

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: **ENC-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: ENC-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

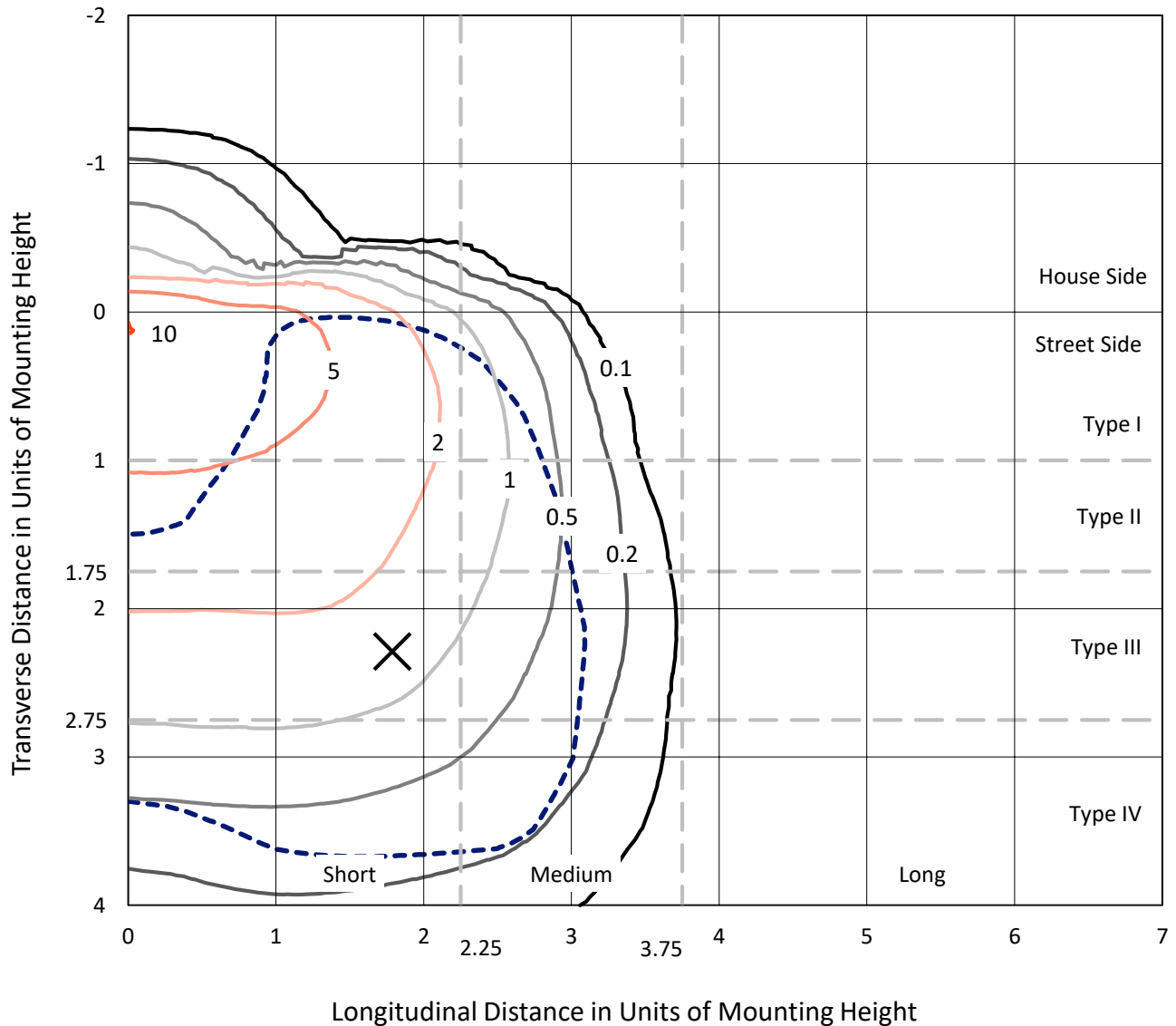


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

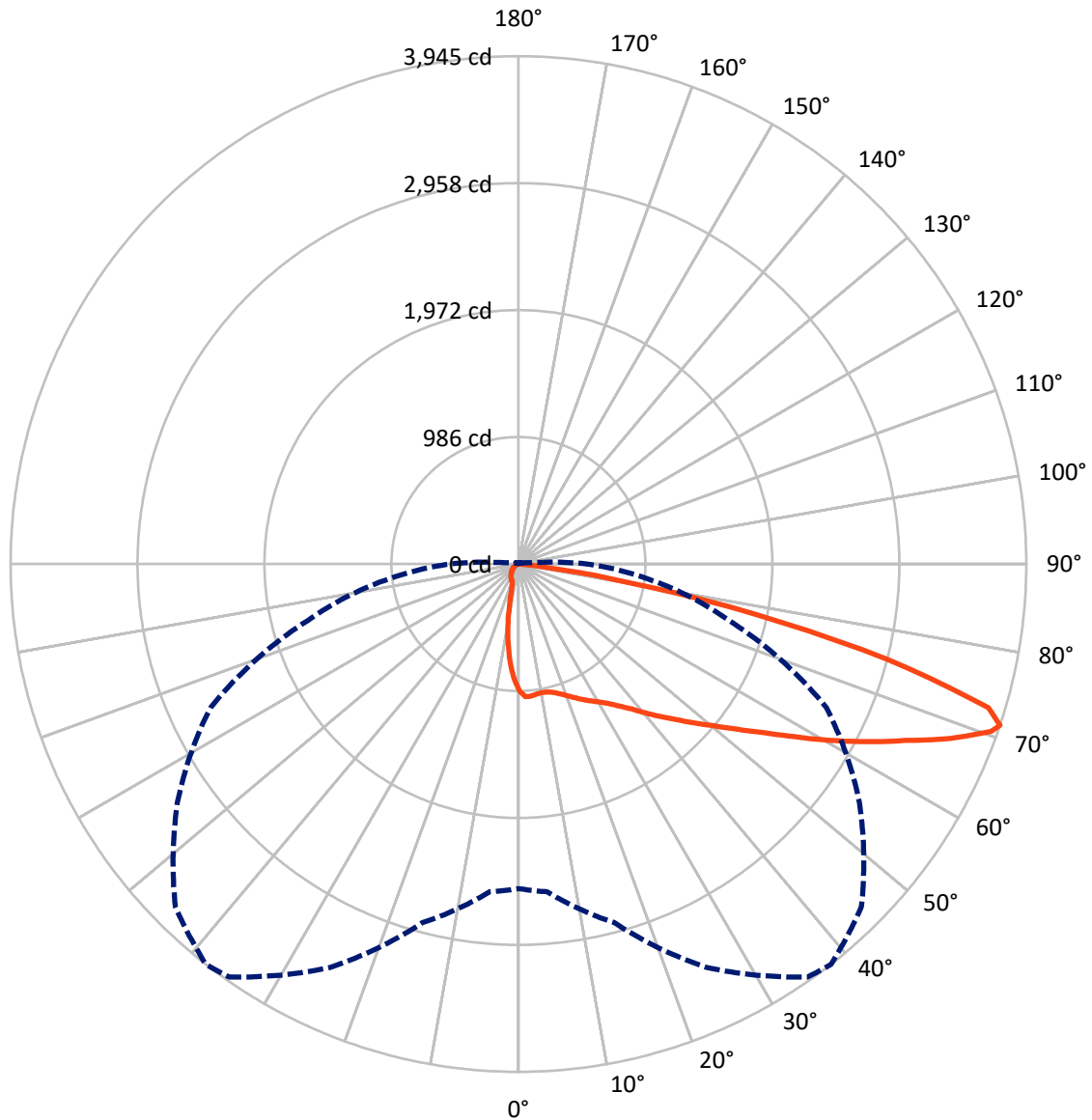


Based on 10 foot mounting height. Maximum calculated value = 10.1 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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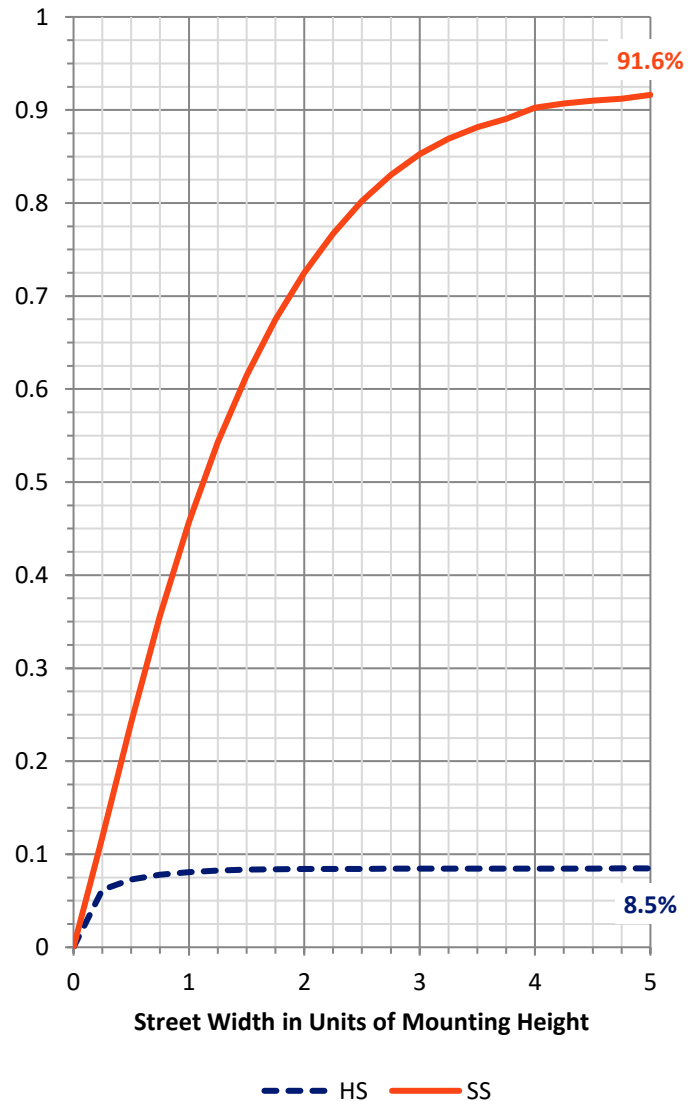
FLUX DISTRIBUTION:

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

Coefficient of Utilization

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 |



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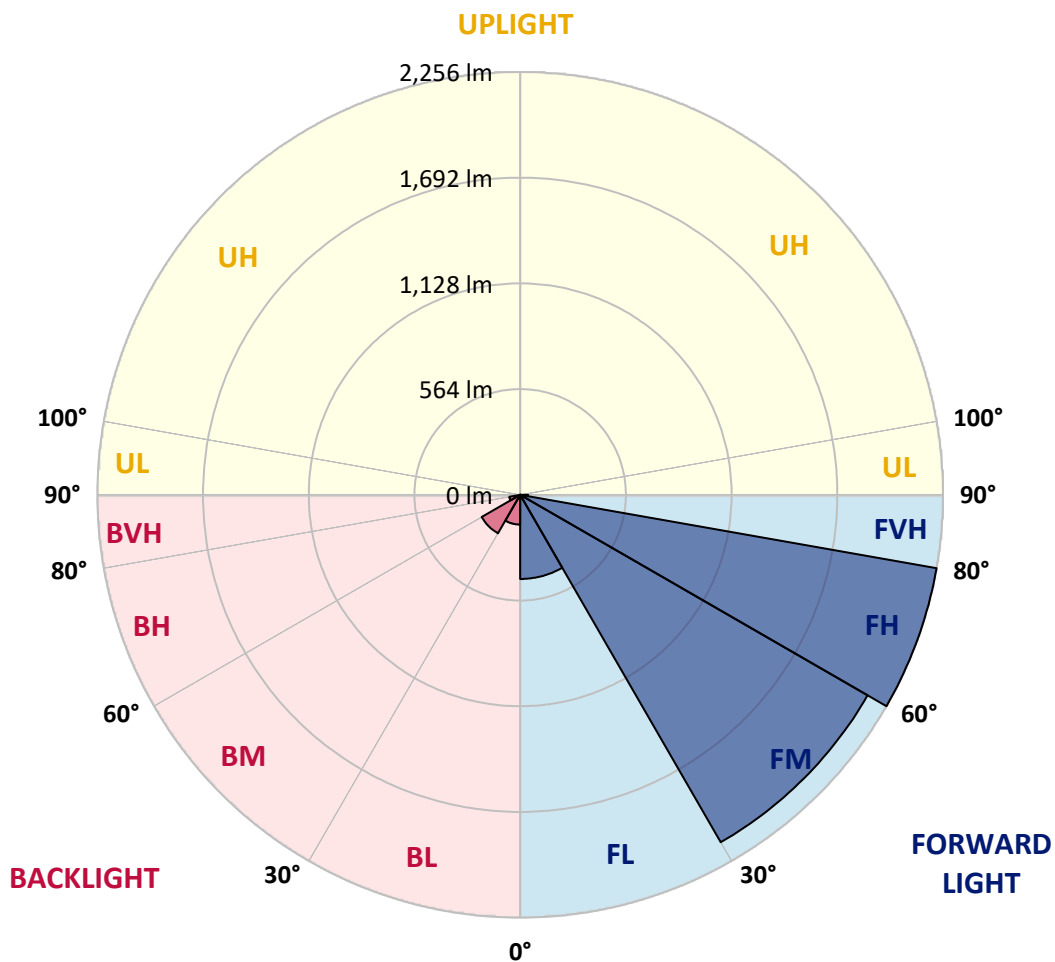
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| 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)