

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: P401562

Luminaire Tested: **ENV-SA1D-827-U-SL4**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401562
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-5)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENV-SA1D-827-U-SL4
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 2700K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3935 lumens
Efficiency: N/A
Efficacy: 91.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - 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

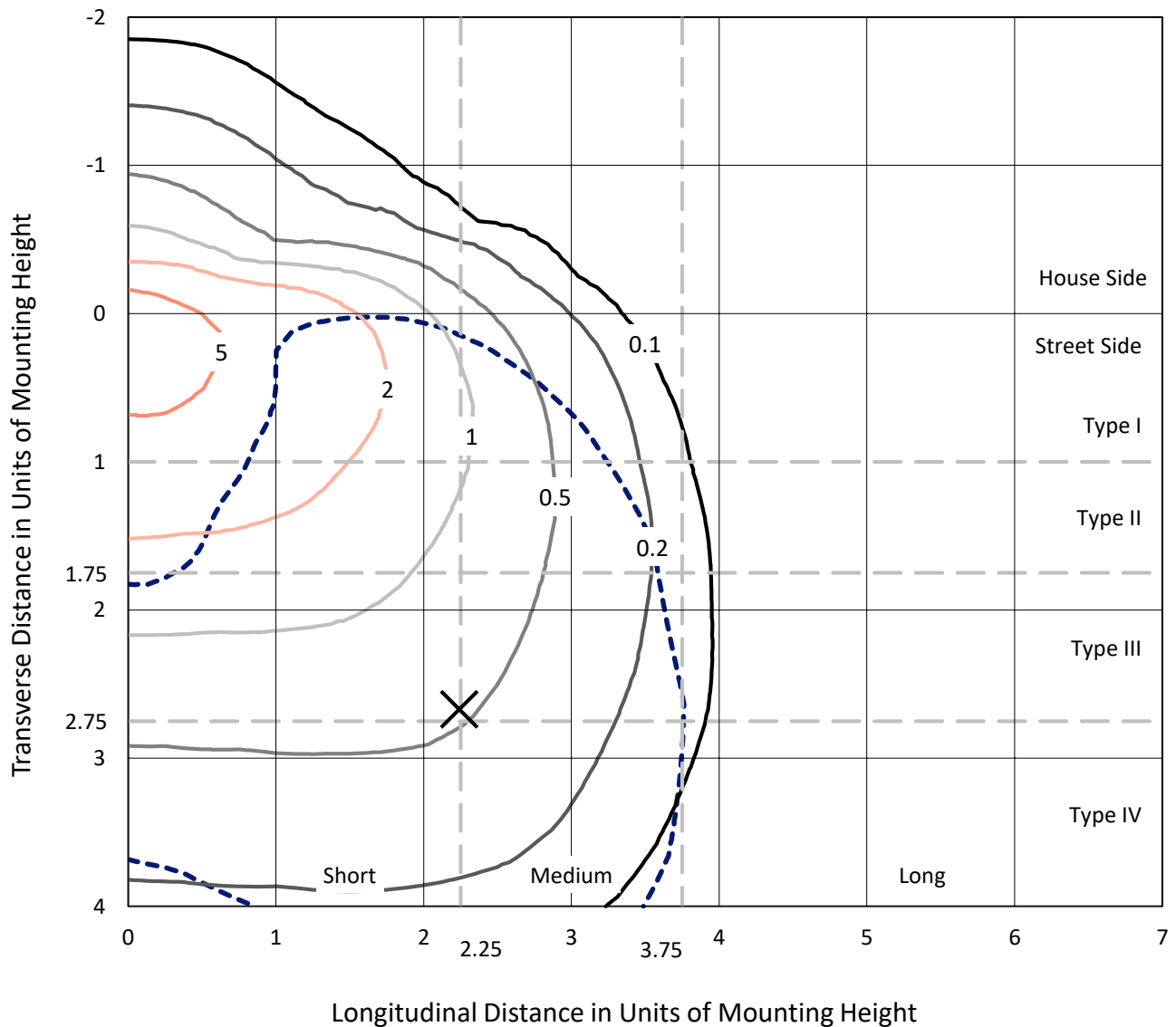


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

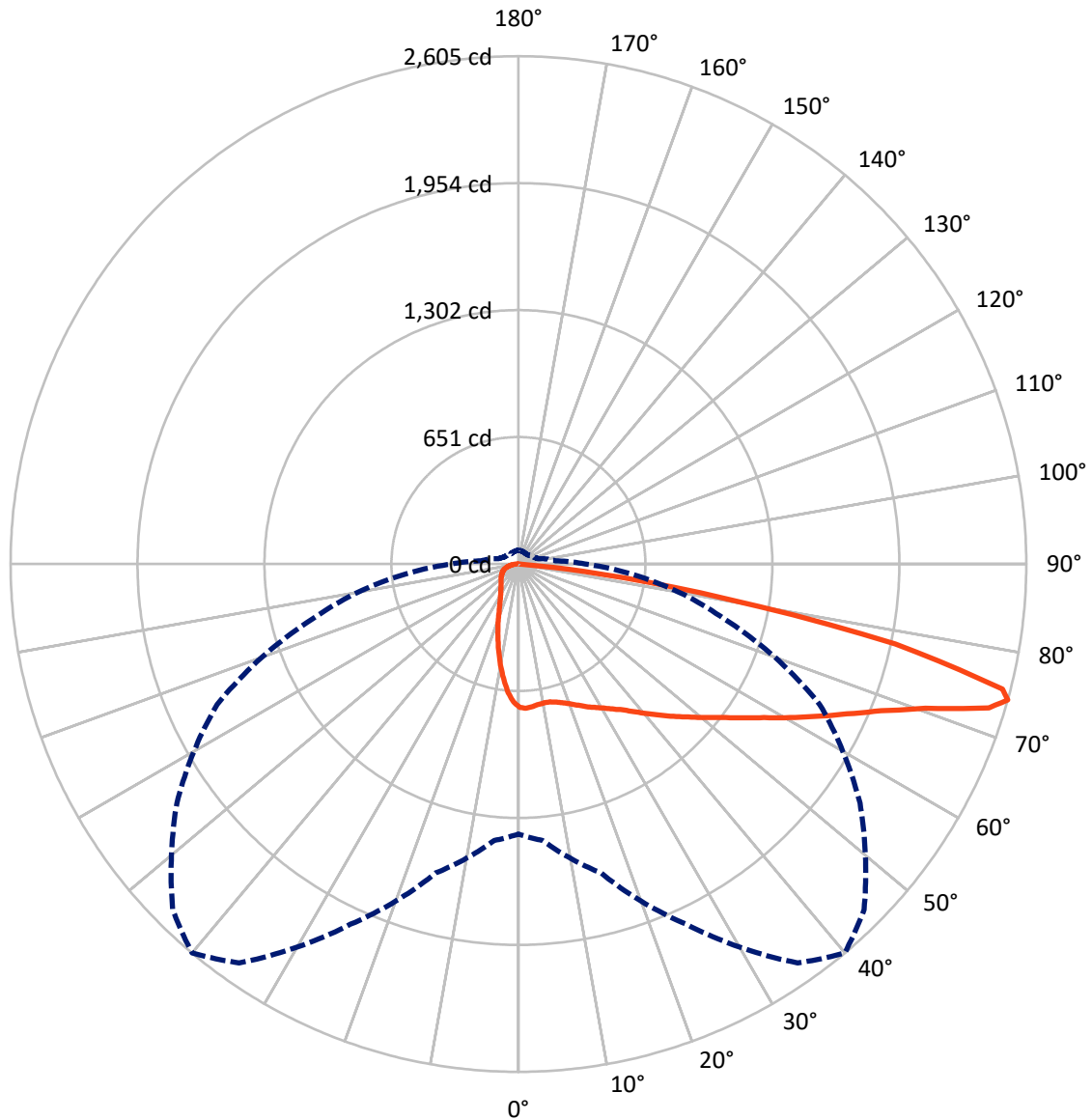


Based on 10 foot mounting height. Maximum calculated value = 7.3 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 74-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 613.5 | 0.0 | 613.5 |
| | % Fixture | 15.6 | 0.0 | 15.6 |
| Street Side | Lumens | 3321.5 | 0.0 | 3321.5 |
| | % Fixture | 84.4 | 0.0 | 84.4 |
| Total | Lumens | 3935.0 | 0.0 | 3935.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 64.8 | 1.6 |
| 10°-20° | 167.0 | 4.2 |
| 20°-30° | 256.1 | 6.5 |
| 30°-40° | 369.9 | 9.4 |
| 40°-50° | 532.2 | 13.5 |
| 50°-60° | 734.8 | 18.7 |
| 60°-70° | 926.4 | 23.5 |
| 70°-80° | 803.3 | 20.4 |
| 80°-90° | 80.4 | 2.0 |
| 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° | 3935.0 | 100.0 |
| 0°-180° | 3935.0 | 100.0 |



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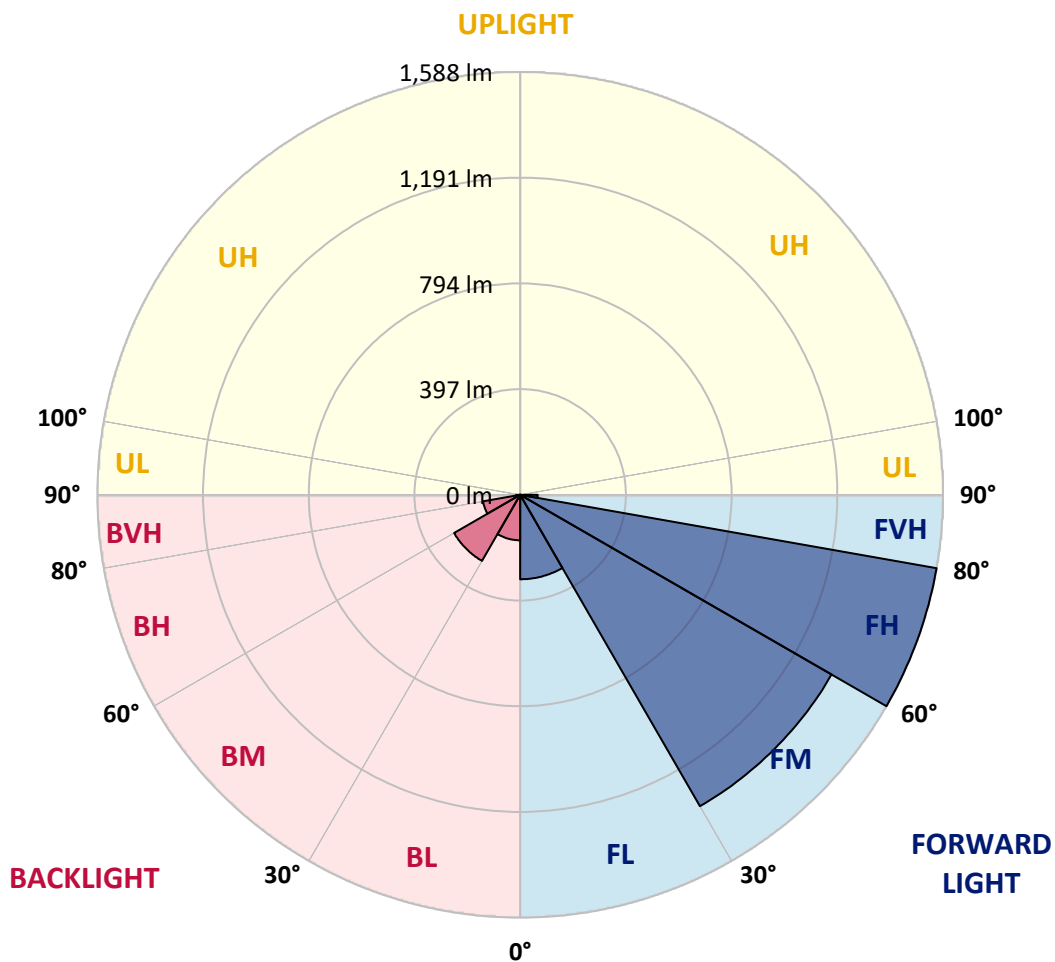
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 317.2 | 8.1 | | | |
| FM | (30°-60°) | 1350.3 | 34.3 | | | |
| FH | (60°-80°) | 1588.1 | 40.4 | | | G1/1800 |
| FVH | (80°-90°) | 65.8 | 1.7 | | | G1/100 |
| BL | (0°-30°) | 170.7 | 4.3 | B1/500 | | |
| BM | (30°-60°) | 286.5 | 7.3 | B1/1000 | | |
| BH | (60°-80°) | 141.6 | 3.6 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 14.7 | 0.4 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 40° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 734.5 | 734.5 | 734.5 | 734.5 | 734.5 | 734.5 | 734.5 | 734.5 | 734.5 | 734.5 | 734.5 |
| 2.5° | 744.0 | 743.4 | 745.1 | 744.0 | 742.2 | 741.0 | 740.4 | 736.9 | 735.7 | 732.2 | 727.4 |
| 5° | 741.0 | 741.0 | 741.0 | 739.8 | 736.3 | 735.1 | 733.9 | 728.6 | 725.1 | 719.2 | 710.3 |
| 7.5° | 731.0 | 732.7 | 732.2 | 731.6 | 728.6 | 727.4 | 725.7 | 719.2 | 714.5 | 705.6 | 694.4 |
| 10° | 721.5 | 721.5 | 722.1 | 724.5 | 723.3 | 723.9 | 723.3 | 716.2 | 709.7 | 698.5 | 684.4 |
| 12.5° | 708.0 | 710.3 | 713.9 | 720.4 | 723.3 | 725.7 | 725.7 | 720.4 | 713.3 | 699.7 | 683.2 |
| 15° | 699.7 | 702.7 | 711.5 | 723.3 | 730.4 | 734.5 | 735.7 | 729.2 | 720.4 | 706.8 | 688.5 |
| 17.5° | 696.2 | 699.7 | 716.2 | 732.7 | 745.1 | 748.7 | 749.3 | 742.2 | 732.7 | 716.2 | 695.0 |
| 20° | 699.7 | 703.8 | 725.7 | 748.1 | 762.8 | 765.8 | 767.0 | 756.9 | 745.1 | 729.2 | 701.5 |
| 22.5° | 713.3 | 719.2 | 743.4 | 767.6 | 782.9 | 787.0 | 785.8 | 771.7 | 759.9 | 742.8 | 709.7 |
| 25° | 742.8 | 746.3 | 768.1 | 794.1 | 805.9 | 810.6 | 807.7 | 791.7 | 776.4 | 759.3 | 721.5 |
| 27.5° | 777.0 | 781.7 | 804.7 | 824.2 | 831.9 | 833.0 | 830.1 | 813.6 | 796.5 | 782.3 | 739.8 |
| 30° | 818.3 | 822.4 | 841.3 | 856.1 | 856.6 | 857.2 | 855.5 | 836.6 | 822.4 | 811.2 | 766.4 |
| 32.5° | 862.0 | 862.5 | 882.0 | 889.1 | 884.4 | 886.1 | 884.4 | 863.7 | 853.7 | 850.2 | 801.2 |
| 35° | 902.1 | 902.7 | 922.7 | 925.1 | 917.4 | 918.0 | 921.5 | 897.4 | 897.4 | 905.6 | 853.1 |
| 37.5° | 940.4 | 942.2 | 959.9 | 957.5 | 954.6 | 959.9 | 964.6 | 944.0 | 955.8 | 979.4 | 916.2 |
| 40° | 969.3 | 973.5 | 997.1 | 995.9 | 1002.4 | 1007.7 | 1011.8 | 1001.2 | 1020.1 | 1066.1 | 994.1 |
| 42.5° | 988.2 | 996.5 | 1030.1 | 1038.4 | 1049.6 | 1059.0 | 1066.1 | 1065.5 | 1098.5 | 1162.3 | 1076.7 |
| 45° | 1007.7 | 1015.9 | 1060.8 | 1080.8 | 1099.7 | 1114.5 | 1128.0 | 1135.1 | 1187.6 | 1263.7 | 1172.9 |
| 47.5° | 1031.3 | 1038.4 | 1088.5 | 1128.0 | 1152.2 | 1172.3 | 1196.5 | 1211.8 | 1278.5 | 1367.0 | 1262.0 |
| 50° | 1067.3 | 1072.0 | 1116.8 | 1178.2 | 1208.9 | 1236.6 | 1266.7 | 1297.9 | 1376.4 | 1472.6 | 1339.8 |
| 52.5° | 1113.9 | 1116.8 | 1149.9 | 1228.9 | 1277.9 | 1307.4 | 1352.2 | 1393.5 | 1476.1 | 1568.2 | 1403.6 |
| 55° | 1167.0 | 1164.6 | 1190.0 | 1289.7 | 1346.9 | 1391.2 | 1446.6 | 1488.5 | 1581.1 | 1651.3 | 1454.3 |
| 57.5° | 1220.1 | 1218.3 | 1238.4 | 1348.1 | 1434.2 | 1486.1 | 1543.4 | 1587.6 | 1677.3 | 1729.2 | 1490.9 |
| 60° | 1270.8 | 1264.3 | 1292.6 | 1416.5 | 1539.8 | 1599.4 | 1650.7 | 1691.5 | 1768.2 | 1785.3 | 1510.3 |
| 62.5° | 1315.6 | 1315.6 | 1356.9 | 1500.9 | 1666.1 | 1719.8 | 1760.5 | 1787.6 | 1854.9 | 1826.6 | 1502.7 |
| 65° | 1356.9 | 1362.3 | 1421.2 | 1595.3 | 1797.1 | 1851.9 | 1887.3 | 1897.9 | 1941.0 | 1828.3 | 1437.8 |
| 67.5° | 1403.6 | 1411.8 | 1495.0 | 1705.6 | 1948.1 | 2006.5 | 2037.2 | 2033.6 | 2002.4 | 1801.2 | 1298.5 |
| 70° | 1449.0 | 1462.5 | 1586.4 | 1847.8 | 2134.5 | 2213.6 | 2247.2 | 2177.6 | 2034.2 | 1650.7 | 1078.5 |
| 72.5° | 1482.0 | 1505.0 | 1661.4 | 1990.0 | 2401.8 | 2523.3 | 2509.8 | 2217.1 | 1885.0 | 1360.5 | 815.9 |
| 74° | 1385.3 | 1423.6 | 1640.7 | 2039.0 | 2498.0 | 2604.7 | 2507.4 | 2138.7 | 1705.0 | 1095.6 | 578.2 |
| 75° | 1272.6 | 1309.7 | 1536.3 | 2019.5 | 2516.2 | 2564.0 | 2385.9 | 2000.6 | 1529.2 | 849.0 | 377.6 |
| 77.5° | 942.2 | 971.1 | 1179.9 | 1592.3 | 1990.0 | 1975.8 | 1776.4 | 1355.8 | 753.4 | 256.0 | 159.3 |
| 80° | 415.9 | 437.8 | 582.3 | 801.2 | 1077.9 | 1073.8 | 1000.0 | 623.0 | 243.1 | 133.9 | 97.3 |
| 82.5° | 125.7 | 125.1 | 167.6 | 233.6 | 409.4 | 417.1 | 354.6 | 214.8 | 116.2 | 55.5 | 47.2 |
| 85° | 0.6 | 0.6 | 0.6 | 0.6 | 1.8 | 15.3 | 13.0 | 41.3 | 21.2 | 10.0 | 17.1 |
| 87.5° | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 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° | 734.5 | 734.5 | 734.5 | 734.5 | 734.5 | 734.5 | 734.5 | 734.5 | 734.5 | 734.5 | 734.5 |
| 2.5° | 724.5 | 723.9 | 722.1 | 718.0 | 715.0 | 706.2 | 709.1 | 703.2 | 702.7 | 701.5 | 700.9 |
| 5° | 706.2 | 703.8 | 696.8 | 688.5 | 679.1 | 664.3 | 659.6 | 650.7 | 645.4 | 643.7 | 644.8 |
| 7.5° | 687.3 | 682.0 | 668.4 | 650.7 | 631.9 | 610.0 | 594.1 | 581.7 | 572.9 | 569.9 | 565.8 |
| 10° | 675.5 | 666.7 | 643.7 | 614.2 | 583.5 | 552.8 | 526.3 | 508.0 | 494.4 | 483.8 | 483.8 |
| 12.5° | 671.4 | 659.6 | 626.0 | 582.9 | 538.6 | 495.0 | 456.6 | 432.5 | 409.4 | 398.2 | 396.5 |
| 15° | 673.8 | 657.2 | 611.2 | 554.6 | 495.6 | 438.9 | 391.7 | 356.9 | 335.1 | 321.5 | 326.3 |
| 17.5° | 676.1 | 655.5 | 595.9 | 524.5 | 453.7 | 388.2 | 333.3 | 293.8 | 267.3 | 260.2 | 257.2 |
| 20° | 679.1 | 651.9 | 576.4 | 492.0 | 410.6 | 339.2 | 281.4 | 241.3 | 221.2 | 212.4 | 212.4 |
| 22.5° | 683.2 | 647.2 | 556.3 | 456.1 | 366.4 | 291.4 | 237.8 | 207.7 | 191.7 | 186.4 | 186.4 |
| 25° | 689.1 | 644.3 | 535.7 | 420.1 | 324.5 | 253.7 | 208.9 | 185.3 | 177.0 | 173.5 | 172.9 |
| 27.5° | 700.3 | 644.8 | 515.6 | 383.5 | 283.2 | 221.8 | 188.2 | 172.9 | 166.4 | 164.6 | 164.0 |
| 30° | 717.4 | 650.7 | 494.4 | 344.5 | 246.6 | 197.6 | 174.0 | 163.4 | 159.3 | 158.1 | 158.1 |
| 32.5° | 741.0 | 661.4 | 476.7 | 309.7 | 219.5 | 178.2 | 162.2 | 155.2 | 152.8 | 151.6 | 152.2 |
| 35° | 777.6 | 679.7 | 455.5 | 277.9 | 194.1 | 164.6 | 152.8 | 147.5 | 145.7 | 145.7 | 146.3 |
| 37.5° | 825.4 | 708.0 | 434.8 | 248.4 | 177.0 | 152.8 | 144.0 | 141.0 | 139.2 | 140.4 | 141.0 |
| 40° | 885.6 | 741.6 | 415.3 | 221.8 | 162.8 | 143.4 | 136.3 | 133.9 | 133.3 | 134.5 | 135.7 |
| 42.5° | 950.4 | 782.3 | 397.6 | 200.0 | 151.6 | 135.7 | 129.8 | 128.6 | 128.0 | 128.6 | 130.4 |
| 45° | 1026.0 | 828.9 | 382.9 | 183.5 | 143.4 | 129.2 | 123.9 | 122.7 | 122.1 | 123.3 | 124.5 |
| 47.5° | 1095.6 | 870.8 | 371.1 | 172.3 | 136.3 | 124.5 | 119.2 | 117.4 | 117.4 | 117.4 | 118.6 |
| 50° | 1152.2 | 903.8 | 364.0 | 164.6 | 130.4 | 119.2 | 114.5 | 112.7 | 112.1 | 111.5 | 112.1 |
| 52.5° | 1201.2 | 928.6 | 361.7 | 159.9 | 125.7 | 114.5 | 109.7 | 108.6 | 107.4 | 106.2 | 106.8 |
| 55° | 1233.6 | 941.0 | 356.9 | 155.8 | 121.5 | 109.1 | 105.0 | 103.8 | 102.7 | 100.9 | 100.9 |
| 57.5° | 1252.5 | 939.8 | 346.3 | 153.4 | 119.2 | 104.4 | 100.3 | 100.3 | 99.1 | 96.2 | 96.8 |
| 60° | 1254.3 | 919.2 | 320.4 | 150.4 | 117.4 | 99.7 | 95.0 | 96.2 | 96.2 | 93.8 | 93.8 |
| 62.5° | 1224.2 | 864.9 | 270.2 | 142.8 | 115.0 | 96.2 | 90.9 | 93.8 | 95.0 | 92.6 | 92.6 |
| 65° | 1131.6 | 736.9 | 217.1 | 131.6 | 109.1 | 92.0 | 86.1 | 92.0 | 95.6 | 93.8 | 93.2 |
| 67.5° | 954.0 | 583.5 | 179.4 | 119.2 | 102.7 | 86.7 | 81.4 | 89.1 | 93.8 | 93.8 | 93.2 |
| 70° | 765.8 | 443.1 | 147.5 | 105.6 | 92.6 | 80.2 | 76.1 | 82.6 | 86.7 | 87.9 | 87.9 |
| 72.5° | 527.4 | 270.8 | 119.8 | 90.9 | 81.4 | 72.6 | 69.0 | 73.2 | 75.5 | 77.9 | 77.3 |
| 74° | 340.4 | 190.0 | 105.0 | 82.6 | 74.3 | 66.7 | 64.9 | 66.7 | 67.8 | 70.2 | 70.8 |
| 75° | 227.7 | 155.2 | 97.9 | 76.7 | 70.2 | 62.5 | 61.4 | 63.1 | 64.3 | 66.1 | 66.1 |
| 77.5° | 131.0 | 110.9 | 79.1 | 63.7 | 58.4 | 53.7 | 53.1 | 53.7 | 55.5 | 57.2 | 56.6 |
| 80° | 90.9 | 84.4 | 62.5 | 49.6 | 46.0 | 43.7 | 44.2 | 44.8 | 47.8 | 48.4 | 47.8 |
| 82.5° | 54.9 | 60.8 | 44.2 | 37.2 | 34.8 | 34.2 | 36.0 | 37.2 | 39.5 | 40.1 | 39.5 |
| 85° | 21.8 | 28.9 | 21.8 | 20.6 | 23.0 | 25.4 | 28.3 | 30.1 | 31.3 | 31.3 | 31.3 |
| 87.5° | 0.0 | 4.1 | 5.3 | 8.3 | 13.0 | 15.3 | 20.1 | 21.8 | 23.0 | 22.4 | 21.8 |
| 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)