

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: P401788

Luminaire Tested: **ENV-SA1F-722-U-T4FT**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401788
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-15)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENV-SA1F-722-U-T4FT
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 2200K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD
THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5480 lumens
Efficiency: N/A
Efficacy: 82.9 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 - G2

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

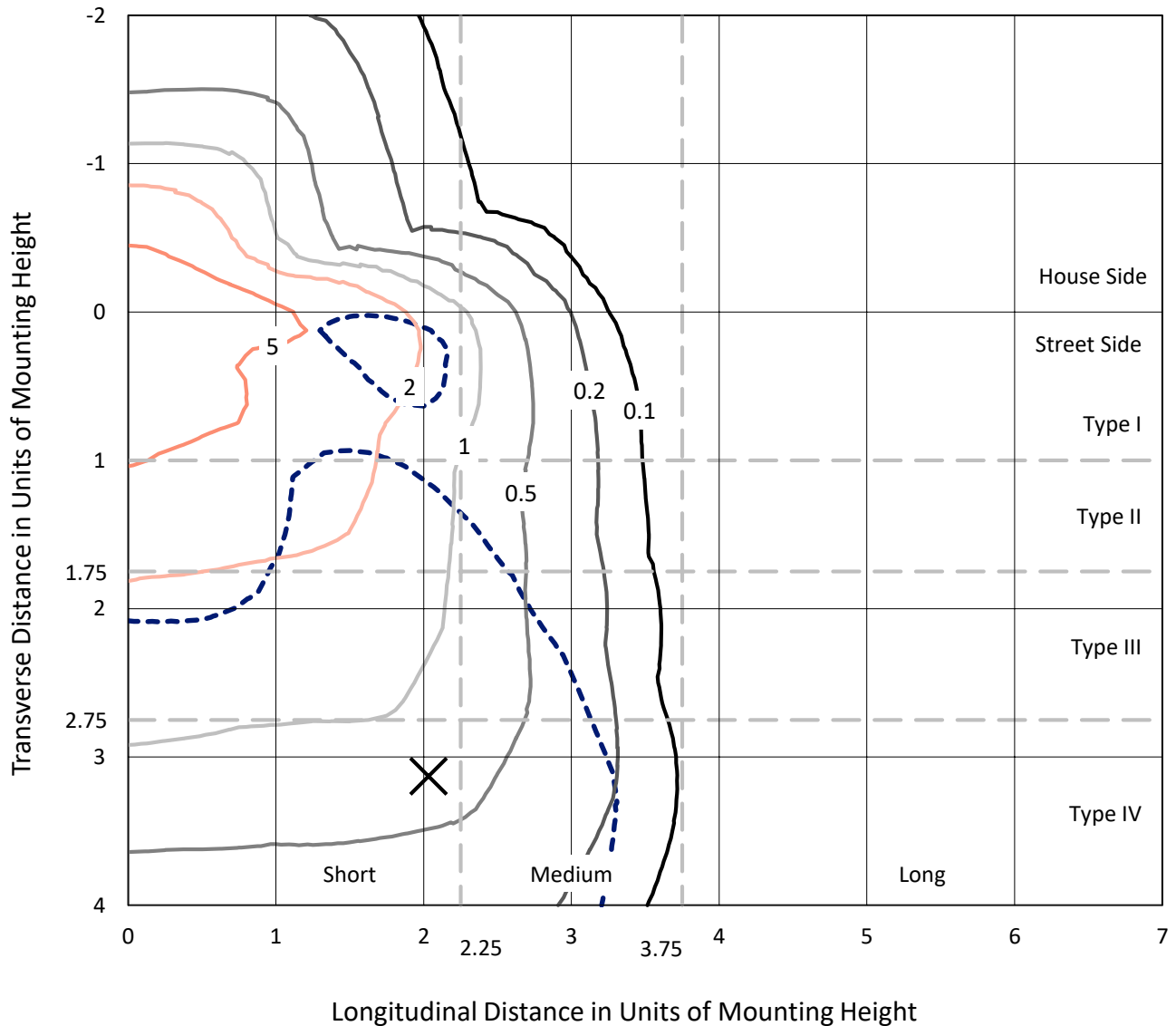


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Iso-Footcandle Lines of Horizontal Illumination

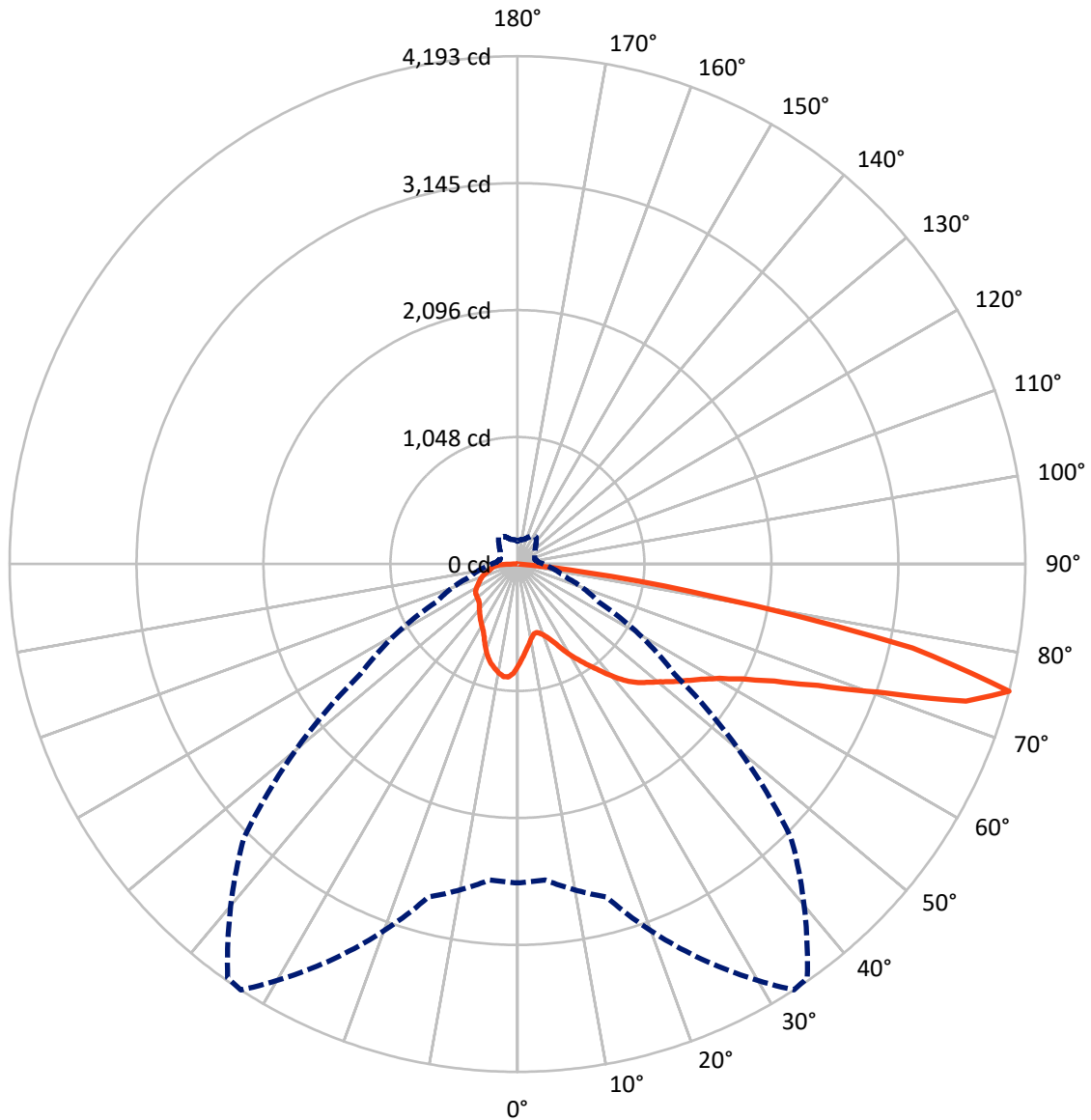
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1331.2 | 0.0 | 1331.2 |
| | % Fixture | 24.3 | 0.0 | 24.3 |
| Street Side | Lumens | 4148.8 | 0.0 | 4148.8 |
| | % Fixture | 75.7 | 0.0 | 75.7 |
| Total | Lumens | 5480.0 | 0.0 | 5480.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 78.4 | 1.4 |
| 10°-20° | 220.6 | 4.0 |
| 20°-30° | 366.8 | 6.7 |
| 30°-40° | 547.3 | 10.0 |
| 40°-50° | 764.5 | 14.0 |
| 50°-60° | 1020.5 | 18.6 |
| 60°-70° | 1265.4 | 23.1 |
| 70°-80° | 1094.0 | 20.0 |
| 80°-90° | 122.3 | 2.2 |
| 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° | 5480.0 | 100.0 |
| 0°-180° | 5480.0 | 100.0 |



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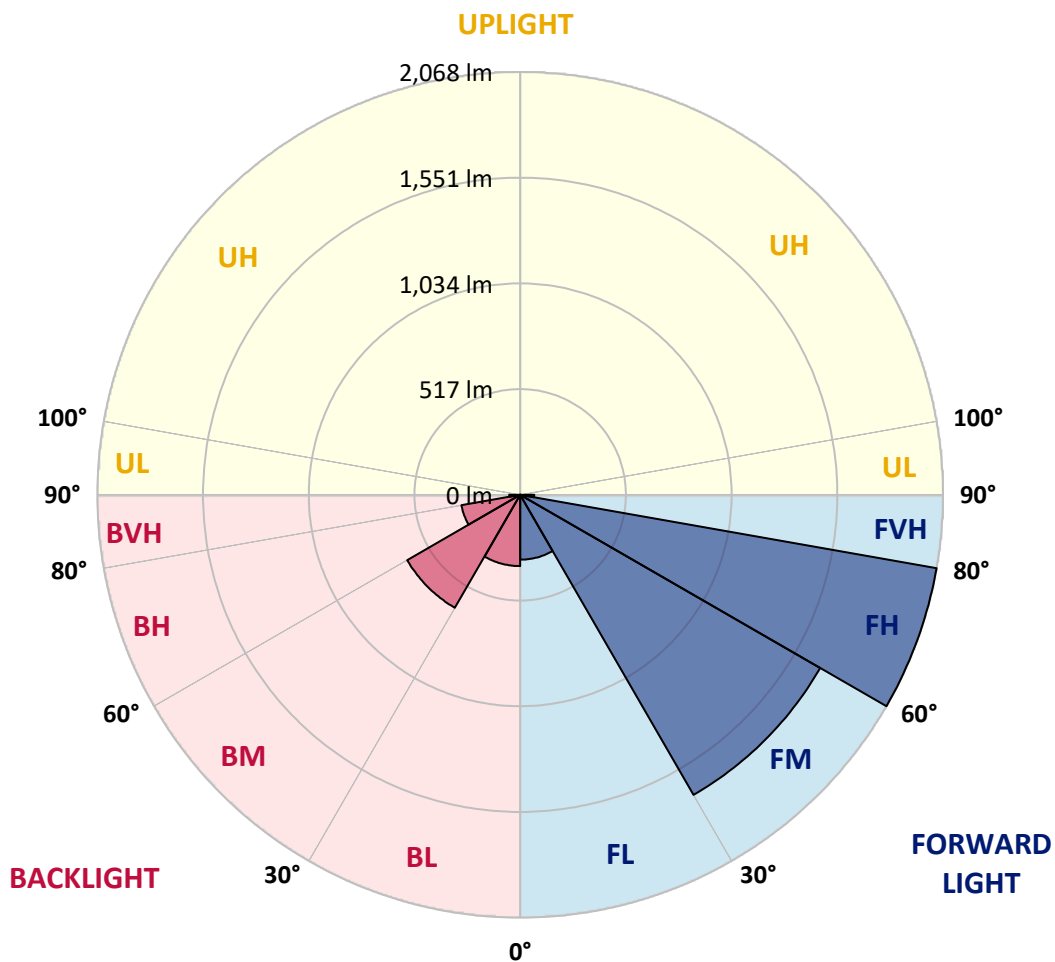
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 317.3 | 5.8 | | | |
| FM | (30°-60°) | 1694.4 | 30.9 | | | |
| FH | (60°-80°) | 2067.9 | 37.7 | | | G2/5000 |
| FVH | (80°-90°) | 69.1 | 1.3 | | | G1/100 |
| BL | (0°-30°) | 348.6 | 6.4 | B1/500 | | |
| BM | (30°-60°) | 637.9 | 11.6 | B1/1000 | | |
| BH | (60°-80°) | 291.5 | 5.3 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 53.2 | 1.0 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 33° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 839.7 | 839.7 | 839.7 | 839.7 | 839.7 | 839.7 | 839.7 | 839.7 | 839.7 | 839.7 | 839.7 |
| 2.5° | 761.6 | 763.2 | 768.1 | 773.8 | 777.0 | 777.0 | 786.0 | 796.6 | 809.6 | 821.0 | 833.2 |
| 5° | 698.1 | 700.6 | 704.6 | 712.0 | 720.9 | 722.5 | 740.4 | 759.1 | 782.7 | 808.0 | 832.4 |
| 7.5° | 635.5 | 640.4 | 648.5 | 658.3 | 672.1 | 675.3 | 700.6 | 725.8 | 758.3 | 796.6 | 836.4 |
| 10° | 587.5 | 590.7 | 594.8 | 608.6 | 625.7 | 631.4 | 664.8 | 696.5 | 741.2 | 788.4 | 841.3 |
| 12.5° | 574.4 | 574.4 | 574.4 | 581.0 | 594.8 | 599.7 | 634.7 | 675.3 | 725.8 | 782.7 | 848.7 |
| 15° | 593.2 | 592.3 | 583.4 | 578.5 | 586.7 | 590.7 | 620.8 | 660.7 | 717.7 | 784.4 | 862.5 |
| 17.5° | 635.5 | 633.0 | 611.9 | 595.6 | 601.3 | 603.7 | 623.3 | 657.4 | 715.2 | 790.9 | 882.8 |
| 20° | 690.8 | 685.1 | 652.6 | 628.1 | 627.3 | 629.0 | 643.6 | 667.2 | 719.3 | 802.3 | 904.8 |
| 22.5° | 764.0 | 760.8 | 712.8 | 675.3 | 668.8 | 668.8 | 675.3 | 690.0 | 729.9 | 815.3 | 934.9 |
| 25° | 858.4 | 849.5 | 791.7 | 741.2 | 726.6 | 722.5 | 721.7 | 721.7 | 748.6 | 834.8 | 972.3 |
| 27.5° | 955.2 | 944.7 | 886.1 | 817.7 | 798.2 | 790.9 | 777.9 | 768.1 | 773.0 | 856.0 | 1017.1 |
| 30° | 1042.3 | 1027.7 | 978.0 | 907.2 | 877.9 | 866.6 | 843.0 | 822.6 | 809.6 | 885.3 | 1076.5 |
| 32.5° | 1090.3 | 1084.6 | 1050.4 | 986.2 | 952.8 | 947.9 | 908.9 | 882.0 | 859.2 | 923.5 | 1156.2 |
| 35° | 1154.6 | 1147.3 | 1125.3 | 1072.4 | 1032.5 | 1020.3 | 991.0 | 959.3 | 922.7 | 974.8 | 1257.1 |
| 37.5° | 1214.0 | 1209.9 | 1201.8 | 1165.2 | 1122.9 | 1110.6 | 1083.8 | 1050.4 | 1000.8 | 1050.4 | 1370.2 |
| 40° | 1274.2 | 1269.3 | 1266.1 | 1253.0 | 1222.9 | 1214.8 | 1201.8 | 1162.7 | 1096.0 | 1133.4 | 1481.7 |
| 42.5° | 1362.1 | 1351.5 | 1317.3 | 1316.5 | 1318.9 | 1325.5 | 1326.3 | 1283.1 | 1200.2 | 1236.8 | 1579.3 |
| 45° | 1476.8 | 1447.5 | 1371.0 | 1368.6 | 1397.1 | 1414.1 | 1455.6 | 1419.0 | 1308.4 | 1342.5 | 1688.4 |
| 47.5° | 1535.4 | 1505.3 | 1426.4 | 1421.5 | 1458.9 | 1484.1 | 1586.6 | 1550.8 | 1420.7 | 1461.3 | 1801.4 |
| 50° | 1563.9 | 1544.3 | 1475.2 | 1490.6 | 1528.9 | 1553.3 | 1711.1 | 1682.7 | 1537.0 | 1589.9 | 1943.8 |
| 52.5° | 1603.7 | 1571.2 | 1522.4 | 1554.9 | 1611.9 | 1637.1 | 1822.6 | 1817.7 | 1635.5 | 1729.8 | 2100.1 |
| 55° | 1589.9 | 1572.8 | 1581.8 | 1625.7 | 1697.3 | 1734.7 | 1934.9 | 1934.9 | 1735.5 | 1879.6 | 2254.7 |
| 57.5° | 1601.3 | 1589.9 | 1663.9 | 1703.0 | 1793.3 | 1847.0 | 2070.0 | 2034.2 | 1820.2 | 2004.9 | 2358.8 |
| 60° | 1698.1 | 1665.6 | 1723.3 | 1800.6 | 1917.0 | 1969.1 | 2224.6 | 2138.3 | 1889.3 | 2113.1 | 2377.5 |
| 62.5° | 1869.0 | 1842.9 | 1848.6 | 1937.3 | 2087.9 | 2148.1 | 2377.5 | 2230.3 | 1935.7 | 2158.6 | 2307.5 |
| 65° | 2152.1 | 2139.9 | 2070.0 | 2123.7 | 2331.1 | 2385.7 | 2568.7 | 2310.0 | 1922.7 | 2124.5 | 2122.8 |
| 67.5° | 2532.9 | 2484.1 | 2389.7 | 2437.7 | 2677.0 | 2732.3 | 2799.0 | 2340.1 | 1838.1 | 1920.2 | 1706.3 |
| 70° | 2848.6 | 2808.0 | 2764.8 | 2890.9 | 3166.0 | 3196.1 | 3039.0 | 2311.6 | 1632.2 | 1502.8 | 1144.0 |
| 72.5° | 3049.6 | 3020.3 | 3060.2 | 3431.2 | 3871.4 | 3814.5 | 3275.8 | 2112.3 | 1273.4 | 920.3 | 572.0 |
| 75° | 2632.2 | 2618.4 | 2846.2 | 3598.8 | 4192.8 | 4171.6 | 3193.6 | 1580.9 | 738.8 | 405.2 | 260.4 |
| 77.5° | 1323.8 | 1474.4 | 1714.4 | 2553.3 | 3336.0 | 3340.1 | 2327.1 | 760.0 | 310.8 | 227.0 | 179.0 |
| 80° | 372.7 | 377.5 | 572.0 | 1052.9 | 1665.6 | 1774.6 | 880.4 | 257.9 | 177.4 | 169.2 | 133.4 |
| 82.5° | 88.7 | 82.2 | 146.5 | 311.6 | 559.0 | 581.8 | 264.4 | 92.8 | 99.3 | 105.8 | 82.2 |
| 85° | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 1.6 | 9.8 | 9.8 | 23.6 | 30.1 | 23.6 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.8 | 0.8 | 0.8 | 0.0 | 0.0 | 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° | 839.7 | 839.7 | 839.7 | 839.7 | 839.7 | 839.7 | 839.7 | 839.7 | 839.7 | 839.7 | 839.7 |
| 2.5° | 838.9 | 847.0 | 860.0 | 871.4 | 881.2 | 888.5 | 899.9 | 901.5 | 904.8 | 906.4 | 908.0 |
| 5° | 846.2 | 861.7 | 886.1 | 907.2 | 921.9 | 925.9 | 935.7 | 934.9 | 935.7 | 935.7 | 934.9 |
| 7.5° | 856.0 | 877.1 | 911.3 | 934.9 | 943.0 | 940.6 | 938.2 | 929.2 | 921.9 | 918.6 | 914.6 |
| 10° | 868.2 | 892.6 | 932.5 | 949.5 | 945.5 | 932.5 | 917.0 | 900.7 | 887.7 | 881.2 | 879.6 |
| 12.5° | 880.4 | 912.1 | 949.5 | 954.4 | 938.2 | 914.6 | 888.5 | 870.6 | 853.5 | 844.6 | 844.6 |
| 15° | 900.7 | 935.7 | 963.4 | 953.6 | 924.3 | 894.2 | 858.4 | 834.0 | 814.5 | 802.3 | 801.5 |
| 17.5° | 925.1 | 962.6 | 978.0 | 949.5 | 907.2 | 864.9 | 821.8 | 790.1 | 764.8 | 752.6 | 745.3 |
| 20° | 955.2 | 990.2 | 985.3 | 936.5 | 882.0 | 829.9 | 776.2 | 738.0 | 712.0 | 698.9 | 696.5 |
| 22.5° | 989.4 | 1018.7 | 987.8 | 915.4 | 847.8 | 781.1 | 722.5 | 684.3 | 667.2 | 657.4 | 658.3 |
| 25° | 1030.9 | 1053.7 | 988.6 | 890.1 | 799.0 | 716.8 | 665.6 | 647.7 | 645.2 | 641.2 | 642.8 |
| 27.5° | 1083.0 | 1090.3 | 985.3 | 856.0 | 736.4 | 649.3 | 619.2 | 626.5 | 633.0 | 630.6 | 632.2 |
| 30° | 1144.8 | 1134.2 | 978.0 | 806.3 | 659.1 | 587.5 | 589.1 | 605.4 | 614.3 | 611.9 | 612.7 |
| 32.5° | 1217.2 | 1178.2 | 964.2 | 746.1 | 585.8 | 550.0 | 563.1 | 579.3 | 588.3 | 588.3 | 589.1 |
| 35° | 1298.6 | 1231.1 | 937.3 | 668.0 | 534.6 | 527.3 | 538.6 | 551.7 | 557.4 | 554.1 | 556.5 |
| 37.5° | 1384.0 | 1276.6 | 894.2 | 581.0 | 496.3 | 509.4 | 515.9 | 519.1 | 518.3 | 513.4 | 511.0 |
| 40° | 1463.8 | 1312.4 | 816.9 | 494.7 | 464.6 | 490.6 | 493.9 | 484.9 | 474.4 | 465.4 | 459.7 |
| 42.5° | 1524.8 | 1331.2 | 709.5 | 432.1 | 434.5 | 469.5 | 471.9 | 454.0 | 433.7 | 419.9 | 416.6 |
| 45° | 1587.5 | 1337.7 | 602.9 | 381.6 | 401.9 | 448.3 | 454.8 | 430.4 | 402.8 | 386.5 | 384.0 |
| 47.5° | 1659.1 | 1353.9 | 498.0 | 346.6 | 374.3 | 433.7 | 444.3 | 414.2 | 383.2 | 358.8 | 354.8 |
| 50° | 1755.1 | 1384.9 | 419.0 | 319.8 | 354.8 | 426.4 | 441.0 | 401.1 | 362.1 | 335.2 | 332.0 |
| 52.5° | 1877.1 | 1430.4 | 345.8 | 298.6 | 339.3 | 415.0 | 436.1 | 388.1 | 346.6 | 314.1 | 309.2 |
| 55° | 1982.1 | 1447.5 | 298.6 | 280.7 | 323.0 | 401.1 | 432.1 | 383.2 | 329.5 | 292.9 | 287.2 |
| 57.5° | 2030.1 | 1398.7 | 265.3 | 262.8 | 305.9 | 384.0 | 423.9 | 367.0 | 310.8 | 282.3 | 277.5 |
| 60° | 2008.1 | 1277.5 | 240.0 | 246.5 | 286.4 | 362.1 | 402.8 | 350.7 | 297.8 | 274.2 | 269.3 |
| 62.5° | 1910.5 | 1137.5 | 221.3 | 231.1 | 264.4 | 334.4 | 378.4 | 336.0 | 286.4 | 265.3 | 258.7 |
| 65° | 1738.8 | 983.7 | 207.5 | 217.2 | 244.9 | 307.6 | 358.8 | 319.0 | 273.4 | 252.2 | 246.5 |
| 67.5° | 1419.0 | 782.7 | 192.8 | 203.4 | 228.6 | 285.6 | 340.9 | 305.1 | 258.7 | 244.9 | 240.0 |
| 70° | 939.0 | 526.4 | 179.0 | 189.6 | 212.4 | 264.4 | 322.2 | 290.5 | 244.9 | 236.0 | 229.5 |
| 72.5° | 431.2 | 283.2 | 164.4 | 174.9 | 193.7 | 240.8 | 298.6 | 268.5 | 226.2 | 220.5 | 210.7 |
| 75° | 213.2 | 174.1 | 146.5 | 156.2 | 170.9 | 212.4 | 270.9 | 249.8 | 209.1 | 199.3 | 188.0 |
| 77.5° | 155.4 | 130.2 | 126.1 | 135.9 | 148.1 | 188.0 | 241.7 | 230.3 | 192.0 | 178.2 | 171.7 |
| 80° | 115.5 | 100.9 | 105.8 | 115.5 | 126.9 | 170.1 | 226.2 | 215.6 | 177.4 | 163.5 | 158.7 |
| 82.5° | 70.8 | 67.5 | 81.4 | 92.8 | 106.6 | 156.2 | 215.6 | 196.9 | 159.5 | 146.5 | 140.8 |
| 85° | 20.3 | 24.4 | 41.5 | 60.2 | 75.7 | 126.1 | 201.0 | 172.5 | 134.3 | 112.3 | 108.2 |
| 87.5° | 0.0 | 2.4 | 13.0 | 27.7 | 44.8 | 83.8 | 154.6 | 135.1 | 102.5 | 83.0 | 79.7 |
| 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)