

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: P401381

Luminaire Tested: **ENV-SA1C-827-U-SL4-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401381
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: ENV-SA1C-827-U-SL4-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 2700K, 615mA 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: 2721 lumens
Efficiency: N/A
Efficacy: 81.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G1

Input Watts (W): 33.3
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

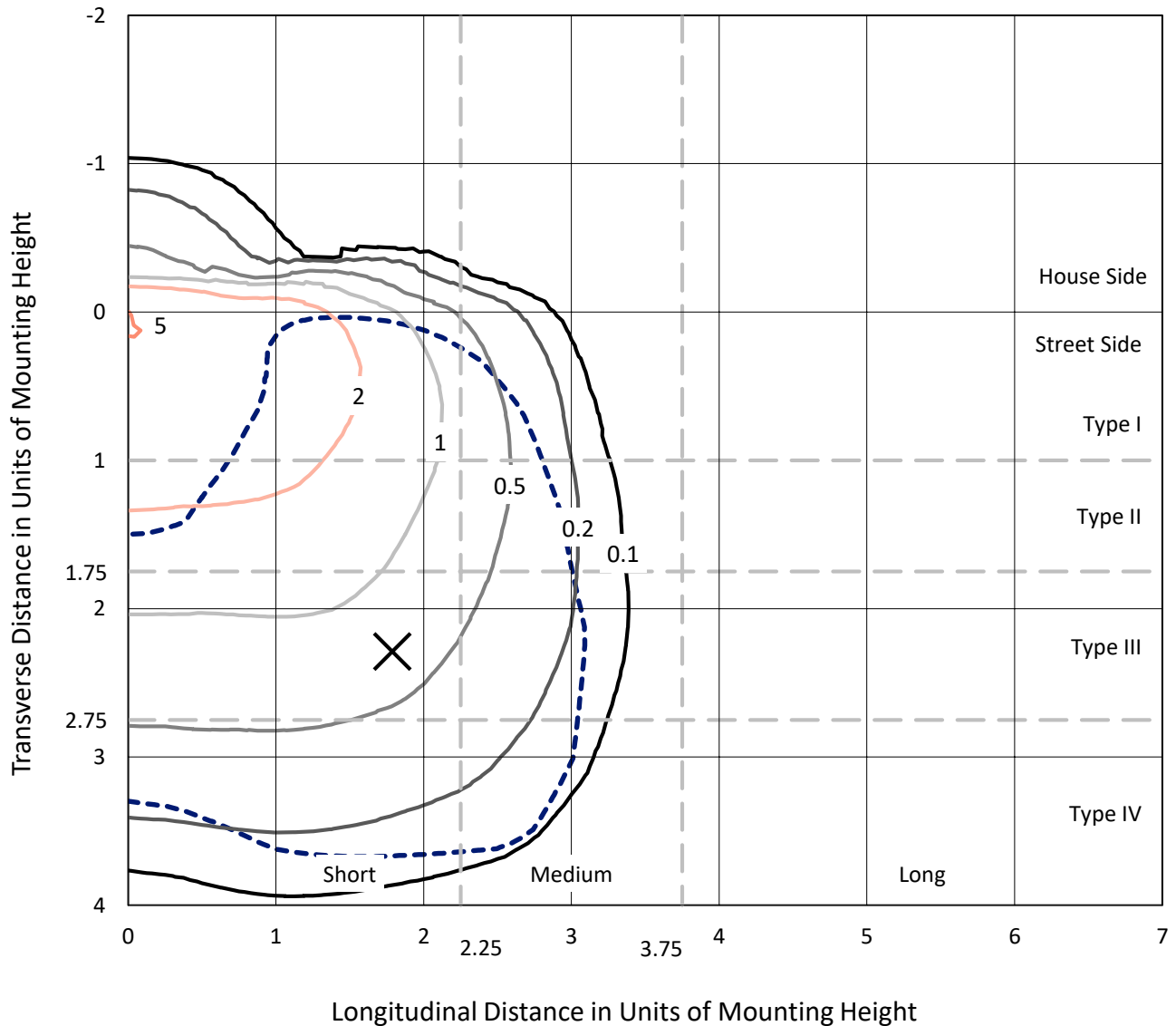


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

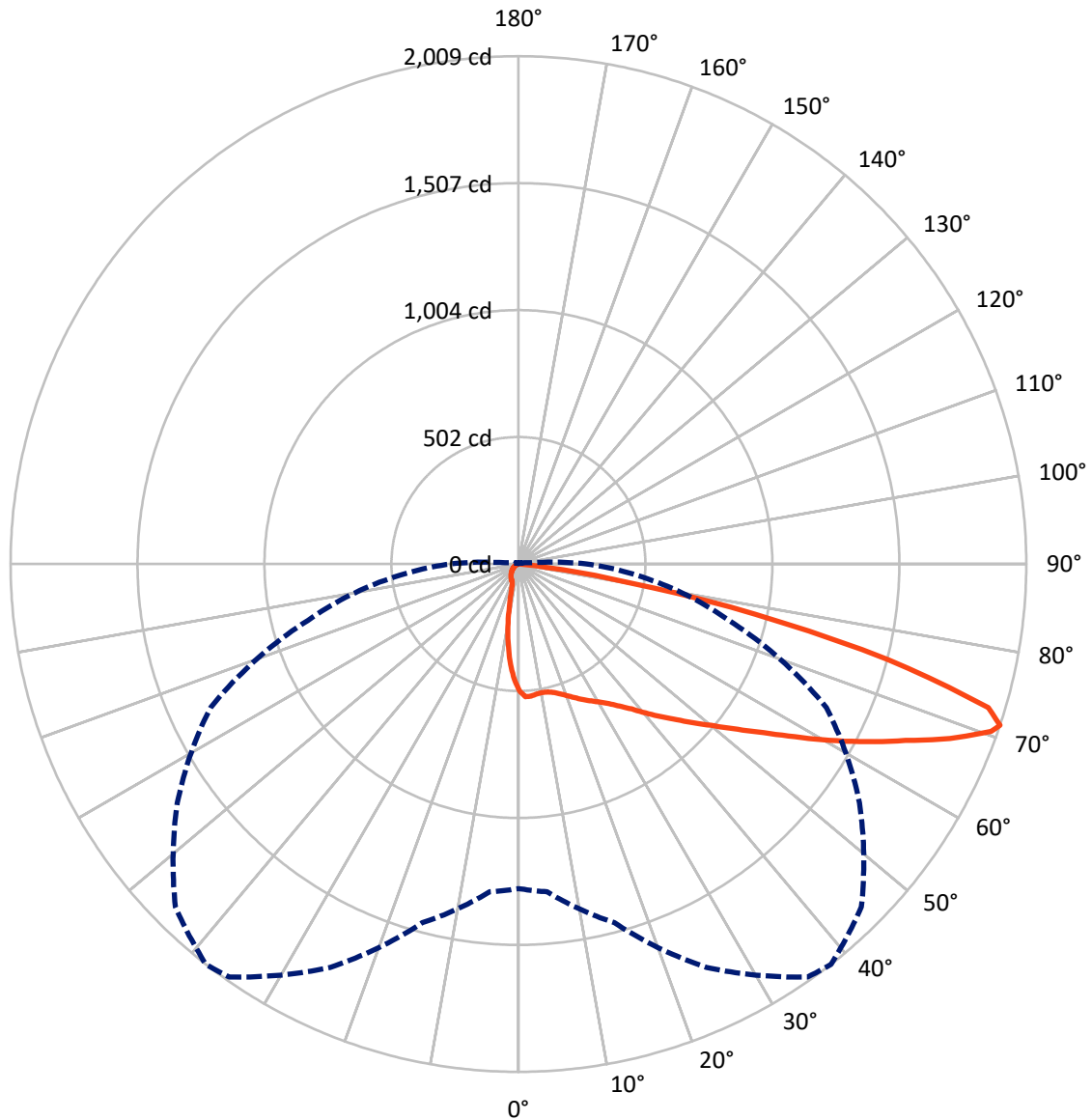


Based on 10 foot mounting height. Maximum calculated value = 5.2 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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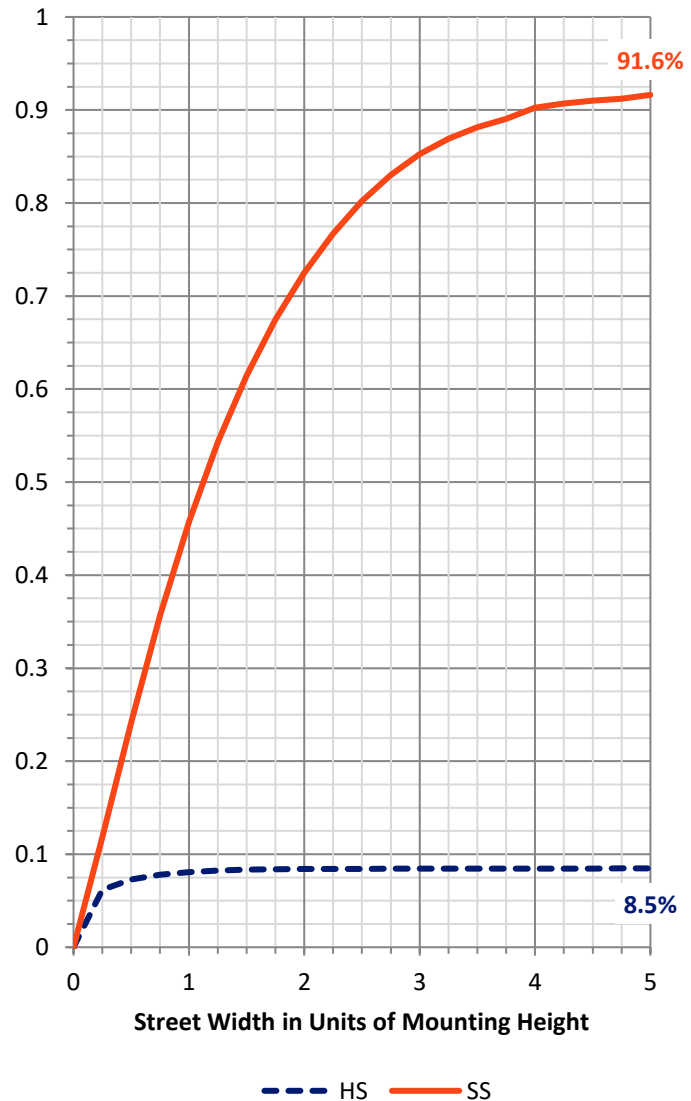
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 232.4 | 0.0 | 232.4 |
| | % Fixture | 8.5 | 0.0 | 8.5 |
| Street Side | Lumens | 2488.6 | 0.0 | 2488.6 |
| | % Fixture | 91.5 | 0.0 | 91.5 |
| Total | Lumens | 2721.0 | 0.0 | 2721.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 42.4 | 1.6 |
| 10°-20° | 102.6 | 3.8 |
| 20°-30° | 164.5 | 6.0 |
| 30°-40° | 250.2 | 9.2 |
| 40°-50° | 390.0 | 14.3 |
| 50°-60° | 570.3 | 21.0 |
| 60°-70° | 731.5 | 26.9 |
| 70°-80° | 447.1 | 16.4 |
| 80°-90° | 22.4 | 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° | 2721.0 | 100.0 |
| 0°-180° | 2721.0 | 100.0 |



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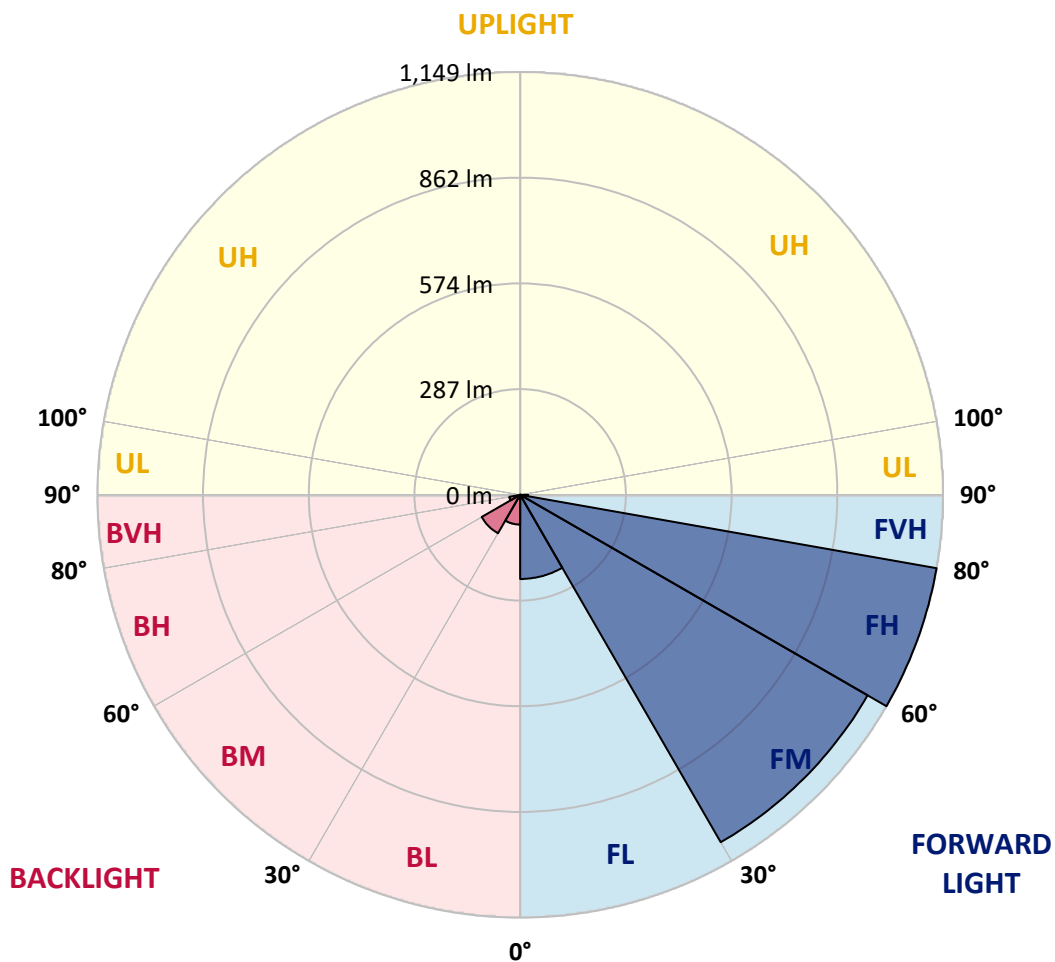
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 228.6 | 8.4 | | | |
| FM | (30°-60°) | 1089.8 | 40.1 | | | |
| FH | (60°-80°) | 1148.7 | 42.2 | | | G1/1800 |
| FVH | (80°-90°) | 21.5 | 0.8 | | | G1/100 |
| BL | (0°-30°) | 80.8 | 3.0 | B0/110 | | |
| BM | (30°-60°) | 120.7 | 4.4 | B0/220 | | |
| BH | (60°-80°) | 29.9 | 1.1 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 1.0 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B0-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 38° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 501.6 | 501.6 | 501.6 | 501.6 | 501.6 | 501.6 | 501.6 | 501.6 | 501.6 | 501.6 | 501.6 |
| 2.5° | 531.3 | 529.9 | 531.3 | 529.9 | 527.1 | 525.7 | 523.8 | 518.6 | 513.9 | 508.2 | 499.7 |
| 5° | 532.3 | 531.3 | 531.3 | 529.4 | 526.1 | 524.7 | 522.8 | 517.7 | 511.5 | 503.0 | 490.3 |
| 7.5° | 527.1 | 526.6 | 525.7 | 523.8 | 520.0 | 519.1 | 517.7 | 511.5 | 505.4 | 496.4 | 480.9 |
| 10° | 518.6 | 519.5 | 519.1 | 519.1 | 517.7 | 516.7 | 515.8 | 508.7 | 502.1 | 491.7 | 475.2 |
| 12.5° | 510.6 | 511.5 | 513.9 | 517.7 | 519.1 | 519.5 | 519.5 | 512.5 | 504.5 | 493.1 | 476.2 |
| 15° | 505.4 | 507.3 | 513.9 | 521.4 | 525.7 | 527.1 | 528.5 | 521.0 | 511.5 | 499.3 | 481.3 |
| 17.5° | 504.0 | 506.8 | 519.5 | 531.3 | 539.3 | 540.3 | 540.3 | 530.9 | 521.0 | 506.8 | 487.5 |
| 20° | 508.7 | 512.5 | 529.0 | 545.5 | 555.4 | 556.3 | 554.4 | 542.2 | 530.4 | 514.8 | 492.7 |
| 22.5° | 522.8 | 526.1 | 545.0 | 564.3 | 573.8 | 574.7 | 570.5 | 553.5 | 540.8 | 528.0 | 499.7 |
| 25° | 547.4 | 549.2 | 569.5 | 587.9 | 593.1 | 594.5 | 587.4 | 567.2 | 552.5 | 540.8 | 509.6 |
| 27.5° | 579.9 | 580.8 | 599.2 | 612.9 | 613.8 | 613.4 | 605.8 | 584.6 | 570.0 | 560.1 | 524.7 |
| 30° | 613.8 | 615.2 | 630.3 | 639.3 | 635.5 | 633.6 | 627.0 | 604.4 | 591.2 | 583.7 | 546.4 |
| 32.5° | 645.4 | 646.8 | 663.3 | 668.0 | 659.6 | 658.1 | 653.4 | 629.4 | 618.1 | 621.8 | 577.5 |
| 35° | 676.5 | 676.5 | 695.4 | 697.7 | 690.2 | 690.2 | 690.2 | 661.4 | 659.6 | 672.3 | 620.9 |
| 37.5° | 704.3 | 709.1 | 728.9 | 727.9 | 726.5 | 727.4 | 730.3 | 708.6 | 715.2 | 736.9 | 677.9 |
| 40° | 727.9 | 734.0 | 760.4 | 762.8 | 768.9 | 774.1 | 778.4 | 767.0 | 782.6 | 818.0 | 751.0 |
| 42.5° | 749.1 | 756.2 | 790.1 | 801.0 | 818.0 | 825.0 | 833.1 | 830.2 | 864.6 | 929.2 | 844.4 |
| 45° | 776.5 | 784.0 | 818.9 | 844.8 | 868.4 | 877.8 | 895.8 | 908.0 | 965.1 | 1038.6 | 945.3 |
| 47.5° | 812.8 | 818.0 | 850.0 | 891.0 | 923.1 | 940.1 | 967.9 | 999.5 | 1068.8 | 1154.6 | 1035.3 |
| 50° | 862.3 | 862.8 | 886.8 | 940.1 | 987.7 | 1006.1 | 1054.2 | 1095.2 | 1181.9 | 1256.9 | 1100.4 |
| 52.5° | 917.0 | 914.1 | 933.0 | 1000.4 | 1060.8 | 1085.7 | 1142.3 | 1199.4 | 1286.6 | 1330.9 | 1129.6 |
| 55° | 968.8 | 970.2 | 982.0 | 1064.5 | 1152.7 | 1176.7 | 1248.4 | 1306.4 | 1382.3 | 1376.2 | 1145.6 |
| 57.5° | 1028.7 | 1028.2 | 1043.3 | 1134.8 | 1260.2 | 1288.0 | 1363.0 | 1410.6 | 1440.3 | 1408.7 | 1148.4 |
| 60° | 1085.3 | 1083.9 | 1107.0 | 1218.7 | 1374.7 | 1415.8 | 1483.2 | 1481.3 | 1498.3 | 1429.4 | 1146.1 |
| 62.5° | 1135.7 | 1139.0 | 1179.6 | 1316.3 | 1503.0 | 1547.3 | 1581.2 | 1557.7 | 1562.4 | 1453.5 | 1116.9 |
| 65° | 1197.0 | 1203.1 | 1268.7 | 1434.6 | 1661.4 | 1682.6 | 1695.8 | 1657.6 | 1610.5 | 1434.1 | 1028.2 |
| 67.5° | 1274.3 | 1292.7 | 1385.1 | 1609.1 | 1826.4 | 1841.0 | 1841.5 | 1718.0 | 1608.6 | 1336.6 | 864.6 |
| 70° | 1305.0 | 1324.3 | 1471.4 | 1747.2 | 1965.5 | 1983.9 | 1926.3 | 1708.5 | 1481.8 | 1046.6 | 583.7 |
| 71° | 1283.8 | 1301.2 | 1469.0 | 1760.4 | 1994.2 | 2008.8 | 1918.8 | 1646.8 | 1343.6 | 862.3 | 452.1 |
| 72.5° | 1130.5 | 1175.8 | 1378.5 | 1677.4 | 1942.8 | 1943.3 | 1796.7 | 1501.1 | 1068.8 | 538.4 | 227.2 |
| 75° | 610.5 | 665.2 | 1010.3 | 1276.7 | 1498.7 | 1510.5 | 1382.3 | 1042.4 | 517.2 | 139.5 | 55.2 |
| 77.5° | 201.3 | 226.8 | 453.1 | 662.9 | 940.1 | 958.5 | 845.3 | 463.0 | 163.1 | 47.1 | 28.8 |
| 80° | 126.3 | 129.2 | 153.2 | 278.6 | 418.2 | 433.7 | 347.9 | 187.6 | 73.5 | 25.9 | 19.8 |
| 82.5° | 21.2 | 25.5 | 72.1 | 82.0 | 147.6 | 116.9 | 79.2 | 95.7 | 34.4 | 11.8 | 17.0 |
| 85° | 0.0 | 0.0 | 0.5 | 0.5 | 2.4 | 0.5 | 0.5 | 19.3 | 1.9 | 1.9 | 9.0 |
| 87.5° | 0.0 | 0.0 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 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° | 501.6 | 501.6 | 501.6 | 501.6 | 501.6 | 501.6 | 501.6 | 501.6 | 501.6 | 501.6 | 501.6 |
| 2.5° | 496.0 | 492.2 | 484.6 | 476.6 | 466.7 | 458.2 | 455.4 | 449.3 | 446.5 | 444.1 | 444.1 |
| 5° | 482.3 | 475.7 | 459.7 | 443.2 | 427.1 | 410.2 | 394.6 | 380.0 | 372.9 | 363.0 | 367.7 |
| 7.5° | 471.0 | 459.7 | 437.0 | 411.1 | 378.1 | 344.6 | 318.7 | 296.1 | 277.2 | 271.1 | 266.8 |
| 10° | 463.0 | 448.8 | 415.8 | 376.2 | 328.1 | 280.5 | 240.4 | 203.2 | 181.5 | 168.3 | 168.3 |
| 12.5° | 462.0 | 444.1 | 401.2 | 340.4 | 271.1 | 206.5 | 157.0 | 121.6 | 104.2 | 96.2 | 95.7 |
| 15° | 465.3 | 443.6 | 388.0 | 307.9 | 218.8 | 143.3 | 98.1 | 82.5 | 78.3 | 77.3 | 77.3 |
| 17.5° | 468.1 | 443.2 | 372.4 | 271.1 | 161.2 | 94.3 | 77.8 | 75.0 | 74.0 | 73.5 | 73.5 |
| 20° | 471.0 | 440.8 | 354.5 | 229.6 | 114.1 | 76.8 | 72.6 | 71.2 | 70.7 | 70.2 | 70.2 |
| 22.5° | 474.7 | 438.4 | 336.1 | 182.5 | 84.4 | 71.7 | 69.3 | 67.9 | 67.4 | 67.4 | 67.4 |
| 25° | 479.9 | 437.0 | 313.5 | 138.1 | 72.6 | 67.9 | 65.5 | 64.6 | 64.6 | 64.1 | 64.1 |
| 27.5° | 489.8 | 438.4 | 289.0 | 99.0 | 67.9 | 64.1 | 62.7 | 61.8 | 61.8 | 61.3 | 61.3 |
| 30° | 503.5 | 442.7 | 258.4 | 77.3 | 64.1 | 60.3 | 58.9 | 58.5 | 58.0 | 58.0 | 58.0 |
| 32.5° | 522.8 | 449.3 | 224.9 | 66.0 | 59.4 | 56.6 | 55.2 | 54.7 | 54.7 | 54.7 | 54.2 |
| 35° | 552.5 | 463.0 | 183.9 | 60.3 | 55.2 | 52.3 | 50.9 | 50.9 | 50.9 | 50.4 | 50.9 |
| 37.5° | 597.8 | 485.1 | 142.4 | 55.6 | 50.4 | 48.1 | 47.1 | 46.7 | 46.7 | 46.7 | 46.7 |
| 40° | 654.8 | 521.0 | 103.7 | 51.4 | 46.2 | 43.8 | 42.9 | 42.4 | 42.0 | 42.0 | 42.0 |
| 42.5° | 728.4 | 560.6 | 75.4 | 46.7 | 42.4 | 40.1 | 39.1 | 38.2 | 37.2 | 36.8 | 36.8 |
| 45° | 804.8 | 607.7 | 58.9 | 42.9 | 38.7 | 36.8 | 35.8 | 34.4 | 33.0 | 31.6 | 31.6 |
| 47.5° | 878.8 | 644.0 | 50.4 | 38.7 | 35.4 | 33.5 | 32.5 | 30.6 | 28.3 | 26.9 | 26.9 |
| 50° | 925.5 | 655.3 | 45.3 | 34.9 | 32.1 | 30.6 | 29.2 | 26.9 | 23.6 | 22.2 | 22.2 |
| 52.5° | 940.1 | 634.6 | 40.5 | 31.6 | 29.2 | 27.8 | 25.9 | 22.6 | 19.3 | 17.4 | 17.4 |
| 55° | 945.7 | 594.5 | 35.8 | 29.2 | 26.4 | 24.5 | 22.2 | 18.9 | 15.6 | 13.7 | 13.7 |
| 57.5° | 938.7 | 537.9 | 32.1 | 26.4 | 23.6 | 21.7 | 18.9 | 15.1 | 11.8 | 10.4 | 10.4 |
| 60° | 914.6 | 455.9 | 28.8 | 23.6 | 20.7 | 18.4 | 15.6 | 11.8 | 9.0 | 7.1 | 7.5 |
| 62.5° | 849.6 | 352.6 | 25.0 | 19.8 | 17.9 | 15.6 | 12.3 | 9.0 | 5.7 | 4.7 | 4.7 |
| 65° | 745.8 | 244.2 | 21.2 | 16.5 | 15.1 | 12.7 | 9.4 | 6.1 | 3.3 | 2.8 | 2.8 |
| 67.5° | 605.8 | 157.9 | 16.5 | 13.7 | 12.7 | 10.4 | 7.1 | 3.8 | 1.9 | 1.9 | 1.4 |
| 70° | 380.5 | 78.3 | 13.2 | 10.4 | 10.4 | 8.0 | 5.2 | 2.4 | 1.4 | 1.4 | 1.4 |
| 71° | 269.2 | 53.3 | 11.8 | 9.4 | 9.4 | 7.5 | 4.7 | 1.9 | 1.4 | 1.4 | 1.4 |
| 72.5° | 121.6 | 33.5 | 9.9 | 8.5 | 8.0 | 6.1 | 4.2 | 1.9 | 1.9 | 1.9 | 1.9 |
| 75° | 38.2 | 18.4 | 7.1 | 6.6 | 6.6 | 5.2 | 3.8 | 2.4 | 2.4 | 2.4 | 2.4 |
| 77.5° | 25.5 | 14.1 | 4.7 | 4.2 | 5.2 | 5.2 | 3.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| 80° | 20.7 | 7.5 | 2.8 | 2.8 | 3.8 | 4.7 | 3.8 | 2.8 | 3.3 | 2.8 | 2.8 |
| 82.5° | 20.3 | 3.8 | 0.9 | 1.4 | 2.4 | 2.8 | 2.8 | 2.4 | 2.8 | 2.8 | 2.8 |
| 85° | 8.5 | 0.9 | 0.5 | 0.9 | 0.9 | 1.4 | 1.4 | 1.9 | 2.4 | 2.4 | 2.4 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 0.9 | 0.9 | 1.4 | 1.9 | 1.9 |
| 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)