

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: P401903

Luminaire Tested: **ENC-SA1F-760-U-SL4-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401903
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-760-U-SL4-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 5700K, 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: 6389 lumens
Efficiency: N/A
Efficacy: 96.7 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

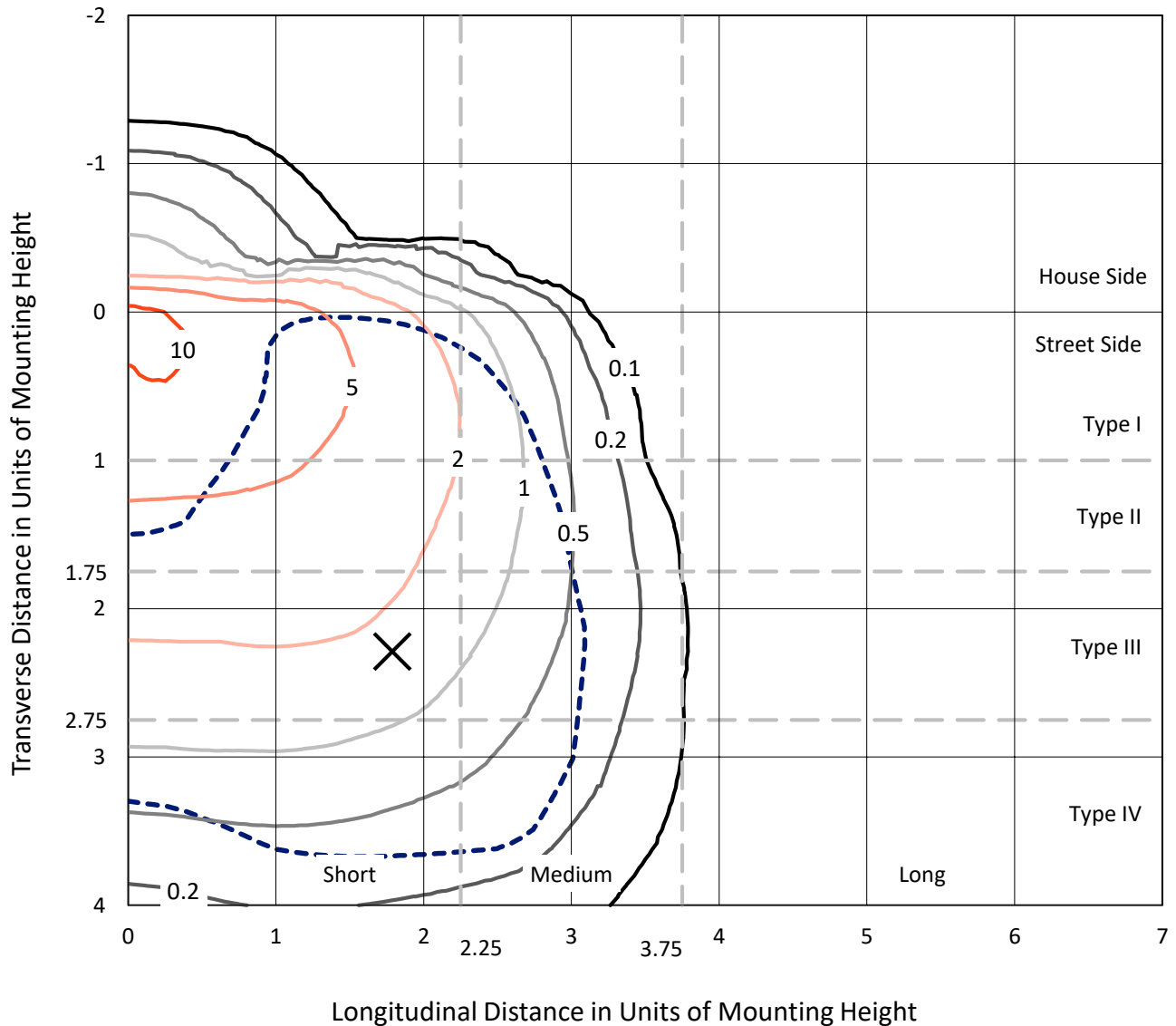


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Iso-Footcandle Lines of Horizontal Illumination

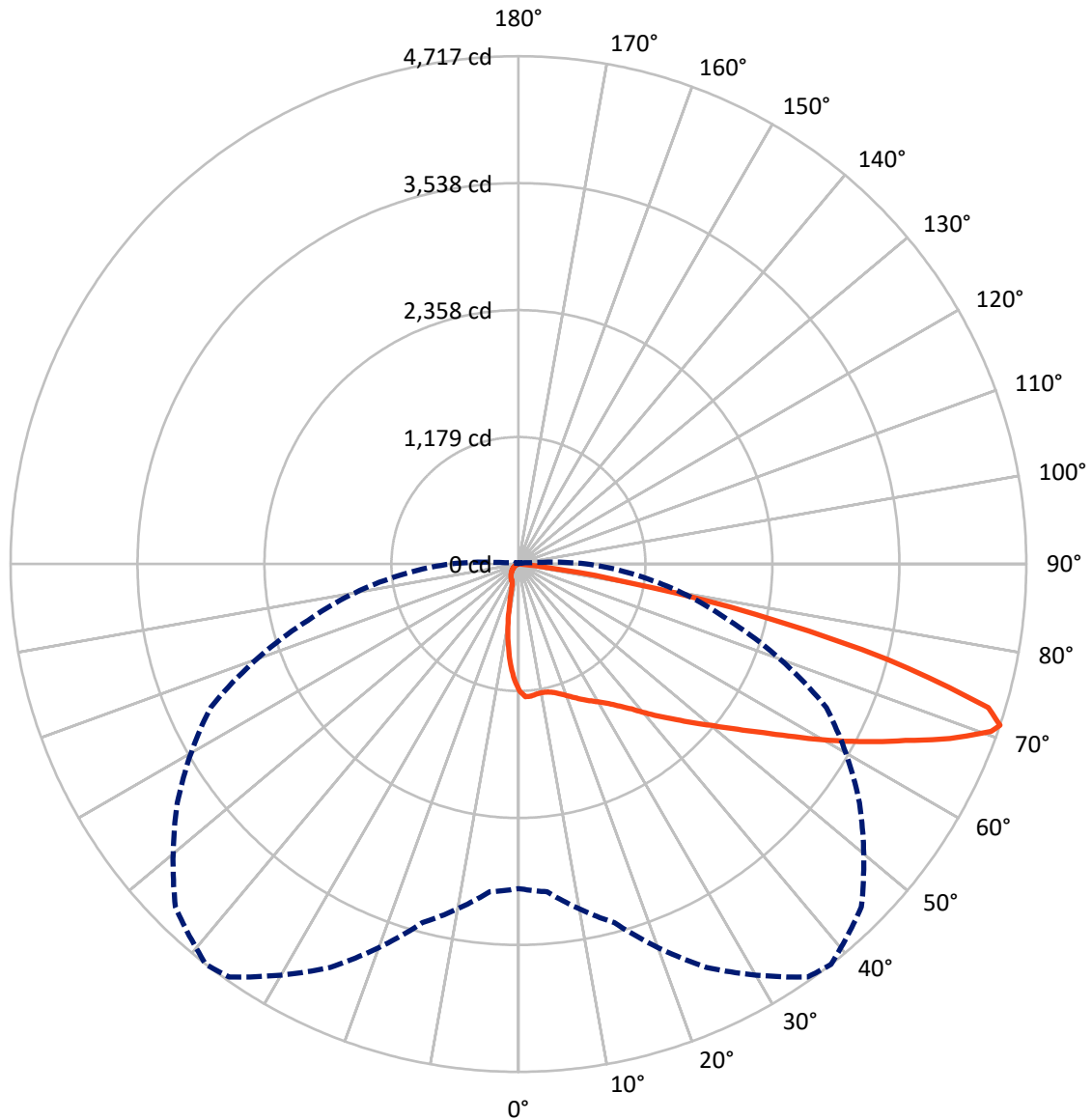
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.1 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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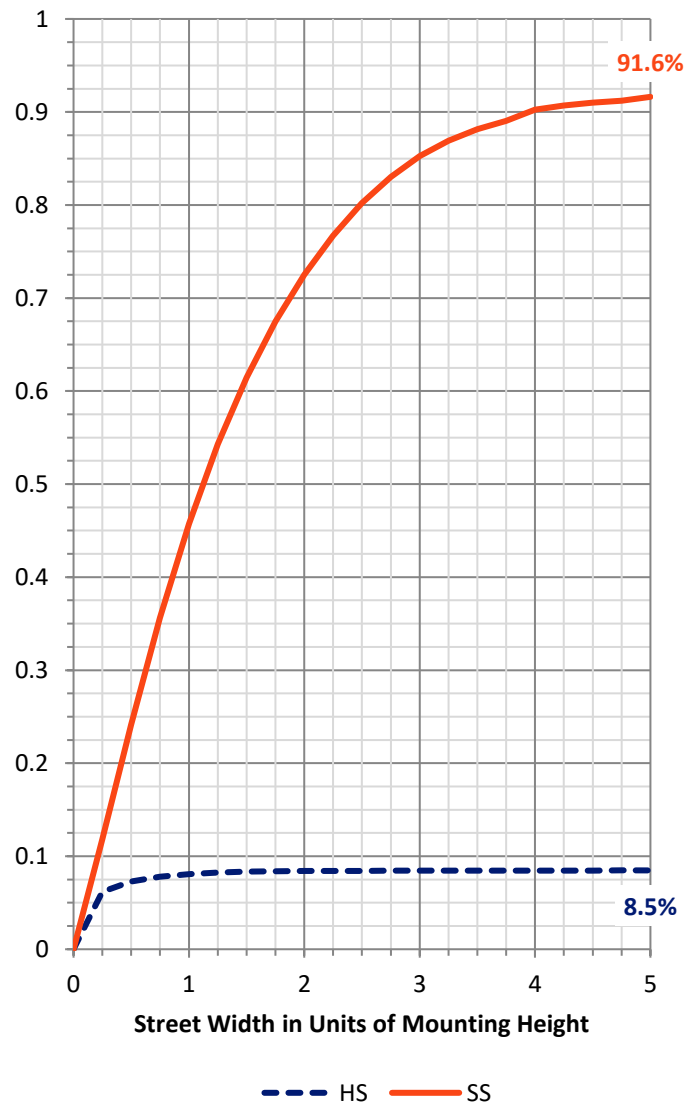
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 545.7 | 0.0 | 545.7 |
| | % Fixture | 8.5 | 0.0 | 8.5 |
| Street Side | Lumens | 5843.3 | 0.0 | 5843.3 |
| | % Fixture | 91.5 | 0.0 | 91.5 |
| Total | Lumens | 6389.0 | 0.0 | 6389.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 99.5 | 1.6 |
| 10°-20° | 240.9 | 3.8 |
| 20°-30° | 386.2 | 6.0 |
| 30°-40° | 587.6 | 9.2 |
| 40°-50° | 915.7 | 14.3 |
| 50°-60° | 1339.1 | 21.0 |
| 60°-70° | 1717.5 | 26.9 |
| 70°-80° | 1049.8 | 16.4 |
| 80°-90° | 52.7 | 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° | 6389.0 | 100.0 |
| 0°-180° | 6389.0 | 100.0 |



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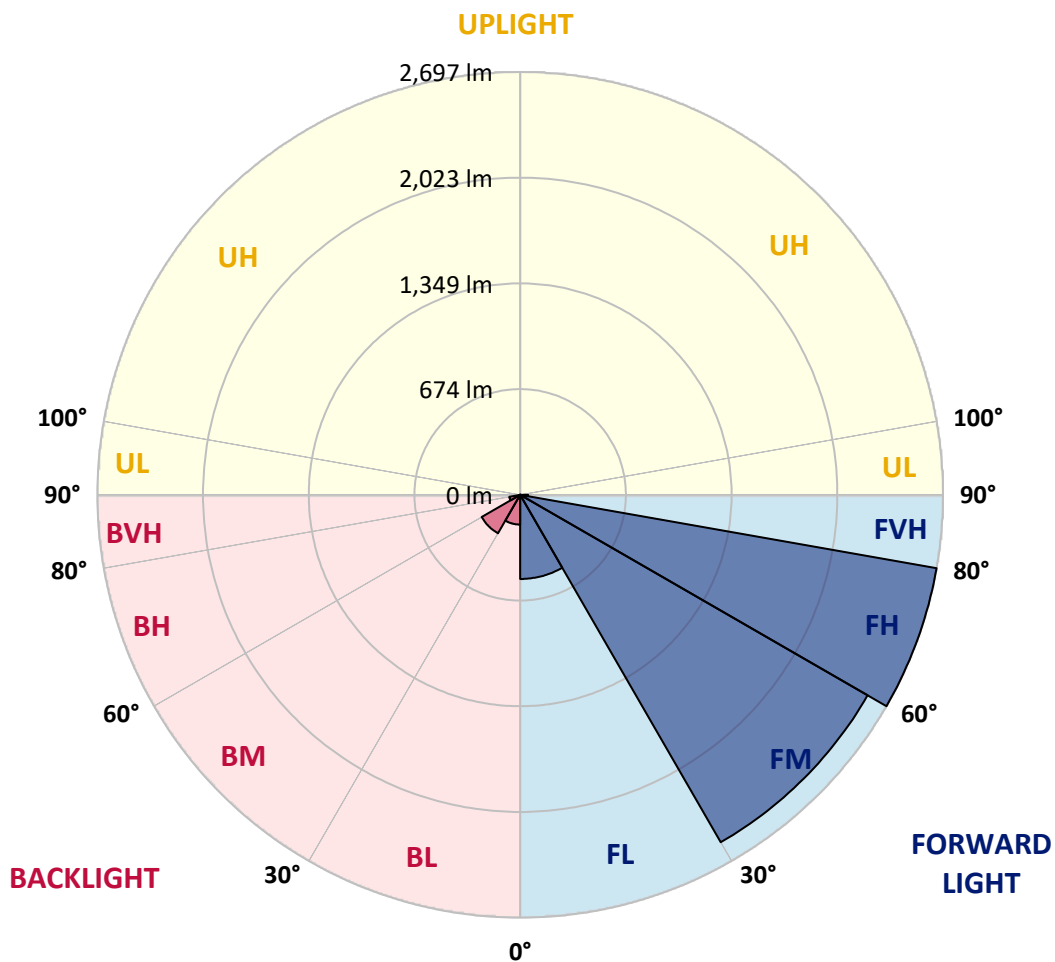
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 536.8 | 8.4 | | | |
| FM | (30°-60°) | 2558.9 | 40.1 | | | |
| FH | (60°-80°) | 2697.2 | 42.2 | | | G2/5000 |
| FVH | (80°-90°) | 50.4 | 0.8 | | | G1/100 |
| BL | (0°-30°) | 189.8 | 3.0 | B1/500 | | |
| BM | (30°-60°) | 283.5 | 4.4 | B1/1000 | | |
| BH | (60°-80°) | 70.2 | 1.1 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 2.3 | 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° | 1177.8 | 1177.8 | 1177.8 | 1177.8 | 1177.8 | 1177.8 | 1177.8 | 1177.8 | 1177.8 | 1177.8 | 1177.8 |
| 2.5° | 1247.6 | 1244.2 | 1247.6 | 1244.2 | 1237.6 | 1234.3 | 1229.9 | 1217.7 | 1206.6 | 1193.3 | 1173.4 |
| 5° | 1249.8 | 1247.6 | 1247.6 | 1243.1 | 1235.4 | 1232.1 | 1227.6 | 1215.5 | 1201.1 | 1181.1 | 1151.3 |
| 7.5° | 1237.6 | 1236.5 | 1234.3 | 1229.9 | 1221.0 | 1218.8 | 1215.5 | 1201.1 | 1186.7 | 1165.6 | 1129.1 |
| 10° | 1217.7 | 1219.9 | 1218.8 | 1218.8 | 1215.5 | 1213.2 | 1211.0 | 1194.4 | 1178.9 | 1154.6 | 1115.8 |
| 12.5° | 1198.9 | 1201.1 | 1206.6 | 1215.5 | 1218.8 | 1219.9 | 1219.9 | 1203.3 | 1184.5 | 1157.9 | 1118.0 |
| 15° | 1186.7 | 1191.1 | 1206.6 | 1224.3 | 1234.3 | 1237.6 | 1240.9 | 1223.2 | 1201.1 | 1172.3 | 1130.2 |
| 17.5° | 1183.4 | 1190.0 | 1219.9 | 1247.6 | 1266.4 | 1268.6 | 1268.6 | 1246.5 | 1223.2 | 1190.0 | 1144.6 |
| 20° | 1194.4 | 1203.3 | 1242.0 | 1280.8 | 1304.0 | 1306.2 | 1301.8 | 1273.0 | 1245.4 | 1208.8 | 1156.8 |
| 22.5° | 1227.6 | 1235.4 | 1279.7 | 1325.1 | 1347.2 | 1349.4 | 1339.4 | 1299.6 | 1269.7 | 1239.8 | 1173.4 |
| 25° | 1285.2 | 1289.6 | 1337.2 | 1380.4 | 1392.6 | 1395.9 | 1379.3 | 1331.7 | 1297.4 | 1269.7 | 1196.6 |
| 27.5° | 1361.6 | 1363.8 | 1407.0 | 1439.1 | 1441.3 | 1440.2 | 1422.5 | 1372.7 | 1338.3 | 1315.1 | 1232.1 |
| 30° | 1441.3 | 1444.6 | 1480.0 | 1501.1 | 1492.2 | 1487.8 | 1472.3 | 1419.1 | 1388.2 | 1370.4 | 1283.0 |
| 32.5° | 1515.5 | 1518.8 | 1557.5 | 1568.6 | 1548.7 | 1545.3 | 1534.3 | 1477.8 | 1451.2 | 1460.1 | 1356.0 |
| 35° | 1588.5 | 1588.5 | 1632.8 | 1638.3 | 1620.6 | 1620.6 | 1620.6 | 1553.1 | 1548.7 | 1578.6 | 1457.9 |
| 37.5° | 1653.8 | 1664.9 | 1711.4 | 1709.2 | 1705.9 | 1708.1 | 1714.7 | 1663.8 | 1679.3 | 1730.2 | 1591.8 |
| 40° | 1709.2 | 1723.6 | 1785.6 | 1791.1 | 1805.5 | 1817.7 | 1827.6 | 1801.1 | 1837.6 | 1920.6 | 1763.4 |
| 42.5° | 1759.0 | 1775.6 | 1855.3 | 1880.8 | 1920.6 | 1937.2 | 1956.0 | 1949.4 | 2030.2 | 2181.9 | 1982.6 |
| 45° | 1823.2 | 1840.9 | 1922.8 | 1983.7 | 2039.1 | 2061.2 | 2103.3 | 2132.0 | 2266.0 | 2438.7 | 2219.5 |
| 47.5° | 1908.4 | 1920.6 | 1995.9 | 2092.2 | 2167.5 | 2207.3 | 2272.6 | 2346.8 | 2509.5 | 2711.0 | 2430.9 |
| 50° | 2024.7 | 2025.8 | 2082.2 | 2207.3 | 2319.1 | 2362.3 | 2475.2 | 2571.5 | 2775.2 | 2951.2 | 2583.7 |
| 52.5° | 2153.1 | 2146.4 | 2190.7 | 2349.0 | 2490.7 | 2549.4 | 2682.2 | 2816.2 | 3020.9 | 3125.0 | 2652.3 |
| 55° | 2274.8 | 2278.2 | 2305.8 | 2499.6 | 2706.6 | 2763.0 | 2931.3 | 3067.4 | 3245.7 | 3231.3 | 2690.0 |
| 57.5° | 2415.4 | 2414.3 | 2449.7 | 2664.5 | 2959.0 | 3024.3 | 3200.3 | 3312.1 | 3381.8 | 3307.7 | 2696.6 |
| 60° | 2548.3 | 2544.9 | 2599.2 | 2861.5 | 3227.9 | 3324.3 | 3482.6 | 3478.1 | 3518.0 | 3356.4 | 2691.1 |
| 62.5° | 2666.7 | 2674.5 | 2769.7 | 3090.7 | 3529.0 | 3633.1 | 3712.8 | 3657.5 | 3668.5 | 3412.8 | 2622.4 |
| 65° | 2810.6 | 2825.0 | 2978.9 | 3368.5 | 3901.0 | 3950.8 | 3981.8 | 3892.1 | 3781.4 | 3367.4 | 2414.3 |
| 67.5° | 2992.2 | 3035.3 | 3252.3 | 3778.1 | 4288.4 | 4322.7 | 4323.9 | 4033.8 | 3777.0 | 3138.3 | 2030.2 |
| 70° | 3064.1 | 3109.5 | 3454.9 | 4102.5 | 4615.0 | 4658.2 | 4523.1 | 4011.7 | 3479.2 | 2457.5 | 1370.4 |
| 71° | 3014.3 | 3055.3 | 3449.3 | 4133.5 | 4682.5 | 4716.8 | 4505.4 | 3866.7 | 3154.9 | 2024.7 | 1061.6 |
| 72.5° | 2654.5 | 2760.8 | 3236.8 | 3938.6 | 4561.9 | 4563.0 | 4218.7 | 3524.6 | 2509.5 | 1264.2 | 533.6 |
| 75° | 1433.5 | 1561.9 | 2372.3 | 2997.7 | 3519.1 | 3546.8 | 3245.7 | 2447.5 | 1214.4 | 327.7 | 129.5 |
| 77.5° | 472.7 | 532.5 | 1063.8 | 1556.4 | 2207.3 | 2250.5 | 1984.8 | 1087.1 | 383.0 | 110.7 | 67.5 |
| 80° | 296.7 | 303.3 | 359.8 | 654.2 | 981.9 | 1018.4 | 816.9 | 440.6 | 172.7 | 60.9 | 46.5 |
| 82.5° | 49.8 | 59.8 | 169.4 | 192.6 | 346.5 | 274.5 | 186.0 | 224.7 | 80.8 | 27.7 | 39.9 |
| 85° | 0.0 | 0.0 | 1.1 | 1.1 | 5.5 | 1.1 | 1.1 | 45.4 | 4.4 | 4.4 | 21.0 |
| 87.5° | 0.0 | 0.0 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 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° | 1177.8 | 1177.8 | 1177.8 | 1177.8 | 1177.8 | 1177.8 | 1177.8 | 1177.8 | 1177.8 | 1177.8 | 1177.8 |
| 2.5° | 1164.5 | 1155.7 | 1138.0 | 1119.2 | 1095.9 | 1076.0 | 1069.3 | 1055.0 | 1048.3 | 1042.8 | 1042.8 |
| 5° | 1132.4 | 1116.9 | 1079.3 | 1040.6 | 1002.9 | 963.1 | 926.5 | 892.2 | 875.6 | 852.4 | 863.4 |
| 7.5° | 1105.9 | 1079.3 | 1026.2 | 965.3 | 887.8 | 809.2 | 748.3 | 695.2 | 650.9 | 636.5 | 626.5 |
| 10° | 1087.1 | 1053.8 | 976.4 | 883.4 | 770.5 | 658.7 | 564.6 | 477.1 | 426.2 | 395.2 | 395.2 |
| 12.5° | 1084.8 | 1042.8 | 942.0 | 799.2 | 636.5 | 484.9 | 368.6 | 285.6 | 244.6 | 225.8 | 224.7 |
| 15° | 1092.6 | 1041.7 | 911.0 | 722.9 | 513.6 | 336.5 | 230.3 | 193.7 | 183.8 | 181.5 | 181.5 |
| 17.5° | 1099.2 | 1040.6 | 874.5 | 636.5 | 378.6 | 221.4 | 182.7 | 176.0 | 173.8 | 172.7 | 172.7 |
| 20° | 1105.9 | 1035.0 | 832.4 | 539.1 | 267.9 | 180.4 | 170.5 | 167.2 | 166.0 | 164.9 | 164.9 |
| 22.5° | 1114.7 | 1029.5 | 789.3 | 428.4 | 198.1 | 168.3 | 162.7 | 159.4 | 158.3 | 158.3 | 158.3 |
| 25° | 1126.9 | 1026.2 | 736.1 | 324.3 | 170.5 | 159.4 | 153.9 | 151.7 | 151.7 | 150.5 | 150.5 |
| 27.5° | 1150.2 | 1029.5 | 678.6 | 232.5 | 159.4 | 150.5 | 147.2 | 145.0 | 145.0 | 143.9 | 143.9 |
| 30° | 1182.3 | 1039.5 | 606.6 | 181.5 | 150.5 | 141.7 | 138.4 | 137.3 | 136.2 | 136.2 | 136.2 |
| 32.5° | 1227.6 | 1055.0 | 528.0 | 155.0 | 139.5 | 132.8 | 129.5 | 128.4 | 128.4 | 128.4 | 127.3 |
| 35° | 1297.4 | 1087.1 | 431.7 | 141.7 | 129.5 | 122.9 | 119.6 | 119.6 | 119.6 | 118.4 | 119.6 |
| 37.5° | 1403.6 | 1139.1 | 334.3 | 130.6 | 118.4 | 112.9 | 110.7 | 109.6 | 109.6 | 109.6 | 109.6 |
| 40° | 1537.6 | 1223.2 | 243.5 | 120.7 | 108.5 | 102.9 | 100.7 | 99.6 | 98.5 | 98.5 | 98.5 |
| 42.5° | 1710.3 | 1316.2 | 177.1 | 109.6 | 99.6 | 94.1 | 91.9 | 89.7 | 87.5 | 86.3 | 86.3 |
| 45° | 1889.6 | 1426.9 | 138.4 | 100.7 | 90.8 | 86.3 | 84.1 | 80.8 | 77.5 | 74.2 | 74.2 |
| 47.5° | 2063.4 | 1512.1 | 118.4 | 90.8 | 83.0 | 78.6 | 76.4 | 72.0 | 66.4 | 63.1 | 63.1 |
| 50° | 2173.0 | 1538.7 | 106.3 | 81.9 | 75.3 | 72.0 | 68.6 | 63.1 | 55.3 | 52.0 | 52.0 |
| 52.5° | 2207.3 | 1490.0 | 95.2 | 74.2 | 68.6 | 65.3 | 60.9 | 53.1 | 45.4 | 41.0 | 41.0 |
| 55° | 2220.6 | 1395.9 | 84.1 | 68.6 | 62.0 | 57.6 | 52.0 | 44.3 | 36.5 | 32.1 | 32.1 |
| 57.5° | 2204.0 | 1263.1 | 75.3 | 62.0 | 55.3 | 50.9 | 44.3 | 35.4 | 27.7 | 24.4 | 24.4 |
| 60° | 2147.5 | 1070.4 | 67.5 | 55.3 | 48.7 | 43.2 | 36.5 | 27.7 | 21.0 | 16.6 | 17.7 |
| 62.5° | 1994.8 | 828.0 | 58.7 | 46.5 | 42.1 | 36.5 | 28.8 | 21.0 | 13.3 | 11.1 | 11.1 |
| 65° | 1751.2 | 573.4 | 49.8 | 38.7 | 35.4 | 29.9 | 22.1 | 14.4 | 7.7 | 6.6 | 6.6 |
| 67.5° | 1422.5 | 370.8 | 38.7 | 32.1 | 29.9 | 24.4 | 16.6 | 8.9 | 4.4 | 4.4 | 3.3 |
| 70° | 893.3 | 183.8 | 31.0 | 24.4 | 24.4 | 18.8 | 12.2 | 5.5 | 3.3 | 3.3 | 3.3 |
| 71° | 632.1 | 125.1 | 27.7 | 22.1 | 22.1 | 17.7 | 11.1 | 4.4 | 3.3 | 3.3 | 3.3 |
| 72.5° | 285.6 | 78.6 | 23.2 | 19.9 | 18.8 | 14.4 | 10.0 | 4.4 | 4.4 | 4.4 | 4.4 |
| 75° | 89.7 | 43.2 | 16.6 | 15.5 | 15.5 | 12.2 | 8.9 | 5.5 | 5.5 | 5.5 | 5.5 |
| 77.5° | 59.8 | 33.2 | 11.1 | 10.0 | 12.2 | 12.2 | 8.9 | 6.6 | 6.6 | 6.6 | 6.6 |
| 80° | 48.7 | 17.7 | 6.6 | 6.6 | 8.9 | 11.1 | 8.9 | 6.6 | 7.7 | 6.6 | 6.6 |
| 82.5° | 47.6 | 8.9 | 2.2 | 3.3 | 5.5 | 6.6 | 6.6 | 5.5 | 6.6 | 6.6 | 6.6 |
| 85° | 19.9 | 2.2 | 1.1 | 2.2 | 2.2 | 3.3 | 3.3 | 4.4 | 5.5 | 5.5 | 5.5 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 | 1.1 | 2.2 | 2.2 | 3.3 | 4.4 | 4.4 |
| 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)