

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: P401929

Luminaire Tested: **ENC-SA1F-827-U-T3-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401929
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-14)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENC-SA1F-827-U-T3-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 2700K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4398 lumens
Efficiency: N/A
Efficacy: 66.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

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

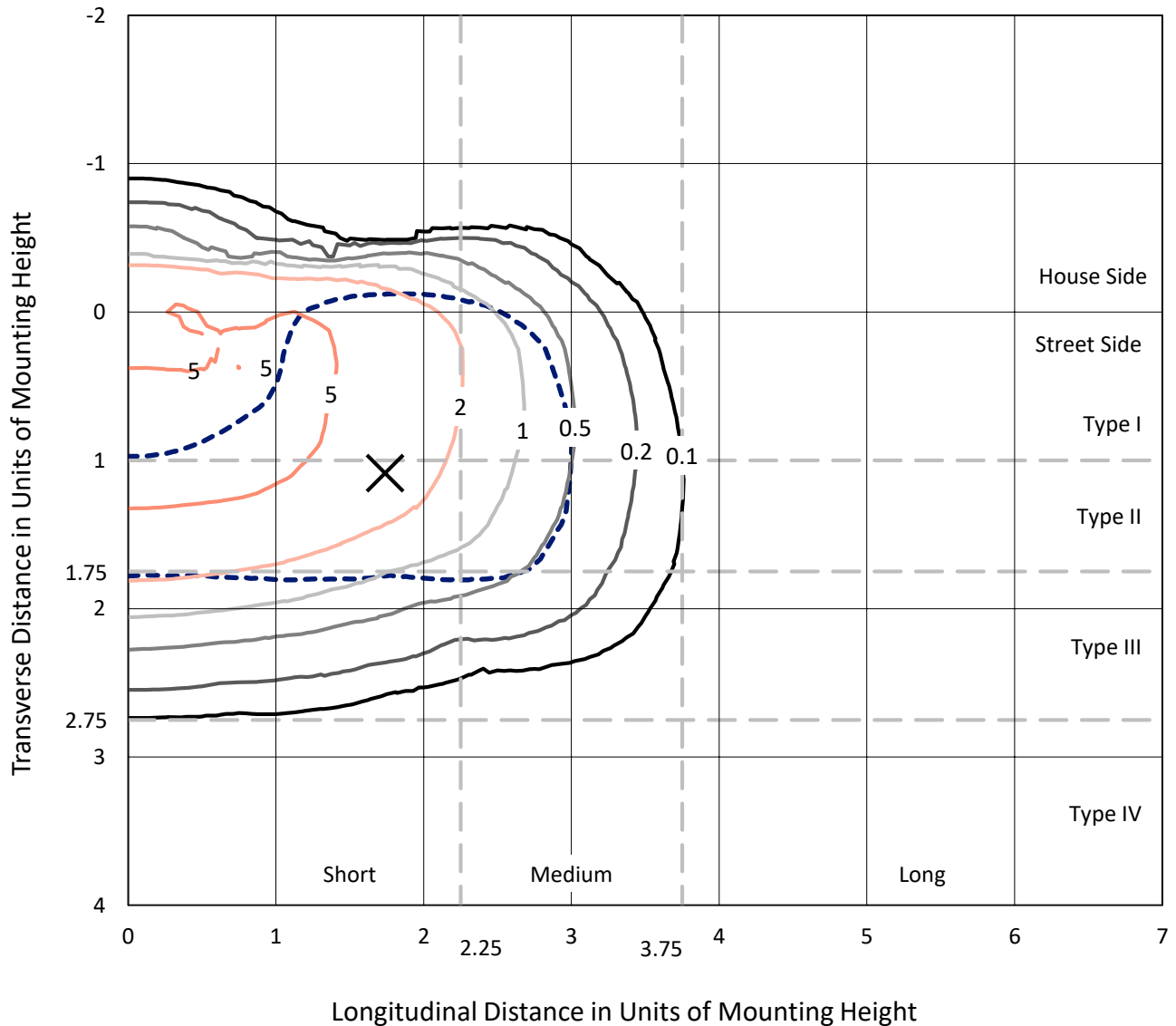


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

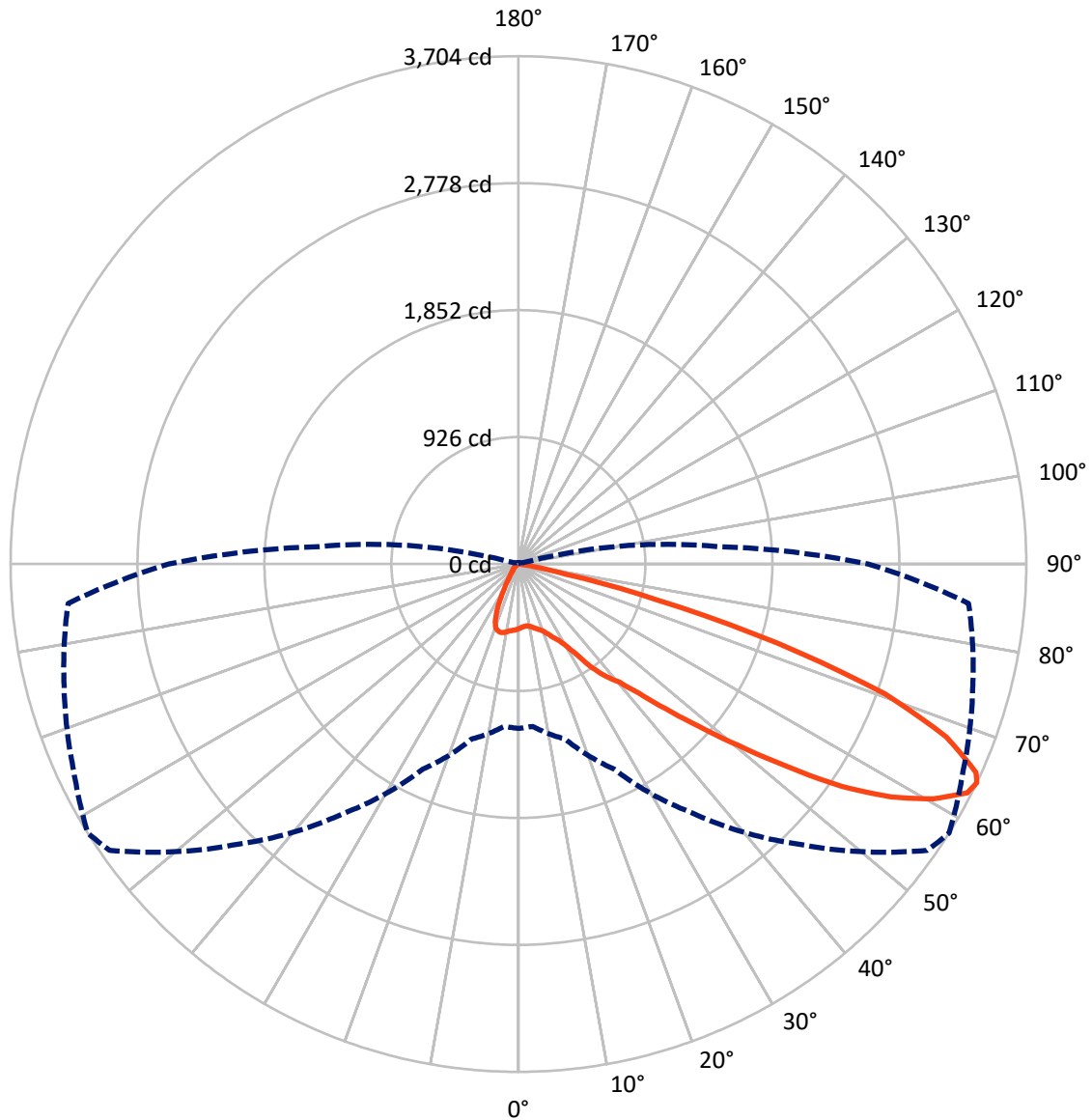


Based on 10 foot mounting height. Maximum calculated value = 7 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 64-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 524.3 | 0.0 | 524.3 |
| | % Fixture | 11.9 | 0.0 | 11.9 |
| Street Side | Lumens | 3873.7 | 0.0 | 3873.7 |
| | % Fixture | 88.1 | 0.0 | 88.1 |
| Total | Lumens | 4398.0 | 0.0 | 4398.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 44.5 | 1.0 |
| 10°-20° | 129.8 | 3.0 |
| 20°-30° | 233.2 | 5.3 |
| 30°-40° | 408.7 | 9.3 |
| 40°-50° | 747.3 | 17.0 |
| 50°-60° | 1278.4 | 29.1 |
| 60°-70° | 1240.2 | 28.2 |
| 70°-80° | 307.2 | 7.0 |
| 80°-90° | 8.7 | 0.2 |
| 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° | 4398.0 | 100.0 |
| 0°-180° | 4398.0 | 100.0 |



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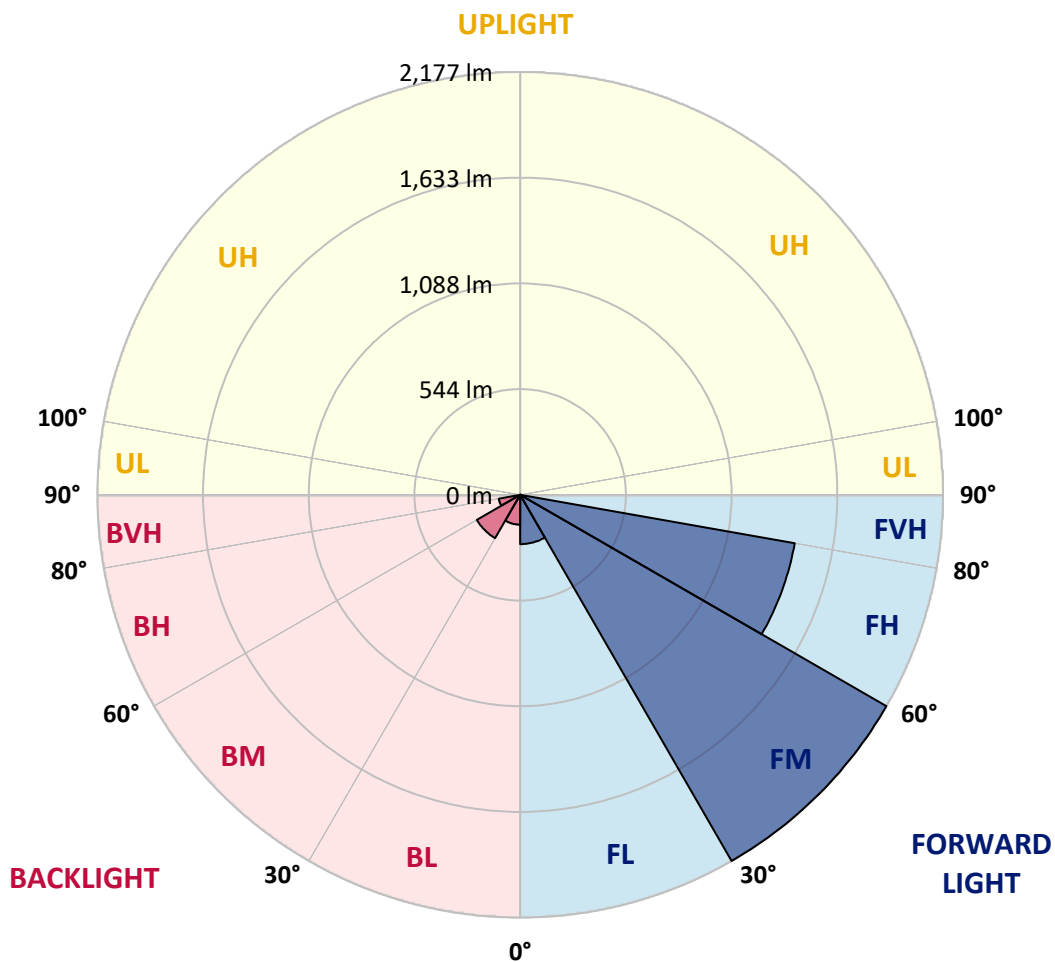
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 253.9 | 5.8 | | | |
| FM | (30°-60°) | 2176.9 | 49.5 | | | |
| FH | (60°-80°) | 1435.4 | 32.6 | | | G1/1800 |
| FVH | (80°-90°) | 7.4 | 0.2 | | | G0/10 |
| BL | (0°-30°) | 153.5 | 3.5 | B1/500 | | |
| BM | (30°-60°) | 257.5 | 5.9 | B1/1000 | | |
| BH | (60°-80°) | 112.0 | 2.5 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 1.3 | 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-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 58° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 471.1 | 471.1 | 471.1 | 471.1 | 471.1 | 471.1 | 471.1 | 471.1 | 471.1 | 471.1 | 471.1 |
| 2.5° | 451.6 | 451.6 | 453.2 | 454.0 | 456.5 | 458.9 | 462.1 | 463.0 | 464.6 | 468.7 | 470.3 |
| 5° | 427.2 | 428.0 | 429.6 | 433.7 | 439.4 | 445.9 | 454.0 | 456.5 | 463.0 | 471.1 | 476.8 |
| 7.5° | 417.4 | 418.2 | 420.7 | 425.5 | 432.9 | 442.6 | 452.4 | 455.6 | 464.6 | 477.6 | 485.7 |
| 10° | 415.8 | 415.8 | 419.0 | 426.3 | 435.3 | 447.5 | 458.1 | 462.1 | 474.4 | 489.8 | 502.8 |
| 12.5° | 415.8 | 415.8 | 419.8 | 428.8 | 439.4 | 454.8 | 469.5 | 475.2 | 489.0 | 508.5 | 524.8 |
| 15° | 423.1 | 424.7 | 427.2 | 432.9 | 445.1 | 462.1 | 482.5 | 489.0 | 506.1 | 529.7 | 550.0 |
| 17.5° | 475.2 | 473.5 | 465.4 | 458.1 | 455.6 | 470.3 | 494.7 | 503.6 | 528.9 | 559.0 | 580.9 |
| 20° | 576.1 | 575.2 | 560.6 | 524.8 | 493.1 | 484.9 | 513.4 | 524.0 | 560.6 | 600.5 | 616.7 |
| 22.5° | 698.1 | 702.2 | 679.4 | 631.4 | 566.3 | 524.8 | 541.1 | 555.7 | 602.9 | 650.9 | 660.7 |
| 25° | 819.3 | 824.2 | 803.1 | 742.9 | 663.1 | 590.7 | 579.3 | 592.3 | 646.0 | 694.0 | 690.0 |
| 27.5° | 962.5 | 958.5 | 937.3 | 869.0 | 776.2 | 679.4 | 630.6 | 633.0 | 674.5 | 728.2 | 715.2 |
| 30° | 1067.5 | 1061.8 | 1041.5 | 995.1 | 908.0 | 797.4 | 703.8 | 696.5 | 708.7 | 768.1 | 754.2 |
| 32.5° | 1163.5 | 1167.6 | 1152.1 | 1090.3 | 1008.1 | 918.6 | 813.6 | 794.1 | 789.2 | 839.7 | 816.9 |
| 35° | 1258.7 | 1257.9 | 1252.2 | 1197.7 | 1117.1 | 1032.5 | 944.6 | 930.8 | 929.2 | 978.0 | 916.2 |
| 37.5° | 1372.6 | 1366.9 | 1356.3 | 1301.0 | 1236.7 | 1156.2 | 1062.6 | 1040.6 | 1036.6 | 1046.3 | 973.9 |
| 40° | 1494.7 | 1502.0 | 1484.9 | 1427.1 | 1357.2 | 1296.9 | 1165.9 | 1132.6 | 1104.9 | 1133.4 | 1087.0 |
| 42.5° | 1676.1 | 1681.8 | 1651.7 | 1611.8 | 1521.5 | 1465.4 | 1332.7 | 1287.2 | 1274.2 | 1317.3 | 1265.2 |
| 45° | 1903.9 | 1893.3 | 1873.0 | 1845.3 | 1770.5 | 1685.1 | 1546.7 | 1503.6 | 1489.8 | 1563.8 | 1478.4 |
| 47.5° | 2081.3 | 2079.7 | 2080.5 | 2074.8 | 2063.4 | 1960.9 | 1796.5 | 1767.2 | 1753.4 | 1860.0 | 1765.6 |
| 50° | 2193.6 | 2200.1 | 2227.8 | 2298.5 | 2350.6 | 2307.5 | 2114.7 | 2078.9 | 2068.3 | 2178.9 | 2051.2 |
| 52.5° | 2278.2 | 2293.7 | 2340.0 | 2480.0 | 2646.8 | 2661.4 | 2501.9 | 2451.5 | 2427.1 | 2458.0 | 2280.6 |
| 55° | 2321.3 | 2328.6 | 2399.4 | 2606.1 | 2867.3 | 2972.2 | 2905.5 | 2863.2 | 2764.8 | 2706.2 | 2550.0 |
| 57.5° | 2220.4 | 2209.0 | 2331.1 | 2593.9 | 2981.2 | 3222.8 | 3251.3 | 3203.3 | 3045.5 | 2999.9 | 2877.0 |
| 60° | 1956.0 | 1951.1 | 2088.6 | 2404.3 | 2881.9 | 3281.4 | 3507.6 | 3477.5 | 3332.7 | 3224.5 | 3108.9 |
| 62.5° | 1492.2 | 1500.4 | 1646.0 | 1967.4 | 2528.0 | 3113.0 | 3650.0 | 3674.4 | 3520.6 | 3359.5 | 3280.6 |
| 64° | 1198.5 | 1188.7 | 1322.2 | 1649.3 | 2218.0 | 2888.4 | 3639.4 | 3703.7 | 3577.6 | 3430.3 | 3296.1 |
| 65° | 1006.5 | 985.3 | 1113.1 | 1409.2 | 1956.0 | 2725.7 | 3564.6 | 3667.9 | 3581.7 | 3447.4 | 3239.9 |
| 67.5° | 529.7 | 541.1 | 595.6 | 856.0 | 1320.5 | 2061.0 | 3209.8 | 3366.0 | 3401.0 | 3213.9 | 2823.3 |
| 70° | 237.6 | 239.2 | 274.2 | 436.9 | 730.7 | 1336.8 | 2581.7 | 2834.7 | 2854.3 | 2640.3 | 2045.5 |
| 72.5° | 78.9 | 79.7 | 121.2 | 174.9 | 306.7 | 619.2 | 1743.6 | 1973.9 | 2016.2 | 1711.9 | 1109.8 |
| 75° | 48.8 | 50.4 | 64.3 | 94.4 | 142.4 | 216.4 | 883.6 | 1039.8 | 1048.8 | 759.1 | 403.6 |
| 77.5° | 30.9 | 32.5 | 39.1 | 56.1 | 78.1 | 82.2 | 289.7 | 350.7 | 397.1 | 273.4 | 125.3 |
| 80° | 19.5 | 19.5 | 25.2 | 34.2 | 40.7 | 35.0 | 78.9 | 104.1 | 125.3 | 91.9 | 42.3 |
| 82.5° | 7.3 | 7.3 | 13.0 | 18.7 | 17.1 | 12.2 | 21.2 | 27.7 | 48.0 | 45.6 | 20.3 |
| 85° | 0.0 | 0.0 | 0.8 | 1.6 | 0.8 | 1.6 | 4.1 | 5.7 | 9.0 | 13.0 | 6.5 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.8 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| 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° | 471.1 | 471.1 | 471.1 | 471.1 | 471.1 | 471.1 | 471.1 | 471.1 | 471.1 | 471.1 | 471.1 |
| 2.5° | 472.7 | 474.4 | 477.6 | 478.4 | 479.2 | 476.8 | 479.2 | 476.8 | 478.4 | 478.4 | 478.4 |
| 5° | 480.0 | 482.5 | 484.9 | 485.7 | 484.9 | 479.2 | 480.9 | 476.8 | 476.0 | 476.0 | 476.0 |
| 7.5° | 489.8 | 492.3 | 496.3 | 493.9 | 489.0 | 480.9 | 480.0 | 474.4 | 471.9 | 471.9 | 472.7 |
| 10° | 507.7 | 510.2 | 511.8 | 506.9 | 497.1 | 484.9 | 476.0 | 463.8 | 458.1 | 455.6 | 455.6 |
| 12.5° | 530.5 | 532.9 | 532.1 | 524.0 | 506.1 | 480.9 | 455.6 | 432.0 | 415.0 | 408.4 | 401.9 |
| 15° | 554.9 | 558.2 | 556.5 | 539.4 | 505.3 | 460.5 | 411.7 | 356.4 | 322.2 | 300.2 | 296.2 |
| 17.5° | 583.4 | 586.6 | 578.5 | 547.6 | 493.1 | 417.4 | 324.6 | 249.8 | 200.2 | 181.4 | 180.6 |
| 20° | 618.4 | 616.7 | 597.2 | 548.4 | 471.1 | 337.7 | 217.2 | 156.2 | 135.1 | 130.2 | 129.4 |
| 22.5° | 658.2 | 650.9 | 615.1 | 543.5 | 410.9 | 229.4 | 139.9 | 123.7 | 121.2 | 119.6 | 119.6 |
| 25° | 681.0 | 668.0 | 621.6 | 529.7 | 316.5 | 146.5 | 118.8 | 115.5 | 112.3 | 109.0 | 108.2 |
| 27.5° | 698.9 | 679.4 | 624.1 | 484.1 | 210.7 | 112.3 | 107.4 | 104.1 | 99.3 | 94.4 | 93.6 |
| 30° | 731.5 | 702.2 | 628.1 | 404.4 | 129.4 | 96.0 | 93.6 | 87.9 | 80.6 | 75.7 | 74.0 |
| 32.5° | 790.0 | 747.7 | 644.4 | 302.7 | 94.4 | 84.6 | 78.1 | 70.8 | 62.7 | 57.8 | 57.8 |
| 35° | 852.7 | 790.9 | 652.5 | 199.3 | 82.2 | 74.0 | 64.3 | 55.3 | 48.0 | 43.9 | 43.1 |
| 37.5° | 910.5 | 852.7 | 650.1 | 122.0 | 73.2 | 63.5 | 52.9 | 43.9 | 37.4 | 34.2 | 34.2 |
| 40° | 1028.4 | 960.9 | 616.7 | 83.8 | 64.3 | 53.7 | 43.1 | 34.2 | 30.1 | 27.7 | 27.7 |
| 42.5° | 1196.9 | 1079.7 | 542.7 | 71.6 | 56.1 | 44.8 | 34.2 | 28.5 | 25.2 | 22.8 | 22.8 |
| 45° | 1385.6 | 1210.7 | 432.9 | 64.3 | 48.8 | 37.4 | 28.5 | 23.6 | 20.3 | 19.5 | 19.5 |
| 47.5° | 1633.0 | 1369.4 | 318.1 | 57.8 | 42.3 | 31.7 | 23.6 | 19.5 | 17.9 | 17.1 | 17.1 |
| 50° | 1849.4 | 1497.9 | 217.2 | 50.4 | 37.4 | 26.9 | 20.3 | 17.9 | 16.3 | 15.5 | 15.5 |
| 52.5° | 2046.3 | 1587.4 | 143.2 | 43.9 | 33.4 | 22.0 | 18.7 | 16.3 | 15.5 | 14.6 | 14.6 |
| 55° | 2278.2 | 1655.8 | 96.8 | 38.2 | 29.3 | 20.3 | 17.9 | 16.3 | 14.6 | 14.6 | 13.8 |
| 57.5° | 2475.1 | 1696.4 | 69.2 | 32.5 | 26.0 | 18.7 | 17.1 | 15.5 | 13.8 | 13.0 | 13.0 |
| 60° | 2589.8 | 1648.4 | 50.4 | 28.5 | 22.8 | 17.1 | 15.5 | 13.8 | 13.0 | 12.2 | 12.2 |
| 62.5° | 2621.6 | 1555.7 | 39.1 | 24.4 | 19.5 | 15.5 | 13.8 | 12.2 | 11.4 | 10.6 | 10.6 |
| 64° | 2548.3 | 1456.4 | 33.4 | 21.2 | 17.1 | 13.8 | 13.0 | 11.4 | 9.8 | 8.1 | 8.1 |
| 65° | 2445.0 | 1364.5 | 30.1 | 19.5 | 15.5 | 13.0 | 12.2 | 10.6 | 8.1 | 6.5 | 6.5 |
| 67.5° | 2037.4 | 1087.8 | 24.4 | 16.3 | 12.2 | 11.4 | 9.8 | 8.1 | 5.7 | 4.1 | 4.1 |
| 70° | 1446.7 | 760.8 | 18.7 | 13.0 | 10.6 | 10.6 | 9.0 | 6.5 | 3.3 | 1.6 | 1.6 |
| 72.5° | 765.6 | 395.4 | 15.5 | 10.6 | 8.1 | 8.1 | 7.3 | 4.1 | 2.4 | 1.6 | 0.8 |
| 75° | 267.7 | 130.2 | 13.0 | 9.0 | 7.3 | 5.7 | 4.9 | 3.3 | 2.4 | 1.6 | 0.8 |
| 77.5° | 81.4 | 43.1 | 11.4 | 9.0 | 6.5 | 4.9 | 5.7 | 4.9 | 4.9 | 3.3 | 2.4 |
| 80° | 26.0 | 15.5 | 6.5 | 5.7 | 6.5 | 6.5 | 5.7 | 4.9 | 5.7 | 4.1 | 3.3 |
| 82.5° | 9.8 | 5.7 | 2.4 | 3.3 | 3.3 | 4.1 | 4.1 | 3.3 | 2.4 | 0.8 | 0.0 |
| 85° | 3.3 | 2.4 | 1.6 | 2.4 | 2.4 | 2.4 | 1.6 | 1.6 | 0.8 | 0.0 | 0.0 |
| 87.5° | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 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 |

(END OF REPORT)