

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: P401417

Luminaire Tested: **ENT-SA1D-722-U-SL4-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401417
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-SA1D-722-U-SL4-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 2200K, 800mA 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: 3406 lumens
Efficiency: N/A
Efficacy: 79.0 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

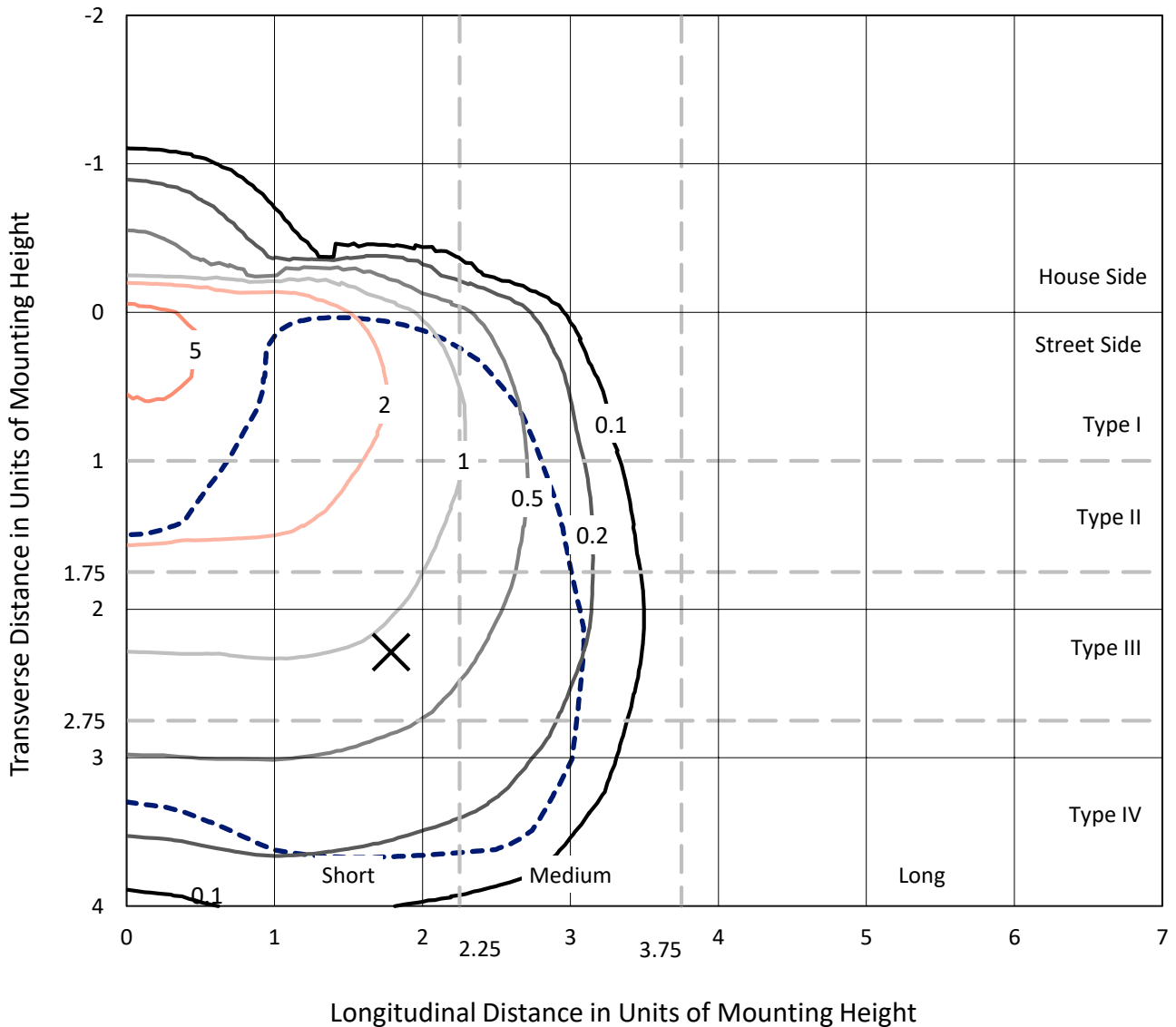
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

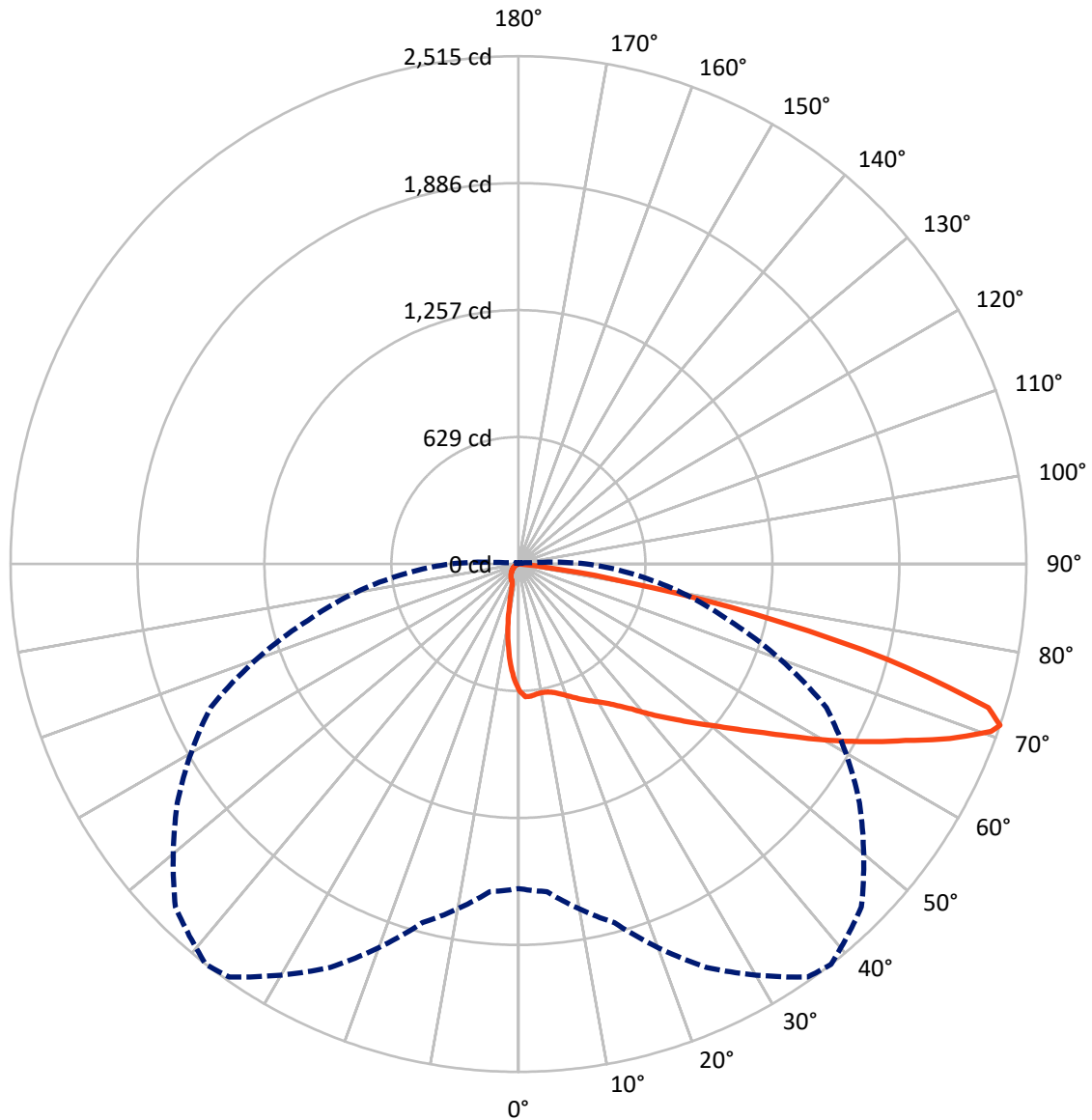


Based on 10 foot mounting height. Maximum calculated value = 6.5 fc
 Type IV - Short - Semi-Cutoff

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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 | 290.9 | 0.0 | 290.9 |
| | % Fixture | 8.5 | 0.0 | 8.5 |
| Street Side | Lumens | 3115.1 | 0.0 | 3115.1 |
| | % Fixture | 91.5 | 0.0 | 91.5 |
| Total | Lumens | 3406.0 | 0.0 | 3406.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 53.0 | 1.6 |
| 10°-20° | 128.4 | 3.8 |
| 20°-30° | 205.9 | 6.0 |
| 30°-40° | 313.2 | 9.2 |
| 40°-50° | 488.2 | 14.3 |
| 50°-60° | 713.9 | 21.0 |
| 60°-70° | 915.6 | 26.9 |
| 70°-80° | 559.7 | 16.4 |
| 80°-90° | 28.1 | 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° | 3406.0 | 100.0 |
| 0°-180° | 3406.0 | 100.0 |



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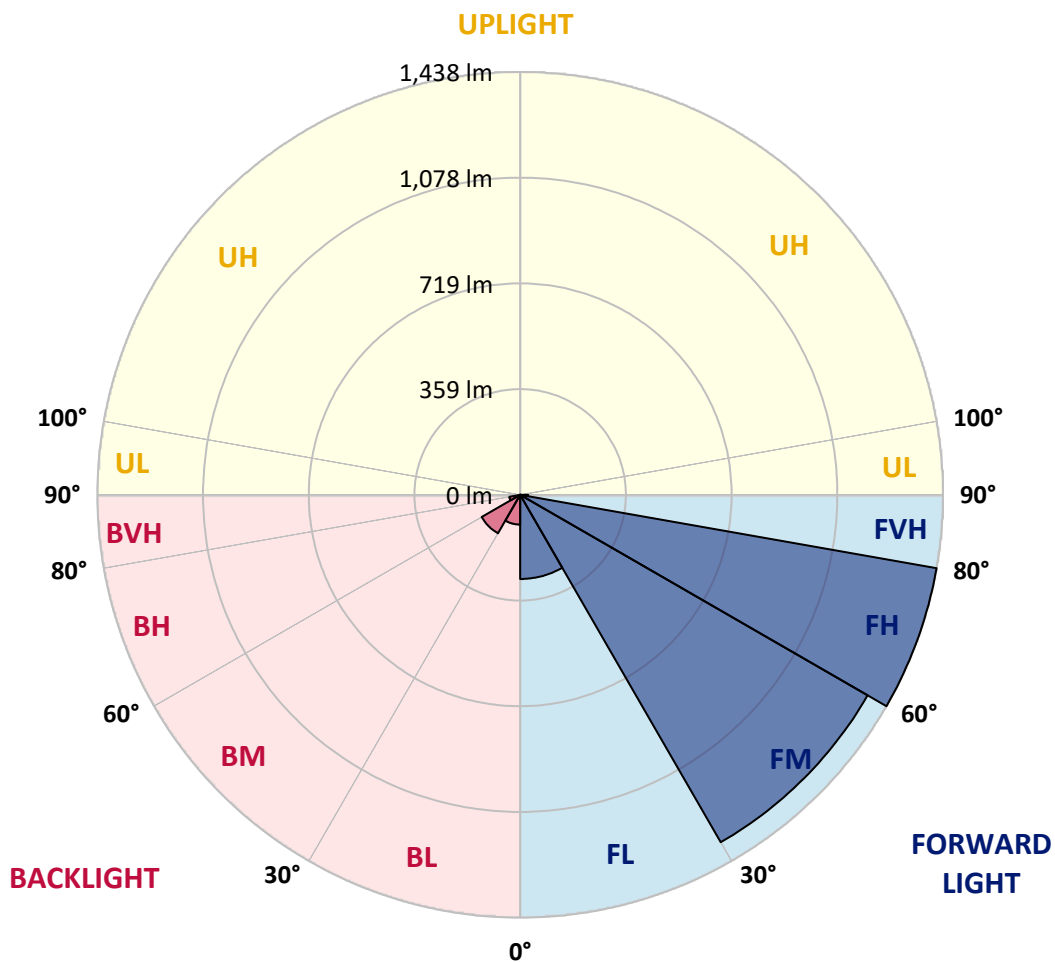
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 286.2 | 8.4 | | | |
| FM (30°-60°) | 1364.1 | 40.1 | | | |
| FH (60°-80°) | 1437.9 | 42.2 | | | G1/1800 |
| FVH (80°-90°) | 26.9 | 0.8 | | | G1/100 |
| BL (0°-30°) | 101.2 | 3.0 | B0/110 | | |
| BM (30°-60°) | 151.1 | 4.4 | B0/220 | | |
| BH (60°-80°) | 37.4 | 1.1 | B0/110 | | G0/110 |
| BVH (80°-90°) | 1.2 | 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° | 627.9 | 627.9 | 627.9 | 627.9 | 627.9 | 627.9 | 627.9 | 627.9 | 627.9 | 627.9 | 627.9 |
| 2.5° | 665.1 | 663.3 | 665.1 | 663.3 | 659.8 | 658.0 | 655.6 | 649.1 | 643.2 | 636.2 | 625.5 |
| 5° | 666.3 | 665.1 | 665.1 | 662.7 | 658.6 | 656.8 | 654.5 | 648.0 | 640.3 | 629.7 | 613.7 |
| 7.5° | 659.8 | 659.2 | 658.0 | 655.6 | 650.9 | 649.7 | 648.0 | 640.3 | 632.6 | 621.4 | 601.9 |
| 10° | 649.1 | 650.3 | 649.7 | 649.7 | 648.0 | 646.8 | 645.6 | 636.8 | 628.5 | 615.5 | 594.9 |
| 12.5° | 639.1 | 640.3 | 643.2 | 648.0 | 649.7 | 650.3 | 650.3 | 641.5 | 631.4 | 617.3 | 596.0 |
| 15° | 632.6 | 635.0 | 643.2 | 652.7 | 658.0 | 659.8 | 661.5 | 652.1 | 640.3 | 625.0 | 602.5 |
| 17.5° | 630.9 | 634.4 | 650.3 | 665.1 | 675.1 | 676.3 | 676.3 | 664.5 | 652.1 | 634.4 | 610.2 |
| 20° | 636.8 | 641.5 | 662.1 | 682.8 | 695.2 | 696.4 | 694.0 | 678.7 | 663.9 | 644.4 | 616.7 |
| 22.5° | 654.5 | 658.6 | 682.2 | 706.4 | 718.2 | 719.4 | 714.1 | 692.8 | 676.9 | 661.0 | 625.5 |
| 25° | 685.1 | 687.5 | 712.9 | 735.9 | 742.4 | 744.2 | 735.3 | 709.9 | 691.6 | 676.9 | 637.9 |
| 27.5° | 725.9 | 727.0 | 750.1 | 767.2 | 768.4 | 767.8 | 758.3 | 731.8 | 713.5 | 701.1 | 656.8 |
| 30° | 768.4 | 770.1 | 789.0 | 800.2 | 795.5 | 793.1 | 784.9 | 756.6 | 740.0 | 730.6 | 684.0 |
| 32.5° | 807.9 | 809.7 | 830.3 | 836.2 | 825.6 | 823.8 | 817.9 | 787.8 | 773.7 | 778.4 | 722.9 |
| 35° | 846.8 | 846.8 | 870.4 | 873.4 | 864.0 | 864.0 | 864.0 | 828.0 | 825.6 | 841.5 | 777.2 |
| 37.5° | 881.7 | 887.6 | 912.3 | 911.2 | 909.4 | 910.6 | 914.1 | 887.0 | 895.2 | 922.4 | 848.6 |
| 40° | 911.2 | 918.8 | 951.9 | 954.8 | 962.5 | 969.0 | 974.3 | 960.1 | 979.6 | 1023.9 | 940.1 |
| 42.5° | 937.7 | 946.6 | 989.1 | 1002.6 | 1023.9 | 1032.7 | 1042.8 | 1039.2 | 1082.3 | 1163.2 | 1056.9 |
| 45° | 972.0 | 981.4 | 1025.1 | 1057.5 | 1087.0 | 1098.8 | 1121.3 | 1136.6 | 1208.0 | 1300.1 | 1183.2 |
| 47.5° | 1017.4 | 1023.9 | 1064.0 | 1115.4 | 1155.5 | 1176.7 | 1211.5 | 1251.1 | 1337.8 | 1445.2 | 1295.9 |
| 50° | 1079.4 | 1079.9 | 1110.0 | 1176.7 | 1236.3 | 1259.3 | 1319.5 | 1370.9 | 1479.5 | 1573.3 | 1377.4 |
| 52.5° | 1147.8 | 1144.3 | 1167.9 | 1252.3 | 1327.8 | 1359.1 | 1429.9 | 1501.3 | 1610.5 | 1665.9 | 1414.0 |
| 55° | 1212.7 | 1214.5 | 1229.2 | 1332.5 | 1442.9 | 1473.0 | 1562.7 | 1635.3 | 1730.3 | 1722.6 | 1434.0 |
| 57.5° | 1287.7 | 1287.1 | 1306.0 | 1420.5 | 1577.4 | 1612.2 | 1706.1 | 1765.7 | 1802.9 | 1763.3 | 1437.6 |
| 60° | 1358.5 | 1356.7 | 1385.6 | 1525.5 | 1720.8 | 1772.2 | 1856.6 | 1854.2 | 1875.4 | 1789.3 | 1434.6 |
| 62.5° | 1421.6 | 1425.8 | 1476.5 | 1647.7 | 1881.3 | 1936.8 | 1979.3 | 1949.8 | 1955.7 | 1819.4 | 1398.0 |
| 65° | 1498.4 | 1506.0 | 1588.1 | 1795.8 | 2079.6 | 2106.2 | 2122.7 | 2074.9 | 2015.9 | 1795.2 | 1287.1 |
| 67.5° | 1595.1 | 1618.1 | 1733.8 | 2014.1 | 2286.2 | 2304.5 | 2305.1 | 2150.4 | 2013.5 | 1673.0 | 1082.3 |
| 70° | 1633.5 | 1657.7 | 1841.8 | 2187.0 | 2460.3 | 2483.3 | 2411.3 | 2138.6 | 1854.8 | 1310.1 | 730.6 |
| 71° | 1606.9 | 1628.8 | 1838.9 | 2203.6 | 2496.3 | 2514.6 | 2401.8 | 2061.3 | 1681.9 | 1079.4 | 565.9 |
| 72.5° | 1415.1 | 1471.8 | 1725.6 | 2099.7 | 2431.9 | 2432.5 | 2249.0 | 1879.0 | 1337.8 | 673.9 | 284.4 |
| 75° | 764.2 | 832.7 | 1264.7 | 1598.1 | 1876.0 | 1890.8 | 1730.3 | 1304.8 | 647.4 | 174.7 | 69.0 |
| 77.5° | 252.0 | 283.9 | 567.1 | 829.7 | 1176.7 | 1199.7 | 1058.1 | 579.5 | 204.2 | 59.0 | 36.0 |
| 80° | 158.2 | 161.7 | 191.8 | 348.8 | 523.4 | 542.9 | 435.5 | 234.9 | 92.1 | 32.5 | 24.8 |
| 82.5° | 26.6 | 31.9 | 90.3 | 102.7 | 184.7 | 146.4 | 99.1 | 119.8 | 43.1 | 14.8 | 21.2 |
| 85° | 0.0 | 0.0 | 0.6 | 0.6 | 3.0 | 0.6 | 0.6 | 24.2 | 2.4 | 2.4 | 11.2 |
| 87.5° | 0.0 | 0.0 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 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° | 627.9 | 627.9 | 627.9 | 627.9 | 627.9 | 627.9 | 627.9 | 627.9 | 627.9 | 627.9 | 627.9 |
| 2.5° | 620.8 | 616.1 | 606.7 | 596.6 | 584.2 | 573.6 | 570.1 | 562.4 | 558.9 | 555.9 | 555.9 |
| 5° | 603.7 | 595.4 | 575.4 | 554.7 | 534.7 | 513.4 | 493.9 | 475.6 | 466.8 | 454.4 | 460.3 |
| 7.5° | 589.5 | 575.4 | 547.1 | 514.6 | 473.3 | 431.4 | 398.9 | 370.6 | 347.0 | 339.3 | 334.0 |
| 10° | 579.5 | 561.8 | 520.5 | 470.9 | 410.7 | 351.1 | 301.0 | 254.3 | 227.2 | 210.7 | 210.7 |
| 12.5° | 578.3 | 555.9 | 502.2 | 426.1 | 339.3 | 258.5 | 196.5 | 152.3 | 130.4 | 120.4 | 119.8 |
| 15° | 582.5 | 555.3 | 485.7 | 385.4 | 273.8 | 179.4 | 122.7 | 103.3 | 98.0 | 96.8 | 96.8 |
| 17.5° | 586.0 | 554.7 | 466.2 | 339.3 | 201.8 | 118.0 | 97.4 | 93.8 | 92.7 | 92.1 | 92.1 |
| 20° | 589.5 | 551.8 | 443.8 | 287.4 | 142.8 | 96.2 | 90.9 | 89.1 | 88.5 | 87.9 | 87.9 |
| 22.5° | 594.3 | 548.8 | 420.8 | 228.4 | 105.6 | 89.7 | 86.7 | 85.0 | 84.4 | 84.4 | 84.4 |
| 25° | 600.8 | 547.1 | 392.4 | 172.9 | 90.9 | 85.0 | 82.0 | 80.8 | 80.8 | 80.3 | 80.3 |
| 27.5° | 613.1 | 548.8 | 361.8 | 123.9 | 85.0 | 80.3 | 78.5 | 77.3 | 77.3 | 76.7 | 76.7 |
| 30° | 630.3 | 554.1 | 323.4 | 96.8 | 80.3 | 75.5 | 73.8 | 73.2 | 72.6 | 72.6 | 72.6 |
| 32.5° | 654.5 | 562.4 | 281.5 | 82.6 | 74.4 | 70.8 | 69.0 | 68.5 | 68.5 | 68.5 | 67.9 |
| 35° | 691.6 | 579.5 | 230.2 | 75.5 | 69.0 | 65.5 | 63.7 | 63.7 | 63.7 | 63.1 | 63.7 |
| 37.5° | 748.3 | 607.2 | 178.2 | 69.6 | 63.1 | 60.2 | 59.0 | 58.4 | 58.4 | 58.4 | 58.4 |
| 40° | 819.7 | 652.1 | 129.8 | 64.3 | 57.8 | 54.9 | 53.7 | 53.1 | 52.5 | 52.5 | 52.5 |
| 42.5° | 911.8 | 701.7 | 94.4 | 58.4 | 53.1 | 50.2 | 49.0 | 47.8 | 46.6 | 46.0 | 46.0 |
| 45° | 1007.4 | 760.7 | 73.8 | 53.7 | 48.4 | 46.0 | 44.9 | 43.1 | 41.3 | 39.5 | 39.5 |
| 47.5° | 1100.0 | 806.1 | 63.1 | 48.4 | 44.3 | 41.9 | 40.7 | 38.4 | 35.4 | 33.6 | 33.6 |
| 50° | 1158.4 | 820.3 | 56.7 | 43.7 | 40.1 | 38.4 | 36.6 | 33.6 | 29.5 | 27.7 | 27.7 |
| 52.5° | 1176.7 | 794.3 | 50.8 | 39.5 | 36.6 | 34.8 | 32.5 | 28.3 | 24.2 | 21.8 | 21.8 |
| 55° | 1183.8 | 744.2 | 44.9 | 36.6 | 33.0 | 30.7 | 27.7 | 23.6 | 19.5 | 17.1 | 17.1 |
| 57.5° | 1175.0 | 673.3 | 40.1 | 33.0 | 29.5 | 27.1 | 23.6 | 18.9 | 14.8 | 13.0 | 13.0 |
| 60° | 1144.9 | 570.7 | 36.0 | 29.5 | 26.0 | 23.0 | 19.5 | 14.8 | 11.2 | 8.9 | 9.4 |
| 62.5° | 1063.4 | 441.4 | 31.3 | 24.8 | 22.4 | 19.5 | 15.3 | 11.2 | 7.1 | 5.9 | 5.9 |
| 65° | 933.6 | 305.7 | 26.6 | 20.7 | 18.9 | 15.9 | 11.8 | 7.7 | 4.1 | 3.5 | 3.5 |
| 67.5° | 758.3 | 197.7 | 20.7 | 17.1 | 15.9 | 13.0 | 8.9 | 4.7 | 2.4 | 2.4 | 1.8 |
| 70° | 476.2 | 98.0 | 16.5 | 13.0 | 13.0 | 10.0 | 6.5 | 3.0 | 1.8 | 1.8 | 1.8 |
| 71° | 337.0 | 66.7 | 14.8 | 11.8 | 11.8 | 9.4 | 5.9 | 2.4 | 1.8 | 1.8 | 1.8 |
| 72.5° | 152.3 | 41.9 | 12.4 | 10.6 | 10.0 | 7.7 | 5.3 | 2.4 | 2.4 | 2.4 | 2.4 |
| 75° | 47.8 | 23.0 | 8.9 | 8.3 | 8.3 | 6.5 | 4.7 | 3.0 | 3.0 | 3.0 | 3.0 |
| 77.5° | 31.9 | 17.7 | 5.9 | 5.3 | 6.5 | 6.5 | 4.7 | 3.5 | 3.5 | 3.5 | 3.5 |
| 80° | 26.0 | 9.4 | 3.5 | 3.5 | 4.7 | 5.9 | 4.7 | 3.5 | 4.1 | 3.5 | 3.5 |
| 82.5° | 25.4 | 4.7 | 1.2 | 1.8 | 3.0 | 3.5 | 3.5 | 3.0 | 3.5 | 3.5 | 3.5 |
| 85° | 10.6 | 1.2 | 0.6 | 1.2 | 1.2 | 1.8 | 1.8 | 2.4 | 3.0 | 3.0 | 3.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 0.6 | 1.2 | 1.2 | 1.8 | 2.4 | 2.4 |
| 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)