

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: P401183

Luminaire Tested: **ENT-SA1B-760-U-SL4-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401183
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: ENT-SA1B-760-U-SL4-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 5700K, 450mA 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: 2813 lumens
Efficiency: N/A
Efficacy: 110.7 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

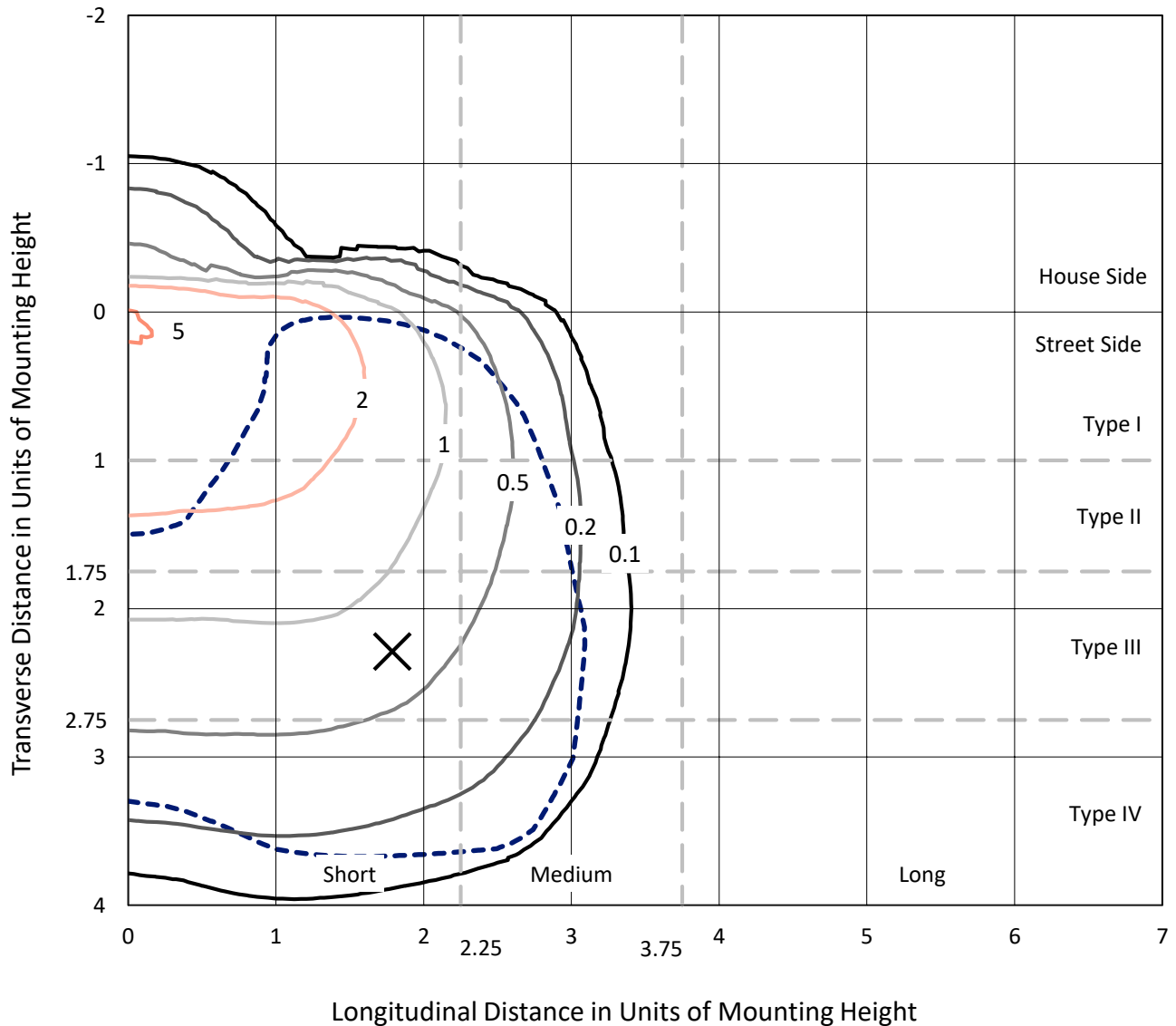
Input Watts (W): 25.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

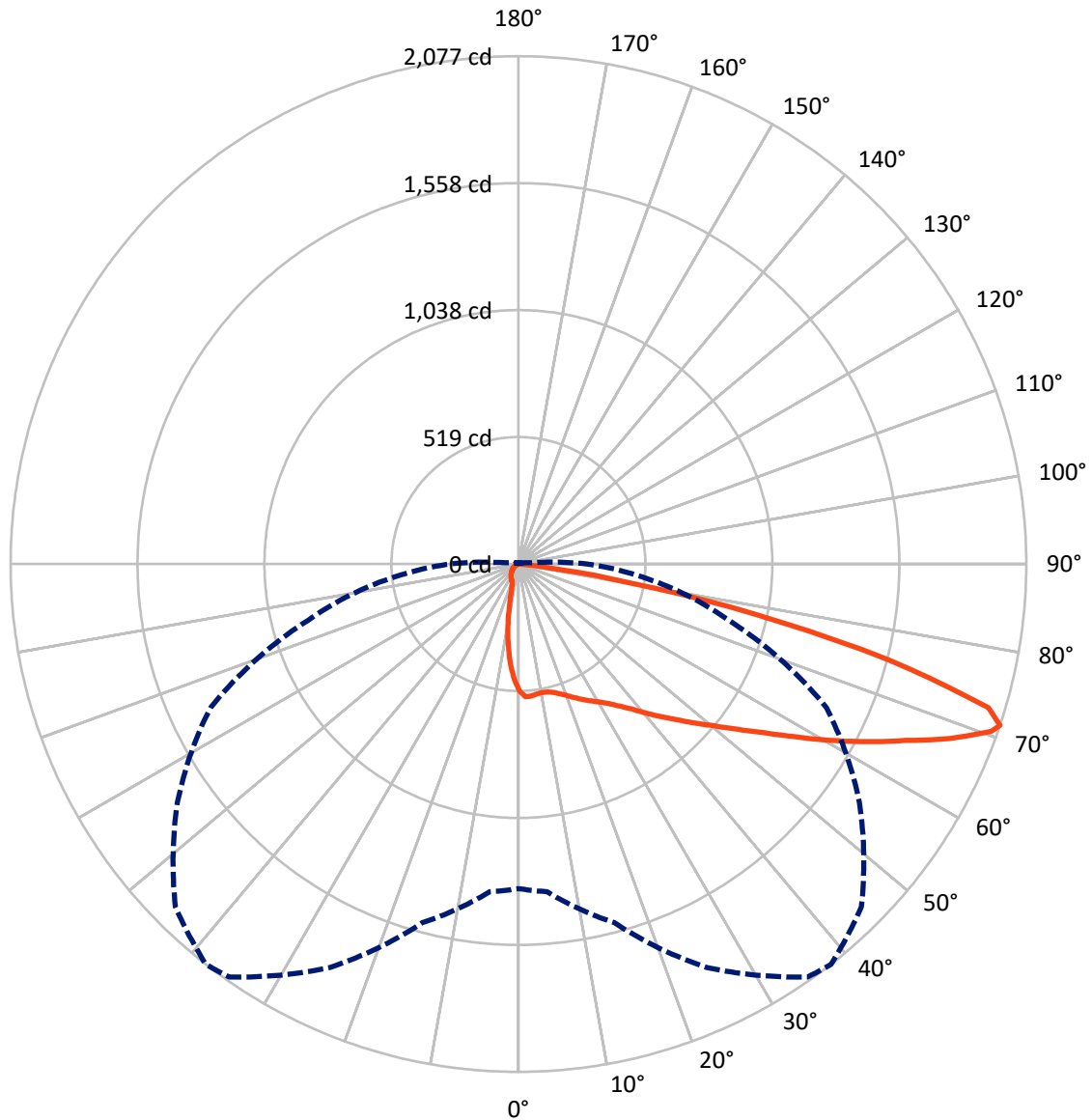
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.3 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 | 240.3 | 0.0 | 240.3 |
| | % Fixture | 8.5 | 0.0 | 8.5 |
| Street Side | Lumens | 2572.7 | 0.0 | 2572.7 |
| | % Fixture | 91.5 | 0.0 | 91.5 |
| Total | Lumens | 2813.0 | 0.0 | 2813.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 43.8 | 1.6 |
| 10°-20° | 106.0 | 3.8 |
| 20°-30° | 170.1 | 6.0 |
| 30°-40° | 258.7 | 9.2 |
| 40°-50° | 403.2 | 14.3 |
| 50°-60° | 589.6 | 21.0 |
| 60°-70° | 756.2 | 26.9 |
| 70°-80° | 462.2 | 16.4 |
| 80°-90° | 23.2 | 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° | 2813.0 | 100.0 |
| 0°-180° | 2813.0 | 100.0 |



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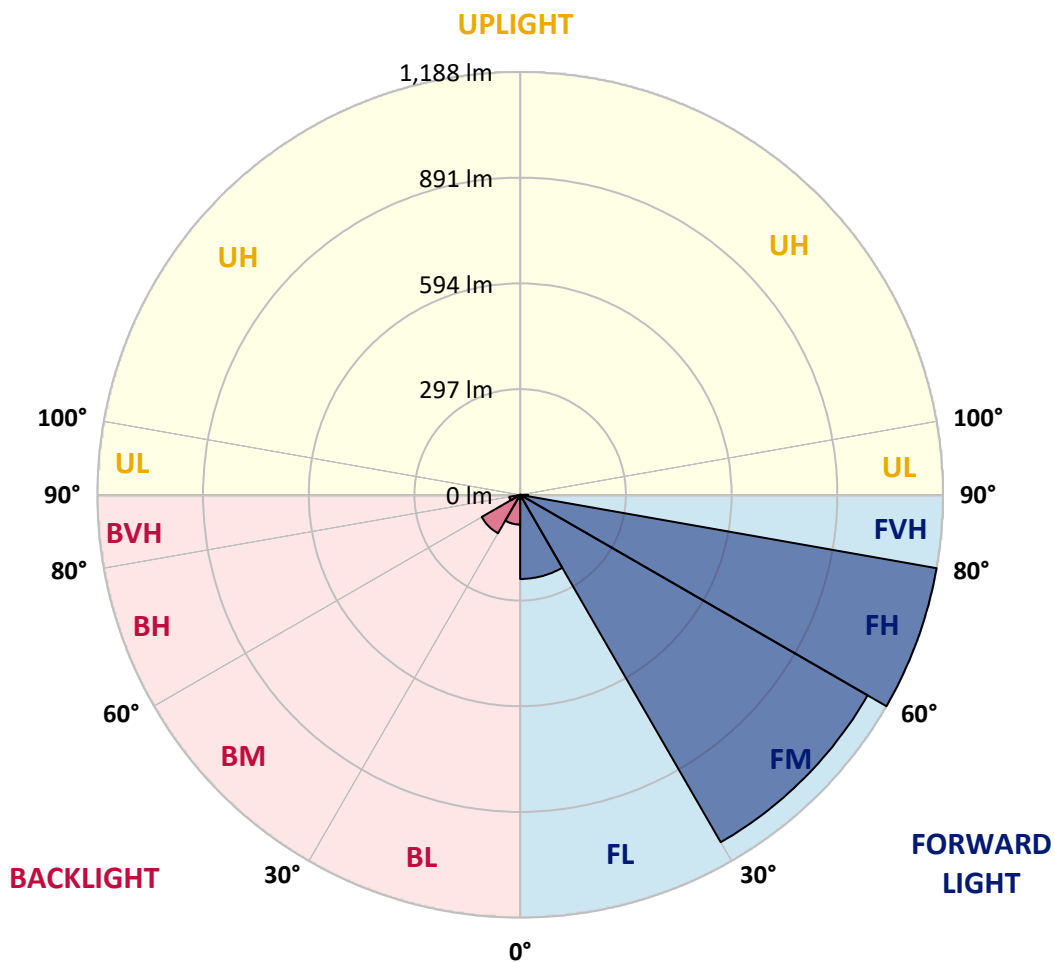
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 236.4 | 8.4 | | | |
| FM | (30°-60°) | 1126.6 | 40.1 | | | |
| FH | (60°-80°) | 1187.5 | 42.2 | | | G1/1800 |
| FVH | (80°-90°) | 22.2 | 0.8 | | | G1/100 |
| BL | (0°-30°) | 83.6 | 3.0 | B0/110 | | |
| BM | (30°-60°) | 124.8 | 4.4 | B0/220 | | |
| BH | (60°-80°) | 30.9 | 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° | 518.6 | 518.6 | 518.6 | 518.6 | 518.6 | 518.6 | 518.6 | 518.6 | 518.6 | 518.6 | 518.6 |
| 2.5° | 549.3 | 547.8 | 549.3 | 547.8 | 544.9 | 543.4 | 541.5 | 536.1 | 531.3 | 525.4 | 516.6 |
| 5° | 550.3 | 549.3 | 549.3 | 547.3 | 543.9 | 542.5 | 540.5 | 535.2 | 528.8 | 520.0 | 506.9 |
| 7.5° | 544.9 | 544.4 | 543.4 | 541.5 | 537.6 | 536.6 | 535.2 | 528.8 | 522.5 | 513.2 | 497.1 |
| 10° | 536.1 | 537.1 | 536.6 | 536.6 | 535.2 | 534.2 | 533.2 | 525.9 | 519.1 | 508.3 | 491.3 |
| 12.5° | 527.8 | 528.8 | 531.3 | 535.2 | 536.6 | 537.1 | 537.1 | 529.8 | 521.5 | 509.8 | 492.3 |
| 15° | 522.5 | 524.4 | 531.3 | 539.1 | 543.4 | 544.9 | 546.4 | 538.6 | 528.8 | 516.1 | 497.6 |
| 17.5° | 521.0 | 523.9 | 537.1 | 549.3 | 557.6 | 558.5 | 558.5 | 548.8 | 538.6 | 523.9 | 504.0 |
| 20° | 525.9 | 529.8 | 546.9 | 563.9 | 574.1 | 575.1 | 573.2 | 560.5 | 548.3 | 532.2 | 509.3 |
| 22.5° | 540.5 | 543.9 | 563.4 | 583.4 | 593.2 | 594.1 | 589.7 | 572.2 | 559.0 | 545.9 | 516.6 |
| 25° | 565.9 | 567.8 | 588.8 | 607.8 | 613.1 | 614.6 | 607.3 | 586.3 | 571.2 | 559.0 | 526.9 |
| 27.5° | 599.5 | 600.5 | 619.5 | 633.6 | 634.6 | 634.1 | 626.3 | 604.4 | 589.3 | 579.0 | 542.5 |
| 30° | 634.6 | 636.0 | 651.6 | 660.9 | 657.0 | 655.1 | 648.2 | 624.8 | 611.2 | 603.4 | 564.9 |
| 32.5° | 667.2 | 668.7 | 685.8 | 690.6 | 681.9 | 680.4 | 675.5 | 650.7 | 639.0 | 642.9 | 597.1 |
| 35° | 699.4 | 699.4 | 718.9 | 721.3 | 713.5 | 713.5 | 713.5 | 683.8 | 681.9 | 695.0 | 641.9 |
| 37.5° | 728.2 | 733.0 | 753.5 | 752.5 | 751.1 | 752.0 | 755.0 | 732.5 | 739.4 | 761.8 | 700.9 |
| 40° | 752.5 | 758.9 | 786.2 | 788.6 | 794.9 | 800.3 | 804.7 | 793.0 | 809.1 | 845.6 | 776.4 |
| 42.5° | 774.5 | 781.8 | 816.9 | 828.1 | 845.6 | 852.9 | 861.2 | 858.3 | 893.9 | 960.6 | 872.9 |
| 45° | 802.7 | 810.5 | 846.6 | 873.4 | 897.8 | 907.5 | 926.0 | 938.7 | 997.7 | 1073.7 | 977.2 |
| 47.5° | 840.3 | 845.6 | 878.8 | 921.2 | 954.3 | 971.9 | 1000.6 | 1033.3 | 1104.9 | 1193.6 | 1070.3 |
| 50° | 891.4 | 891.9 | 916.8 | 971.9 | 1021.1 | 1040.1 | 1089.8 | 1132.2 | 1221.9 | 1299.4 | 1137.6 |
| 52.5° | 948.0 | 945.0 | 964.5 | 1034.2 | 1096.6 | 1122.5 | 1180.9 | 1239.9 | 1330.1 | 1375.9 | 1167.8 |
| 55° | 1001.6 | 1003.0 | 1015.2 | 1100.5 | 1191.7 | 1216.5 | 1290.6 | 1350.6 | 1429.0 | 1422.7 | 1184.4 |
| 57.5° | 1063.5 | 1063.0 | 1078.6 | 1173.1 | 1302.8 | 1331.5 | 1409.0 | 1458.3 | 1489.0 | 1456.3 | 1187.3 |
| 60° | 1122.0 | 1120.5 | 1144.4 | 1259.9 | 1421.2 | 1463.6 | 1533.3 | 1531.4 | 1548.9 | 1477.8 | 1184.8 |
| 62.5° | 1174.1 | 1177.5 | 1219.4 | 1360.8 | 1553.8 | 1599.6 | 1634.7 | 1610.3 | 1615.2 | 1502.6 | 1154.6 |
| 65° | 1237.5 | 1243.8 | 1311.6 | 1483.1 | 1717.6 | 1739.5 | 1753.1 | 1713.7 | 1664.9 | 1482.6 | 1063.0 |
| 67.5° | 1317.4 | 1336.4 | 1431.9 | 1663.5 | 1888.1 | 1903.3 | 1903.7 | 1776.0 | 1663.0 | 1381.7 | 893.9 |
| 70° | 1349.1 | 1369.1 | 1521.1 | 1806.3 | 2031.9 | 2050.9 | 1991.5 | 1766.3 | 1531.9 | 1082.0 | 603.4 |
| 71° | 1327.2 | 1345.2 | 1518.7 | 1819.9 | 2061.7 | 2076.8 | 1983.7 | 1702.5 | 1389.1 | 891.4 | 467.4 |
| 72.5° | 1168.8 | 1215.5 | 1425.1 | 1734.1 | 2008.5 | 2009.0 | 1857.4 | 1551.8 | 1104.9 | 556.6 | 234.9 |
| 75° | 631.2 | 687.7 | 1044.5 | 1319.8 | 1549.4 | 1561.6 | 1429.0 | 1077.6 | 534.7 | 144.3 | 57.0 |
| 77.5° | 208.1 | 234.4 | 468.4 | 685.3 | 971.9 | 990.9 | 873.9 | 478.6 | 168.6 | 48.7 | 29.7 |
| 80° | 130.6 | 133.5 | 158.4 | 288.0 | 432.3 | 448.4 | 359.7 | 194.0 | 76.0 | 26.8 | 20.5 |
| 82.5° | 21.9 | 26.3 | 74.6 | 84.8 | 152.6 | 120.9 | 81.9 | 98.9 | 35.6 | 12.2 | 17.5 |
| 85° | 0.0 | 0.0 | 0.5 | 0.5 | 2.4 | 0.5 | 0.5 | 20.0 | 1.9 | 1.9 | 9.3 |
| 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° | 518.6 | 518.6 | 518.6 | 518.6 | 518.6 | 518.6 | 518.6 | 518.6 | 518.6 | 518.6 | 518.6 |
| 2.5° | 512.7 | 508.8 | 501.0 | 492.8 | 482.5 | 473.7 | 470.8 | 464.5 | 461.6 | 459.1 | 459.1 |
| 5° | 498.6 | 491.8 | 475.2 | 458.1 | 441.6 | 424.0 | 407.9 | 392.8 | 385.5 | 375.3 | 380.2 |
| 7.5° | 486.9 | 475.2 | 451.8 | 425.0 | 390.9 | 356.3 | 329.5 | 306.1 | 286.6 | 280.2 | 275.9 |
| 10° | 478.6 | 464.0 | 429.9 | 388.9 | 339.2 | 290.0 | 248.6 | 210.1 | 187.6 | 174.0 | 174.0 |
| 12.5° | 477.6 | 459.1 | 414.8 | 351.9 | 280.2 | 213.5 | 162.3 | 125.7 | 107.7 | 99.4 | 98.9 |
| 15° | 481.1 | 458.6 | 401.1 | 318.3 | 226.1 | 148.2 | 101.4 | 85.3 | 80.9 | 79.9 | 79.9 |
| 17.5° | 484.0 | 458.1 | 385.0 | 280.2 | 166.7 | 97.5 | 80.4 | 77.5 | 76.5 | 76.0 | 76.0 |
| 20° | 486.9 | 455.7 | 366.5 | 237.4 | 117.9 | 79.4 | 75.1 | 73.6 | 73.1 | 72.6 | 72.6 |
| 22.5° | 490.8 | 453.3 | 347.5 | 188.6 | 87.2 | 74.1 | 71.6 | 70.2 | 69.7 | 69.7 | 69.7 |
| 25° | 496.2 | 451.8 | 324.1 | 142.8 | 75.1 | 70.2 | 67.7 | 66.8 | 66.8 | 66.3 | 66.3 |
| 27.5° | 506.4 | 453.3 | 298.8 | 102.4 | 70.2 | 66.3 | 64.8 | 63.8 | 63.8 | 63.4 | 63.4 |
| 30° | 520.5 | 457.7 | 267.1 | 79.9 | 66.3 | 62.4 | 60.9 | 60.4 | 59.9 | 59.9 | 59.9 |
| 32.5° | 540.5 | 464.5 | 232.5 | 68.2 | 61.4 | 58.5 | 57.0 | 56.5 | 56.5 | 56.5 | 56.0 |
| 35° | 571.2 | 478.6 | 190.1 | 62.4 | 57.0 | 54.1 | 52.6 | 52.6 | 52.6 | 52.2 | 52.6 |
| 37.5° | 618.0 | 501.5 | 147.2 | 57.5 | 52.2 | 49.7 | 48.7 | 48.3 | 48.3 | 48.3 | 48.3 |
| 40° | 677.0 | 538.6 | 107.2 | 53.1 | 47.8 | 45.3 | 44.4 | 43.9 | 43.4 | 43.4 | 43.4 |
| 42.5° | 753.0 | 579.5 | 78.0 | 48.3 | 43.9 | 41.4 | 40.5 | 39.5 | 38.5 | 38.0 | 38.0 |
| 45° | 832.0 | 628.2 | 60.9 | 44.4 | 40.0 | 38.0 | 37.0 | 35.6 | 34.1 | 32.7 | 32.7 |
| 47.5° | 908.5 | 665.8 | 52.2 | 40.0 | 36.6 | 34.6 | 33.6 | 31.7 | 29.2 | 27.8 | 27.8 |
| 50° | 956.7 | 677.5 | 46.8 | 36.1 | 33.1 | 31.7 | 30.2 | 27.8 | 24.4 | 22.9 | 22.9 |
| 52.5° | 971.9 | 656.0 | 41.9 | 32.7 | 30.2 | 28.8 | 26.8 | 23.4 | 20.0 | 18.0 | 18.0 |
| 55° | 977.7 | 614.6 | 37.0 | 30.2 | 27.3 | 25.3 | 22.9 | 19.5 | 16.1 | 14.1 | 14.1 |
| 57.5° | 970.4 | 556.1 | 33.1 | 27.3 | 24.4 | 22.4 | 19.5 | 15.6 | 12.2 | 10.7 | 10.7 |
| 60° | 945.5 | 471.3 | 29.7 | 24.4 | 21.4 | 19.0 | 16.1 | 12.2 | 9.3 | 7.3 | 7.8 |
| 62.5° | 878.3 | 364.6 | 25.8 | 20.5 | 18.5 | 16.1 | 12.7 | 9.3 | 5.8 | 4.9 | 4.9 |
| 65° | 771.0 | 252.5 | 21.9 | 17.1 | 15.6 | 13.2 | 9.7 | 6.3 | 3.4 | 2.9 | 2.9 |
| 67.5° | 626.3 | 163.3 | 17.1 | 14.1 | 13.2 | 10.7 | 7.3 | 3.9 | 1.9 | 1.9 | 1.5 |
| 70° | 393.3 | 80.9 | 13.6 | 10.7 | 10.7 | 8.3 | 5.4 | 2.4 | 1.5 | 1.5 | 1.5 |
| 71° | 278.3 | 55.1 | 12.2 | 9.7 | 9.7 | 7.8 | 4.9 | 1.9 | 1.5 | 1.5 | 1.5 |
| 72.5° | 125.7 | 34.6 | 10.2 | 8.8 | 8.3 | 6.3 | 4.4 | 1.9 | 1.9 | 1.9 | 1.9 |
| 75° | 39.5 | 19.0 | 7.3 | 6.8 | 6.8 | 5.4 | 3.9 | 2.4 | 2.4 | 2.4 | 2.4 |
| 77.5° | 26.3 | 14.6 | 4.9 | 4.4 | 5.4 | 5.4 | 3.9 | 2.9 | 2.9 | 2.9 | 2.9 |
| 80° | 21.4 | 7.8 | 2.9 | 2.9 | 3.9 | 4.9 | 3.9 | 2.9 | 3.4 | 2.9 | 2.9 |
| 82.5° | 21.0 | 3.9 | 1.0 | 1.5 | 2.4 | 2.9 | 2.9 | 2.4 | 2.9 | 2.9 | 2.9 |
| 85° | 8.8 | 1.0 | 0.5 | 1.0 | 1.0 | 1.5 | 1.5 | 1.9 | 2.4 | 2.4 | 2.4 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 1.0 | 1.0 | 1.5 | 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)