

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: P472147

Luminaire Tested: **CCW-VA-1-730-U-T4W**

Issue Date: 01/27/2021

Test Information

Test Method: LM-79-08
Report Number: P472147
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: CCW-VA-1-730-U-T4W
Description: INVUE WALL PACK Wave Stream LUMINAIRE WITH T4W DISTRIBUTION LENS
Light Source: 3000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3122 lumens
Efficiency: N/A
Efficacy: 107.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.54' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G1

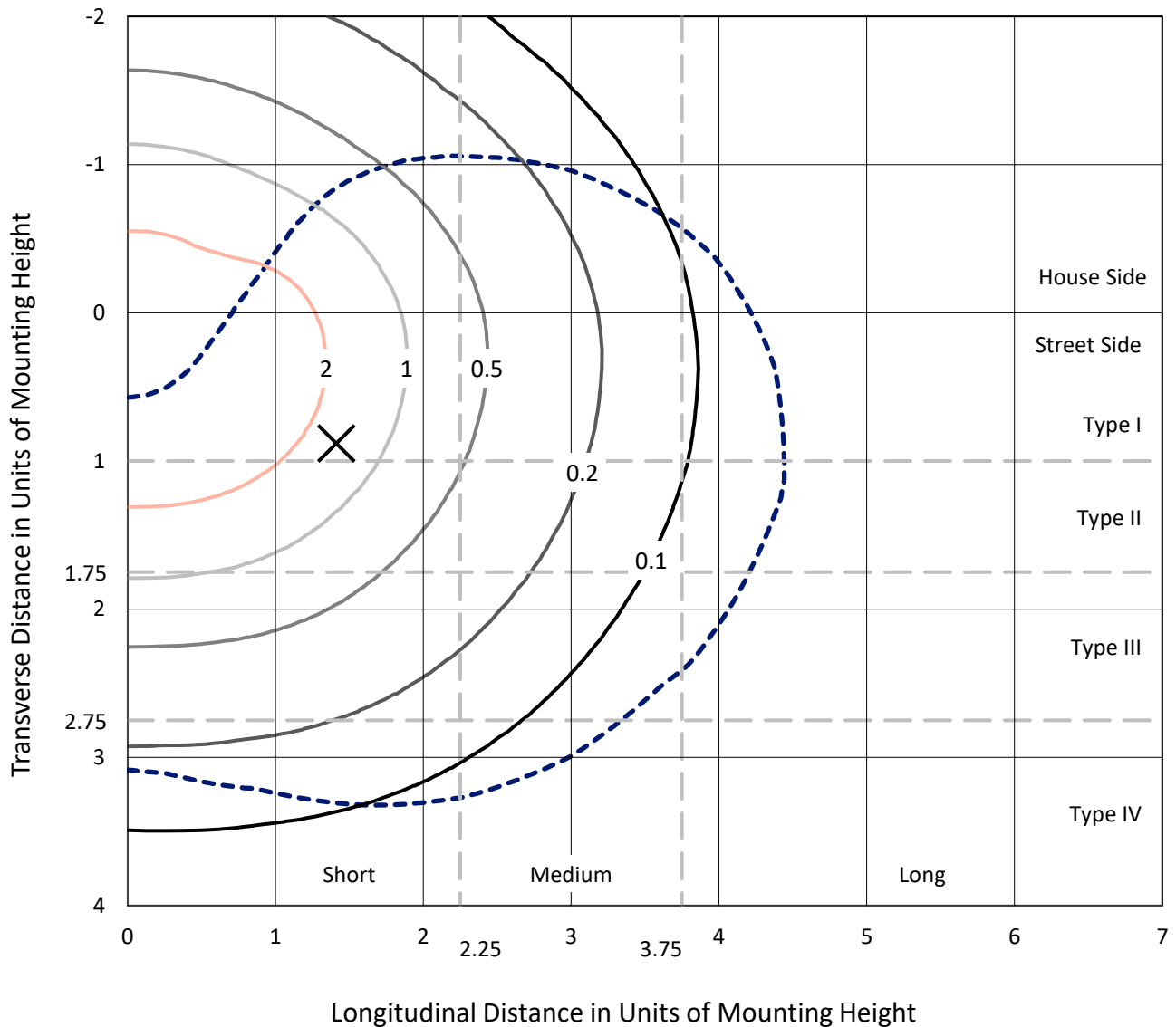
Input Watts (W): 29
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

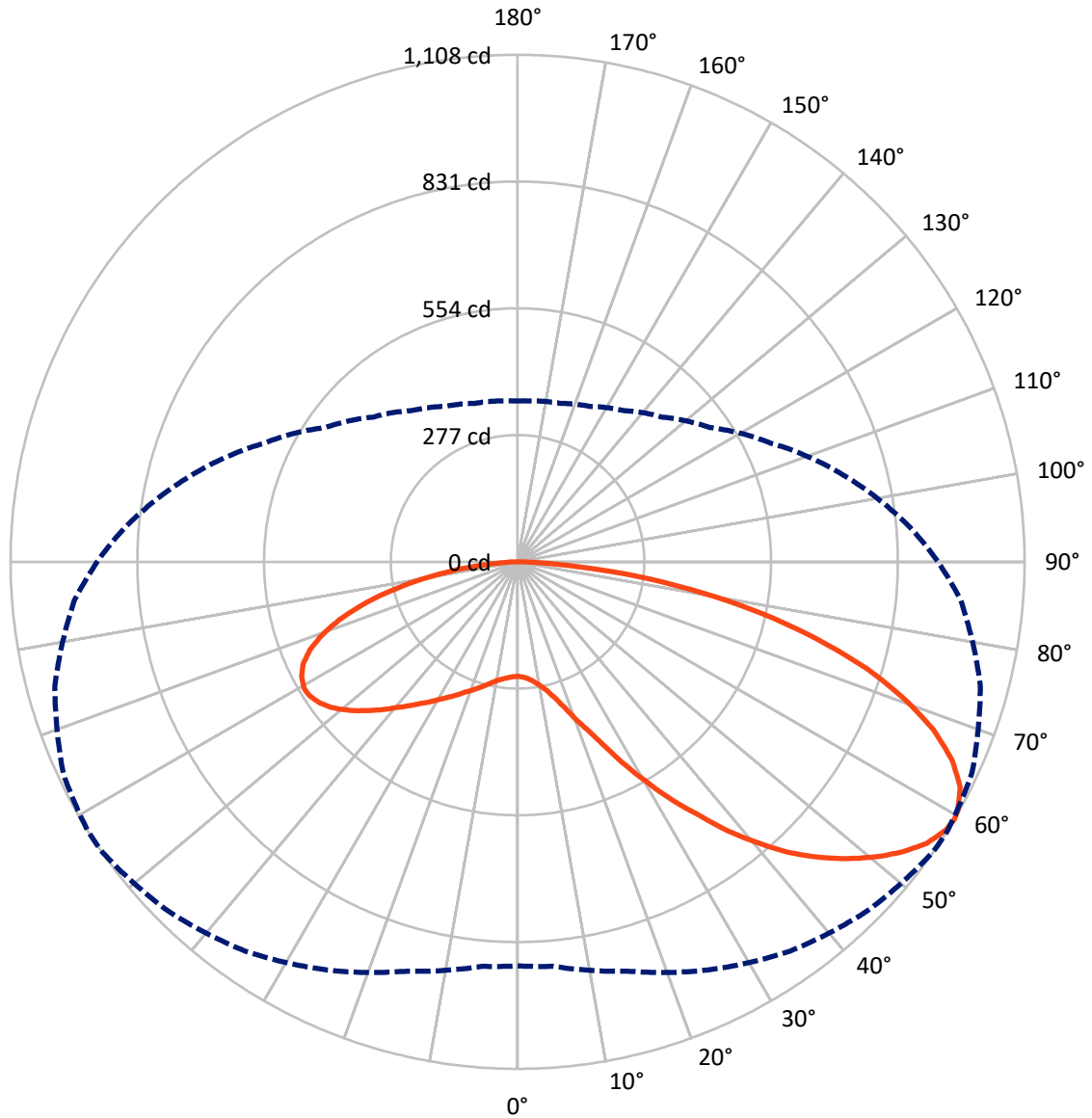
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.8 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 59-Deg Vertical

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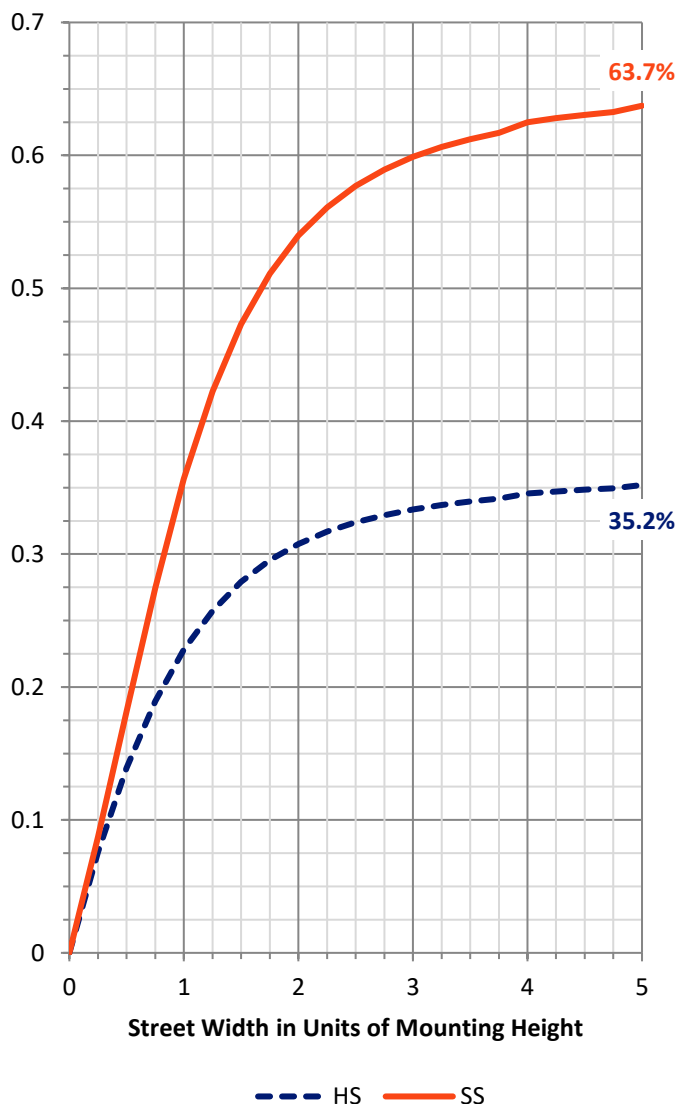
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1113.4 | 0.0 | 1113.4 |
| | % Fixture | 35.7 | 0.0 | 35.7 |
| Street Side | Lumens | 2008.6 | 0.0 | 2008.6 |
| | % Fixture | 64.3 | 0.0 | 64.3 |
| Total | Lumens | 3122.0 | 0.0 | 3122.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 24.8 | 0.8 |
| 10°-20° | 84.7 | 2.7 |
| 20°-30° | 178.7 | 5.7 |
| 30°-40° | 328.9 | 10.5 |
| 40°-50° | 512.7 | 16.4 |
| 50°-60° | 673.7 | 21.6 |
| 60°-70° | 706.0 | 22.6 |
| 70°-80° | 489.5 | 15.7 |
| 80°-90° | 122.9 | 3.9 |
| 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° | 3122.0 | 100.0 |
| 0°-180° | 3122.0 | 100.0 |

Coefficient of Utilization

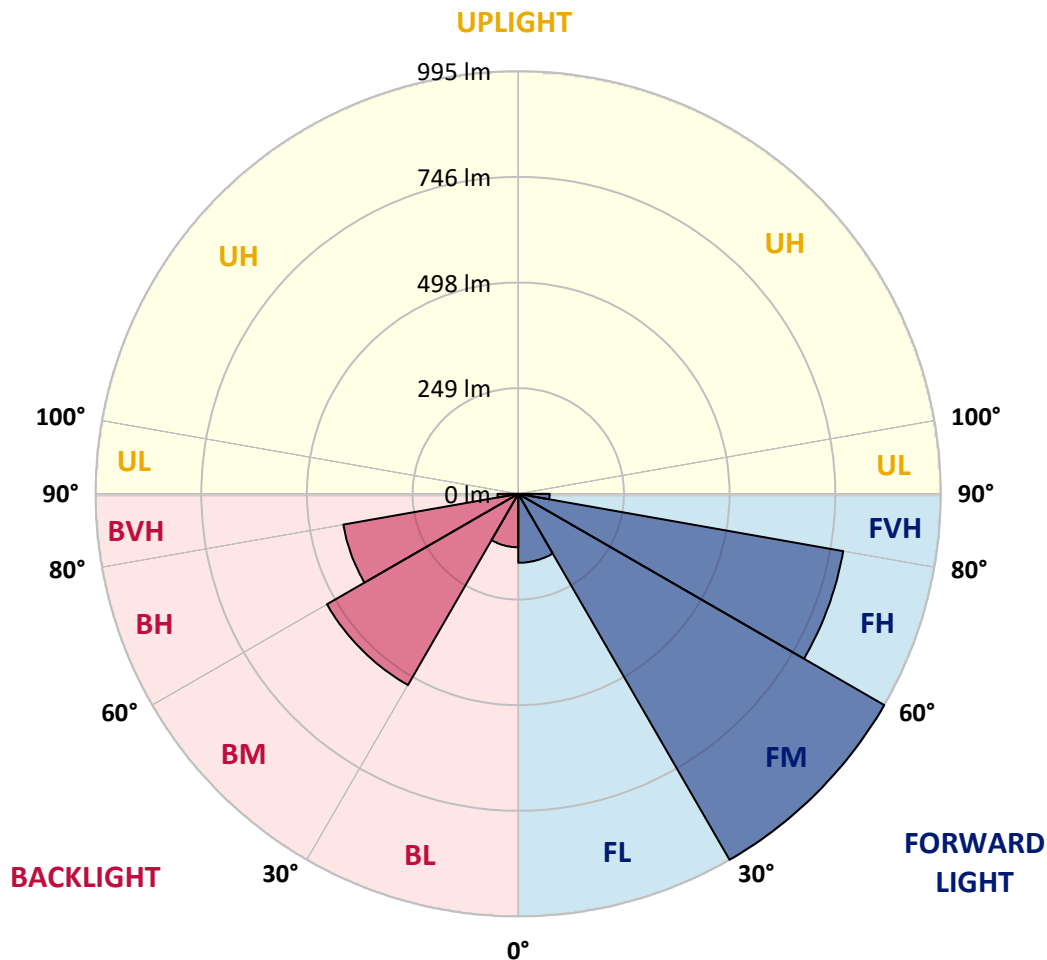


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 162.4 | 5.2 | | | |
| FM (30°-60°) | 995.2 | 31.9 | | | |
| FH (60°-80°) | 777.1 | 24.9 | | | G1/1800 |
| FVH (80°-90°) | 73.9 | 2.4 | | | G1/100 |
| BL (0°-30°) | 125.8 | 4.0 | B1/500 | | |
| BM (30°-60°) | 520.2 | 16.7 | B1/1000 | | |
| BH (60°-80°) | 418.3 | 13.4 | B1/500 | | G1/500 |
| BVH (80°-90°) | 49.1 | 1.6 | | | 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° | 45° | 55° | 58° | 65° | 75° | 85° |
|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|
| 0° | 250.3 | 250.3 | 250.3 | 250.3 | 250.3 | 250.3 | 250.3 | 250.3 | 250.3 | 250.3 | 250.3 |
| 2.5° | 253.8 | 253.8 | 253.8 | 253.1 | 253.1 | 253.1 | 252.4 | 252.4 | 252.4 | 251.7 | 251.0 |
| 5° | 259.4 | 259.4 | 258.7 | 259.4 | 258.7 | 258.0 | 257.3 | 257.3 | 257.3 | 256.6 | 255.9 |
| 7.5° | 267.1 | 267.9 | 267.1 | 267.9 | 267.1 | 266.4 | 265.0 | 265.0 | 264.3 | 262.9 | 261.5 |
| 10° | 279.1 | 279.1 | 279.1 | 278.4 | 277.7 | 277.0 | 276.3 | 275.6 | 274.9 | 272.8 | 270.7 |
| 12.5° | 293.9 | 293.9 | 293.9 | 292.5 | 292.5 | 291.1 | 290.3 | 289.6 | 288.2 | 285.4 | 282.6 |
| 15° | 312.1 | 311.4 | 313.5 | 313.5 | 312.8 | 312.8 | 310.7 | 309.3 | 307.9 | 303.7 | 297.4 |
| 17.5° | 336.7 | 336.0 | 338.2 | 339.6 | 339.6 | 340.3 | 336.7 | 335.3 | 330.4 | 324.8 | 316.4 |
| 20° | 369.8 | 368.4 | 370.5 | 371.9 | 370.5 | 371.9 | 368.4 | 369.1 | 362.1 | 352.2 | 338.9 |
| 22.5° | 405.6 | 405.6 | 407.8 | 407.8 | 408.5 | 409.9 | 405.6 | 403.5 | 397.9 | 383.8 | 367.0 |
| 25° | 449.9 | 453.4 | 453.4 | 453.4 | 456.3 | 457.0 | 452.7 | 449.2 | 441.5 | 422.5 | 399.3 |
| 27.5° | 504.1 | 503.4 | 502.7 | 506.9 | 506.9 | 508.3 | 505.5 | 504.1 | 494.9 | 471.7 | 436.6 |
| 30° | 561.7 | 557.5 | 560.3 | 561.7 | 564.5 | 566.6 | 563.8 | 559.6 | 548.4 | 523.0 | 479.5 |
| 32.5° | 614.4 | 617.3 | 621.5 | 622.9 | 627.1 | 627.8 | 620.8 | 620.8 | 609.5 | 577.2 | 532.2 |
| 35° | 674.2 | 674.2 | 685.4 | 690.4 | 690.4 | 694.6 | 684.0 | 678.4 | 670.7 | 636.9 | 580.0 |
| 37.5° | 726.2 | 727.6 | 736.8 | 748.0 | 749.4 | 755.7 | 748.0 | 745.9 | 731.8 | 697.4 | 634.1 |
| 40° | 774.7 | 776.1 | 787.4 | 800.7 | 808.5 | 818.3 | 810.6 | 807.1 | 792.3 | 752.9 | 688.3 |
| 42.5° | 812.7 | 815.5 | 829.6 | 849.2 | 861.9 | 873.9 | 870.3 | 868.2 | 847.8 | 806.4 | 738.2 |
| 45° | 841.5 | 846.4 | 866.1 | 889.3 | 906.9 | 924.5 | 925.2 | 921.0 | 902.0 | 855.6 | 786.7 |
| 47.5° | 864.7 | 870.3 | 892.1 | 921.7 | 948.4 | 970.2 | 974.4 | 969.5 | 951.9 | 903.4 | 830.3 |
| 50° | 883.7 | 886.5 | 911.1 | 949.1 | 982.1 | 1009.5 | 1018.0 | 1013.8 | 998.3 | 943.5 | 868.2 |
| 52.5° | 893.5 | 897.8 | 925.9 | 969.5 | 1009.5 | 1042.6 | 1055.2 | 1053.1 | 1034.8 | 980.0 | 902.0 |
| 55° | 898.5 | 902.7 | 935.7 | 985.6 | 1030.6 | 1069.3 | 1084.8 | 1085.5 | 1067.9 | 1013.1 | 933.6 |
| 57.5° | 892.8 | 898.5 | 934.3 | 989.9 | 1039.8 | 1081.2 | 1105.1 | 1104.4 | 1090.4 | 1038.4 | 960.3 |
| 59° | 883.0 | 887.2 | 925.9 | 984.2 | 1038.4 | 1079.8 | 1107.3 | 1108.0 | 1095.3 | 1046.8 | 972.3 |
| 60° | 871.7 | 876.7 | 916.0 | 977.2 | 1032.7 | 1074.9 | 1103.7 | 1105.1 | 1094.6 | 1048.9 | 977.2 |
| 62.5° | 833.1 | 839.4 | 883.0 | 948.4 | 1008.8 | 1048.9 | 1083.4 | 1085.5 | 1079.8 | 1043.3 | 980.7 |
| 65° | 778.9 | 784.6 | 831.7 | 901.3 | 964.5 | 1006.0 | 1038.4 | 1043.3 | 1042.6 | 1018.0 | 966.7 |
| 67.5° | 712.9 | 713.6 | 757.9 | 833.8 | 899.9 | 940.6 | 971.6 | 980.0 | 986.3 | 970.2 | 925.2 |
| 70° | 633.4 | 632.7 | 675.6 | 750.8 | 816.9 | 859.8 | 890.7 | 896.4 | 912.5 | 899.9 | 863.3 |
| 72.5° | 535.0 | 543.4 | 583.5 | 646.8 | 712.2 | 760.0 | 787.4 | 797.9 | 807.1 | 809.9 | 779.6 |
| 75° | 442.2 | 451.3 | 483.0 | 542.0 | 598.3 | 642.6 | 672.1 | 677.0 | 693.9 | 698.1 | 670.0 |
| 77.5° | 353.6 | 354.3 | 377.5 | 424.6 | 475.9 | 512.5 | 536.4 | 549.1 | 558.2 | 566.6 | 537.1 |
| 80° | 248.2 | 251.7 | 267.9 | 301.6 | 341.7 | 380.3 | 400.0 | 408.5 | 414.8 | 420.4 | 410.6 |
| 82.5° | 155.4 | 156.8 | 167.3 | 187.7 | 215.1 | 236.9 | 257.3 | 264.3 | 265.7 | 278.4 | 277.0 |
| 85° | 73.8 | 74.5 | 81.6 | 91.4 | 103.3 | 120.9 | 128.7 | 128.7 | 138.5 | 147.6 | 147.6 |
| 87.5° | 9.8 | 9.8 | 12.0 | 13.4 | 16.9 | 21.8 | 30.2 | 30.9 | 36.6 | 40.8 | 44.3 |
| 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° | 250.3 | 250.3 | 250.3 | 250.3 | 250.3 | 250.3 | 250.3 | 250.3 | 250.3 | 250.3 | 250.3 |
| 2.5° | 251.0 | 251.0 | 251.0 | 251.0 | 251.0 | 250.3 | 251.0 | 251.0 | 251.0 | 251.0 | 251.0 |
| 5° | 255.9 | 255.2 | 254.5 | 253.8 | 253.8 | 253.1 | 253.1 | 253.1 | 253.1 | 253.1 | 253.1 |
| 7.5° | 260.8 | 260.1 | 259.4 | 258.0 | 257.3 | 256.6 | 256.6 | 255.9 | 255.9 | 255.9 | 255.9 |
| 10° | 269.3 | 268.6 | 265.7 | 263.6 | 262.2 | 261.5 | 260.8 | 260.1 | 259.4 | 259.4 | 259.4 |
| 12.5° | 280.5 | 279.1 | 274.2 | 271.4 | 269.3 | 267.9 | 266.4 | 265.7 | 265.0 | 264.3 | 264.3 |
| 15° | 294.6 | 291.1 | 284.7 | 280.5 | 277.7 | 275.6 | 273.5 | 272.1 | 271.4 | 270.7 | 270.7 |
| 17.5° | 311.4 | 307.2 | 298.8 | 291.1 | 286.1 | 282.6 | 279.8 | 277.7 | 277.0 | 277.0 | 277.0 |
| 20° | 332.5 | 325.5 | 313.5 | 303.0 | 295.3 | 290.3 | 286.1 | 284.0 | 283.3 | 282.6 | 281.9 |
| 22.5° | 357.1 | 348.0 | 330.4 | 314.2 | 304.4 | 297.4 | 292.5 | 289.6 | 287.5 | 286.8 | 286.8 |
| 25° | 385.3 | 371.9 | 348.7 | 329.0 | 315.7 | 305.8 | 299.5 | 296.0 | 292.5 | 291.1 | 291.1 |
| 27.5° | 419.0 | 401.4 | 370.5 | 344.5 | 326.2 | 314.2 | 307.2 | 302.3 | 298.8 | 296.0 | 294.6 |
| 30° | 455.6 | 435.9 | 394.4 | 361.4 | 338.2 | 324.8 | 316.4 | 310.7 | 305.8 | 300.9 | 300.2 |
| 32.5° | 502.0 | 473.8 | 423.2 | 380.3 | 352.2 | 335.3 | 325.5 | 318.5 | 312.1 | 307.2 | 305.8 |
| 35° | 549.1 | 515.3 | 453.4 | 400.0 | 365.6 | 345.2 | 333.2 | 325.5 | 319.2 | 313.5 | 312.8 |
| 37.5° | 597.6 | 561.7 | 486.5 | 423.2 | 381.0 | 356.4 | 341.7 | 333.2 | 325.5 | 319.9 | 319.2 |
| 40° | 648.2 | 606.0 | 520.2 | 447.1 | 397.2 | 367.7 | 350.8 | 340.3 | 331.8 | 326.9 | 326.2 |
| 42.5° | 696.0 | 650.3 | 556.8 | 475.2 | 416.2 | 379.6 | 359.9 | 348.7 | 338.2 | 333.2 | 332.5 |
| 45° | 741.7 | 692.5 | 593.3 | 501.3 | 435.2 | 392.3 | 369.1 | 355.7 | 344.5 | 339.6 | 338.9 |
| 47.5° | 783.2 | 734.0 | 627.1 | 529.4 | 454.9 | 406.3 | 378.9 | 362.8 | 350.1 | 345.2 | 345.2 |
| 50° | 820.4 | 769.1 | 660.1 | 555.4 | 473.1 | 420.4 | 387.4 | 369.1 | 356.4 | 351.5 | 350.8 |
| 52.5° | 855.6 | 800.0 | 689.0 | 577.9 | 490.7 | 433.1 | 395.8 | 374.0 | 360.6 | 355.0 | 354.3 |
| 55° | 883.7 | 828.2 | 712.9 | 596.2 | 502.7 | 441.5 | 401.4 | 376.8 | 362.1 | 357.1 | 356.4 |
| 57.5° | 908.3 | 851.4 | 729.7 | 608.8 | 510.4 | 446.4 | 404.2 | 376.8 | 361.4 | 355.7 | 355.0 |
| 59° | 918.8 | 861.2 | 735.4 | 612.3 | 511.8 | 447.1 | 403.5 | 374.7 | 358.5 | 352.9 | 351.5 |
| 60° | 924.5 | 865.4 | 737.5 | 613.0 | 511.1 | 445.7 | 402.8 | 372.6 | 355.7 | 349.4 | 349.4 |
| 62.5° | 930.1 | 868.9 | 734.7 | 607.4 | 503.4 | 438.0 | 395.8 | 364.2 | 345.2 | 338.2 | 338.2 |
| 65° | 918.1 | 856.3 | 718.5 | 591.9 | 487.9 | 424.6 | 382.4 | 350.1 | 329.0 | 322.0 | 322.0 |
| 67.5° | 883.0 | 825.3 | 689.0 | 563.1 | 462.6 | 401.4 | 360.6 | 327.6 | 307.9 | 300.2 | 298.1 |
| 70° | 823.2 | 774.7 | 642.6 | 521.6 | 428.1 | 371.9 | 333.2 | 301.6 | 281.2 | 273.5 | 270.7 |
| 72.5° | 743.1 | 695.3 | 580.7 | 471.0 | 382.4 | 333.2 | 299.5 | 269.3 | 246.8 | 239.0 | 239.7 |
| 75° | 632.7 | 599.0 | 500.6 | 407.0 | 329.7 | 284.0 | 255.9 | 230.6 | 211.6 | 205.3 | 206.0 |
| 77.5° | 513.2 | 485.1 | 405.6 | 331.8 | 269.3 | 234.1 | 210.2 | 189.8 | 177.2 | 173.6 | 171.5 |
| 80° | 393.0 | 365.6 | 304.4 | 247.5 | 204.6 | 180.0 | 163.8 | 149.7 | 139.9 | 135.0 | 136.4 |
| 82.5° | 263.6 | 246.8 | 201.8 | 163.8 | 139.2 | 121.6 | 116.0 | 106.9 | 103.3 | 100.5 | 102.6 |
| 85° | 142.0 | 127.2 | 105.5 | 87.9 | 76.6 | 71.7 | 73.1 | 72.4 | 69.6 | 68.9 | 71.0 |
| 87.5° | 46.4 | 40.1 | 30.9 | 26.0 | 26.7 | 23.9 | 23.9 | 22.5 | 20.4 | 19.7 | 21.1 |
| 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)