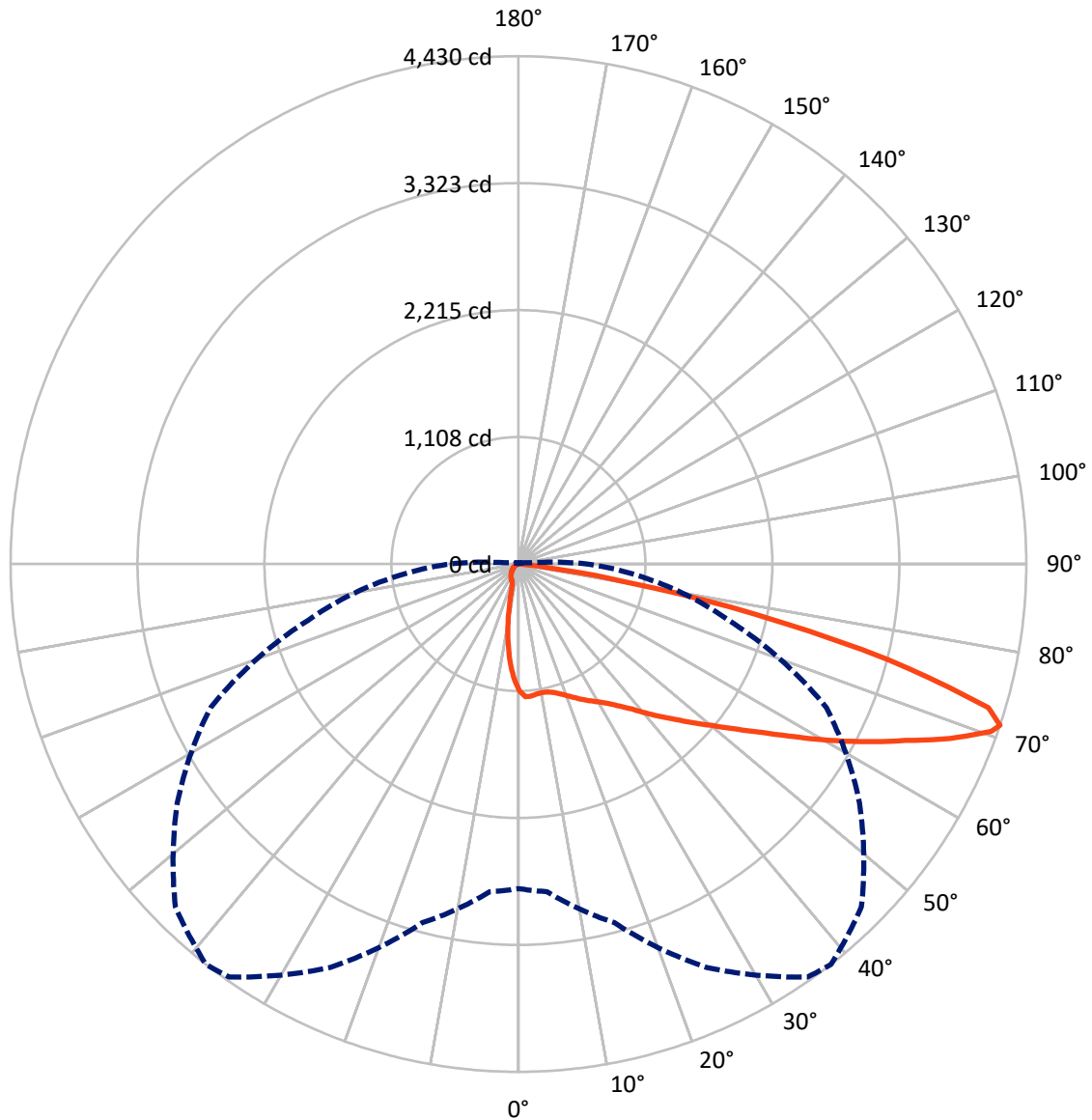


Based on 10 foot mounting height. Maximum calculated value = 11.4 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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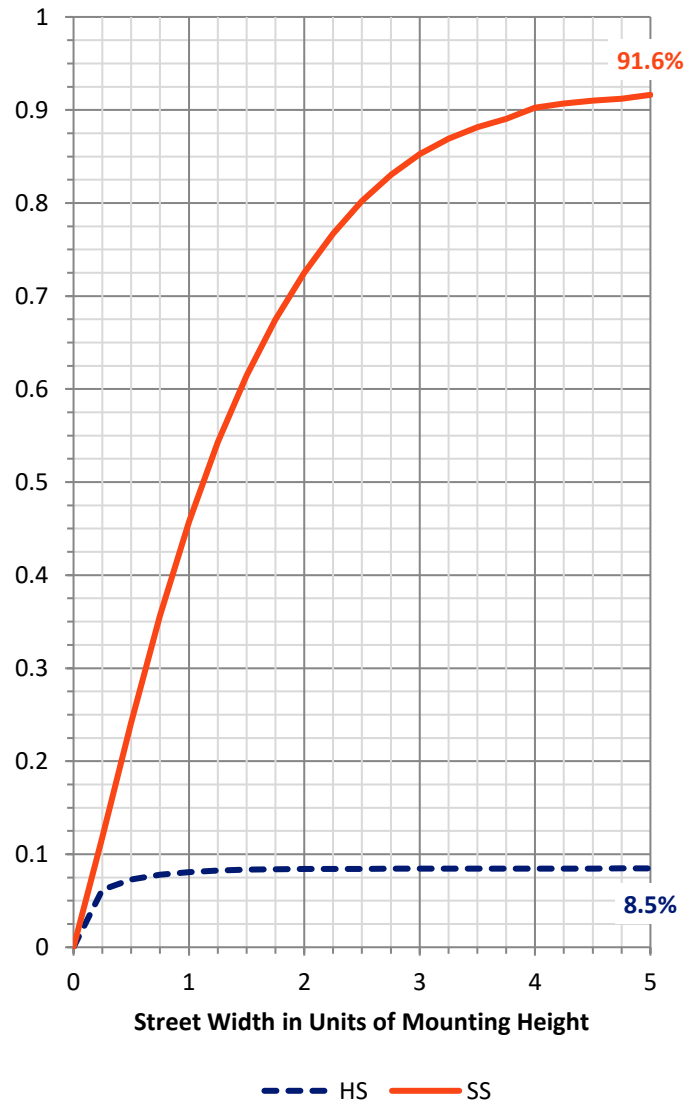
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 512.6 | 0.0 | 512.6 |
| | % Fixture | 8.5 | 0.0 | 8.5 |
| Street Side | Lumens | 5488.4 | 0.0 | 5488.4 |
| | % Fixture | 91.5 | 0.0 | 91.5 |
| Total | Lumens | 6001.0 | 0.0 | 6001.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 93.5 | 1.6 |
| 10°-20° | 226.2 | 3.8 |
| 20°-30° | 362.8 | 6.0 |
| 30°-40° | 551.9 | 9.2 |
| 40°-50° | 860.1 | 14.3 |
| 50°-60° | 1257.7 | 21.0 |
| 60°-70° | 1613.2 | 26.9 |
| 70°-80° | 986.0 | 16.4 |
| 80°-90° | 49.5 | 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° | 6001.0 | 100.0 |
| 0°-180° | 6001.0 | 100.0 |



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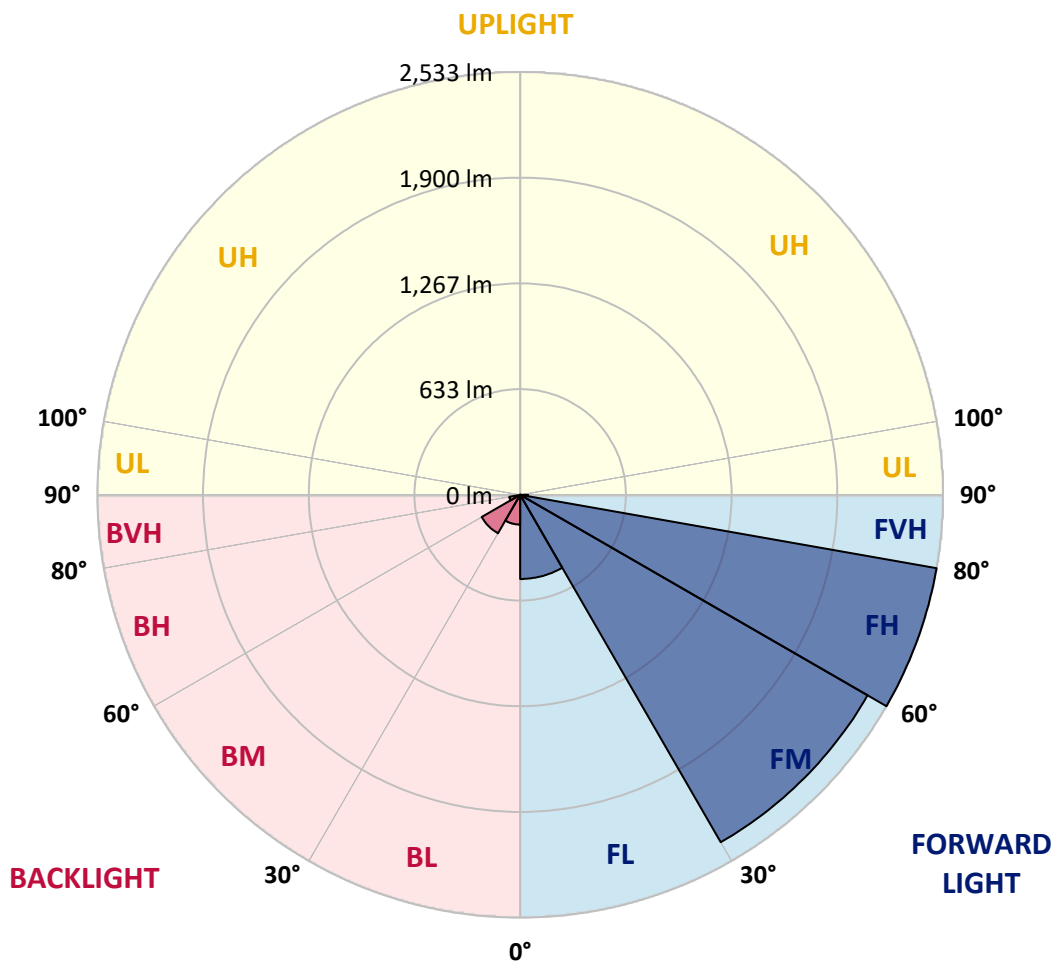
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 504.2 | 8.4 | | | |
| FM | (30°-60°) | 2403.5 | 40.1 | | | |
| FH | (60°-80°) | 2533.4 | 42.2 | | | G2/5000 |
| FVH | (80°-90°) | 47.3 | 0.8 | | | G1/100 |
| BL | (0°-30°) | 178.3 | 3.0 | B1/500 | | |
| BM | (30°-60°) | 266.3 | 4.4 | B1/1000 | | |
| BH | (60°-80°) | 65.9 | 1.1 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 2.2 | 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° | 1106.3 | 1106.3 | 1106.3 | 1106.3 | 1106.3 | 1106.3 | 1106.3 | 1106.3 | 1106.3 | 1106.3 | 1106.3 |
| 2.5° | 1171.8 | 1168.7 | 1171.8 | 1168.7 | 1162.4 | 1159.3 | 1155.2 | 1143.7 | 1133.3 | 1120.9 | 1102.1 |
| 5° | 1173.9 | 1171.8 | 1171.8 | 1167.6 | 1160.4 | 1157.2 | 1153.1 | 1141.6 | 1128.1 | 1109.4 | 1081.3 |
| 7.5° | 1162.4 | 1161.4 | 1159.3 | 1155.2 | 1146.8 | 1144.8 | 1141.6 | 1128.1 | 1114.6 | 1094.9 | 1060.5 |
| 10° | 1143.7 | 1145.8 | 1144.8 | 1144.8 | 1141.6 | 1139.6 | 1137.5 | 1121.9 | 1107.3 | 1084.5 | 1048.1 |
| 12.5° | 1126.1 | 1128.1 | 1133.3 | 1141.6 | 1144.8 | 1145.8 | 1145.8 | 1130.2 | 1112.5 | 1087.6 | 1050.1 |
| 15° | 1114.6 | 1118.8 | 1133.3 | 1150.0 | 1159.3 | 1162.4 | 1165.6 | 1148.9 | 1128.1 | 1101.1 | 1061.6 |
| 17.5° | 1111.5 | 1117.7 | 1145.8 | 1171.8 | 1189.5 | 1191.6 | 1191.6 | 1170.8 | 1148.9 | 1117.7 | 1075.1 |
| 20° | 1121.9 | 1130.2 | 1166.6 | 1203.0 | 1224.8 | 1226.9 | 1222.7 | 1195.7 | 1169.7 | 1135.4 | 1086.5 |
| 22.5° | 1153.1 | 1160.4 | 1202.0 | 1244.6 | 1265.4 | 1267.5 | 1258.1 | 1220.7 | 1192.6 | 1164.5 | 1102.1 |
| 25° | 1207.2 | 1211.3 | 1256.0 | 1296.6 | 1308.0 | 1311.1 | 1295.5 | 1250.8 | 1218.6 | 1192.6 | 1124.0 |
| 27.5° | 1278.9 | 1281.0 | 1321.5 | 1351.7 | 1353.8 | 1352.7 | 1336.1 | 1289.3 | 1257.1 | 1235.2 | 1157.2 |
| 30° | 1353.8 | 1356.9 | 1390.1 | 1409.9 | 1401.6 | 1397.4 | 1382.9 | 1333.0 | 1303.8 | 1287.2 | 1205.1 |
| 32.5° | 1423.4 | 1426.5 | 1462.9 | 1473.3 | 1454.6 | 1451.5 | 1441.1 | 1388.1 | 1363.1 | 1371.4 | 1273.7 |
| 35° | 1492.0 | 1492.0 | 1533.6 | 1538.8 | 1522.2 | 1522.2 | 1522.2 | 1458.8 | 1454.6 | 1482.7 | 1369.4 |
| 37.5° | 1553.4 | 1563.8 | 1607.5 | 1605.4 | 1602.3 | 1604.3 | 1610.6 | 1562.7 | 1577.3 | 1625.1 | 1495.2 |
| 40° | 1605.4 | 1618.9 | 1677.1 | 1682.3 | 1695.8 | 1707.3 | 1716.6 | 1691.7 | 1726.0 | 1804.0 | 1656.3 |
| 42.5° | 1652.2 | 1667.8 | 1742.6 | 1766.5 | 1804.0 | 1819.6 | 1837.2 | 1831.0 | 1906.9 | 2049.4 | 1862.2 |
| 45° | 1712.5 | 1729.1 | 1806.0 | 1863.2 | 1915.2 | 1936.0 | 1975.5 | 2002.6 | 2128.4 | 2290.6 | 2084.7 |
| 47.5° | 1792.5 | 1804.0 | 1874.7 | 1965.1 | 2035.8 | 2073.3 | 2134.6 | 2204.3 | 2357.1 | 2546.4 | 2283.3 |
| 50° | 1901.7 | 1902.7 | 1955.8 | 2073.3 | 2178.3 | 2218.8 | 2324.9 | 2415.3 | 2606.7 | 2772.0 | 2426.8 |
| 52.5° | 2022.3 | 2016.1 | 2057.7 | 2206.4 | 2339.4 | 2394.5 | 2519.3 | 2645.1 | 2837.5 | 2935.2 | 2491.2 |
| 55° | 2136.7 | 2139.8 | 2165.8 | 2347.8 | 2542.2 | 2595.2 | 2753.3 | 2881.2 | 3048.6 | 3035.0 | 2526.6 |
| 57.5° | 2268.7 | 2267.7 | 2301.0 | 2502.7 | 2779.3 | 2840.6 | 3005.9 | 3110.9 | 3176.4 | 3106.8 | 2532.8 |
| 60° | 2393.5 | 2390.4 | 2441.3 | 2687.8 | 3031.9 | 3122.4 | 3271.1 | 3266.9 | 3304.3 | 3152.5 | 2527.6 |
| 62.5° | 2504.8 | 2512.0 | 2601.5 | 2903.0 | 3314.7 | 3412.5 | 3487.3 | 3435.3 | 3445.7 | 3205.6 | 2463.2 |
| 65° | 2639.9 | 2653.4 | 2798.0 | 3164.0 | 3664.1 | 3710.9 | 3740.0 | 3655.8 | 3551.8 | 3162.9 | 2267.7 |
| 67.5° | 2810.4 | 2851.0 | 3054.8 | 3548.7 | 4028.0 | 4060.2 | 4061.3 | 3788.9 | 3547.6 | 2947.7 | 1906.9 |
| 70° | 2878.0 | 2920.7 | 3245.1 | 3853.3 | 4334.7 | 4375.3 | 4248.4 | 3768.1 | 3267.9 | 2308.2 | 1287.2 |
| 71° | 2831.2 | 2869.7 | 3239.9 | 3882.4 | 4398.2 | 4430.4 | 4231.8 | 3631.9 | 2963.3 | 1901.7 | 997.1 |
| 72.5° | 2493.3 | 2593.1 | 3040.2 | 3699.4 | 4284.8 | 4285.9 | 3962.5 | 3310.6 | 2357.1 | 1187.4 | 501.2 |
| 75° | 1346.5 | 1467.1 | 2228.2 | 2815.6 | 3305.4 | 3331.4 | 3048.6 | 2298.9 | 1140.6 | 307.8 | 121.7 |
| 77.5° | 444.0 | 500.1 | 999.2 | 1461.9 | 2073.3 | 2113.8 | 1864.3 | 1021.0 | 359.8 | 104.0 | 63.4 |
| 80° | 278.7 | 284.9 | 337.9 | 614.5 | 922.3 | 956.6 | 767.3 | 413.8 | 162.2 | 57.2 | 43.7 |
| 82.5° | 46.8 | 56.1 | 159.1 | 180.9 | 325.4 | 257.9 | 174.7 | 211.1 | 75.9 | 26.0 | 37.4 |
| 85° | 0.0 | 0.0 | 1.0 | 1.0 | 5.2 | 1.0 | 1.0 | 42.6 | 4.2 | 4.2 | 19.8 |
| 87.5° | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 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 |



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CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1106.3 | 1106.3 | 1106.3 | 1106.3 | 1106.3 | 1106.3 | 1106.3 | 1106.3 | 1106.3 | 1106.3 | 1106.3 |
| 2.5° | 1093.8 | 1085.5 | 1068.9 | 1051.2 | 1029.4 | 1010.6 | 1004.4 | 990.9 | 984.6 | 979.4 | 979.4 |
| 5° | 1063.7 | 1049.1 | 1013.8 | 977.4 | 942.0 | 904.6 | 870.3 | 838.0 | 822.4 | 800.6 | 811.0 |
| 7.5° | 1038.7 | 1013.8 | 963.9 | 906.7 | 833.9 | 760.1 | 702.9 | 653.0 | 611.4 | 597.9 | 588.5 |
| 10° | 1021.0 | 989.8 | 917.1 | 829.7 | 723.7 | 618.7 | 530.3 | 448.1 | 400.3 | 371.2 | 371.2 |
| 12.5° | 1019.0 | 979.4 | 884.8 | 750.7 | 597.9 | 455.4 | 346.2 | 268.3 | 229.8 | 212.1 | 211.1 |
| 15° | 1026.2 | 978.4 | 855.7 | 679.0 | 482.4 | 316.1 | 216.3 | 182.0 | 172.6 | 170.5 | 170.5 |
| 17.5° | 1032.5 | 977.4 | 821.4 | 597.9 | 355.6 | 208.0 | 171.6 | 165.3 | 163.2 | 162.2 | 162.2 |
| 20° | 1038.7 | 972.2 | 781.9 | 506.4 | 251.6 | 169.5 | 160.1 | 157.0 | 156.0 | 154.9 | 154.9 |
| 22.5° | 1047.0 | 967.0 | 741.3 | 402.4 | 186.1 | 158.0 | 152.8 | 149.7 | 148.7 | 148.7 | 148.7 |
| 25° | 1058.5 | 963.9 | 691.4 | 304.6 | 160.1 | 149.7 | 144.5 | 142.4 | 142.4 | 141.4 | 141.4 |
| 27.5° | 1080.3 | 967.0 | 637.4 | 218.3 | 149.7 | 141.4 | 138.3 | 136.2 | 136.2 | 135.2 | 135.2 |
| 30° | 1110.5 | 976.3 | 569.8 | 170.5 | 141.4 | 133.1 | 130.0 | 128.9 | 127.9 | 127.9 | 127.9 |
| 32.5° | 1153.1 | 990.9 | 496.0 | 145.6 | 131.0 | 124.8 | 121.7 | 120.6 | 120.6 | 120.6 | 119.6 |
| 35° | 1218.6 | 1021.0 | 405.5 | 133.1 | 121.7 | 115.4 | 112.3 | 112.3 | 112.3 | 111.3 | 112.3 |
| 37.5° | 1318.4 | 1069.9 | 314.0 | 122.7 | 111.3 | 106.1 | 104.0 | 102.9 | 102.9 | 102.9 | 102.9 |
| 40° | 1444.2 | 1148.9 | 228.7 | 113.3 | 101.9 | 96.7 | 94.6 | 93.6 | 92.5 | 92.5 | 92.5 |
| 42.5° | 1606.4 | 1236.3 | 166.4 | 102.9 | 93.6 | 88.4 | 86.3 | 84.2 | 82.1 | 81.1 | 81.1 |
| 45° | 1774.9 | 1340.2 | 130.0 | 94.6 | 85.3 | 81.1 | 79.0 | 75.9 | 72.8 | 69.7 | 69.7 |
| 47.5° | 1938.1 | 1420.3 | 111.3 | 85.3 | 78.0 | 73.8 | 71.7 | 67.6 | 62.4 | 59.3 | 59.3 |
| 50° | 2041.0 | 1445.3 | 99.8 | 76.9 | 70.7 | 67.6 | 64.5 | 59.3 | 52.0 | 48.9 | 48.9 |
| 52.5° | 2073.3 | 1399.5 | 89.4 | 69.7 | 64.5 | 61.3 | 57.2 | 49.9 | 42.6 | 38.5 | 38.5 |
| 55° | 2085.7 | 1311.1 | 79.0 | 64.5 | 58.2 | 54.1 | 48.9 | 41.6 | 34.3 | 30.2 | 30.2 |
| 57.5° | 2070.1 | 1186.4 | 70.7 | 58.2 | 52.0 | 47.8 | 41.6 | 33.3 | 26.0 | 22.9 | 22.9 |
| 60° | 2017.1 | 1005.4 | 63.4 | 52.0 | 45.7 | 40.6 | 34.3 | 26.0 | 19.8 | 15.6 | 16.6 |
| 62.5° | 1873.6 | 777.7 | 55.1 | 43.7 | 39.5 | 34.3 | 27.0 | 19.8 | 12.5 | 10.4 | 10.4 |
| 65° | 1644.9 | 538.6 | 46.8 | 36.4 | 33.3 | 28.1 | 20.8 | 13.5 | 7.3 | 6.2 | 6.2 |
| 67.5° | 1336.1 | 348.3 | 36.4 | 30.2 | 28.1 | 22.9 | 15.6 | 8.3 | 4.2 | 4.2 | 3.1 |
| 70° | 839.1 | 172.6 | 29.1 | 22.9 | 22.9 | 17.7 | 11.4 | 5.2 | 3.1 | 3.1 | 3.1 |
| 71° | 593.7 | 117.5 | 26.0 | 20.8 | 20.8 | 16.6 | 10.4 | 4.2 | 3.1 | 3.1 | 3.1 |
| 72.5° | 268.3 | 73.8 | 21.8 | 18.7 | 17.7 | 13.5 | 9.4 | 4.2 | 4.2 | 4.2 | 4.2 |
| 75° | 84.2 | 40.6 | 15.6 | 14.6 | 14.6 | 11.4 | 8.3 | 5.2 | 5.2 | 5.2 | 5.2 |
| 77.5° | 56.1 | 31.2 | 10.4 | 9.4 | 11.4 | 11.4 | 8.3 | 6.2 | 6.2 | 6.2 | 6.2 |
| 80° | 45.7 | 16.6 | 6.2 | 6.2 | 8.3 | 10.4 | 8.3 | 6.2 | 7.3 | 6.2 | 6.2 |
| 82.5° | 44.7 | 8.3 | 2.1 | 3.1 | 5.2 | 6.2 | 6.2 | 5.2 | 6.2 | 6.2 | 6.2 |
| 85° | 18.7 | 2.1 | 1.0 | 2.1 | 2.1 | 3.1 | 3.1 | 4.2 | 5.2 | 5.2 | 5.2 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 2.1 | 2.1 | 3.1 | 4.2 | 4.2 |
| 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)