

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: P472214

Luminaire Tested: **CCW-VA-2-727-U-T2**

Issue Date: 01/27/2021

Test Information

Test Method: LM-79-08
Report Number: P472214
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: CCW-VA-2-727-U-T2
Description: INVUE WALL PACK Wave Stream LUMINAIRE WITH T2 DISTRIBUTION LENS
Light Source: 2700K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3418.7 lumens
Efficiency: N/A
Efficacy: 84.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.54' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G2

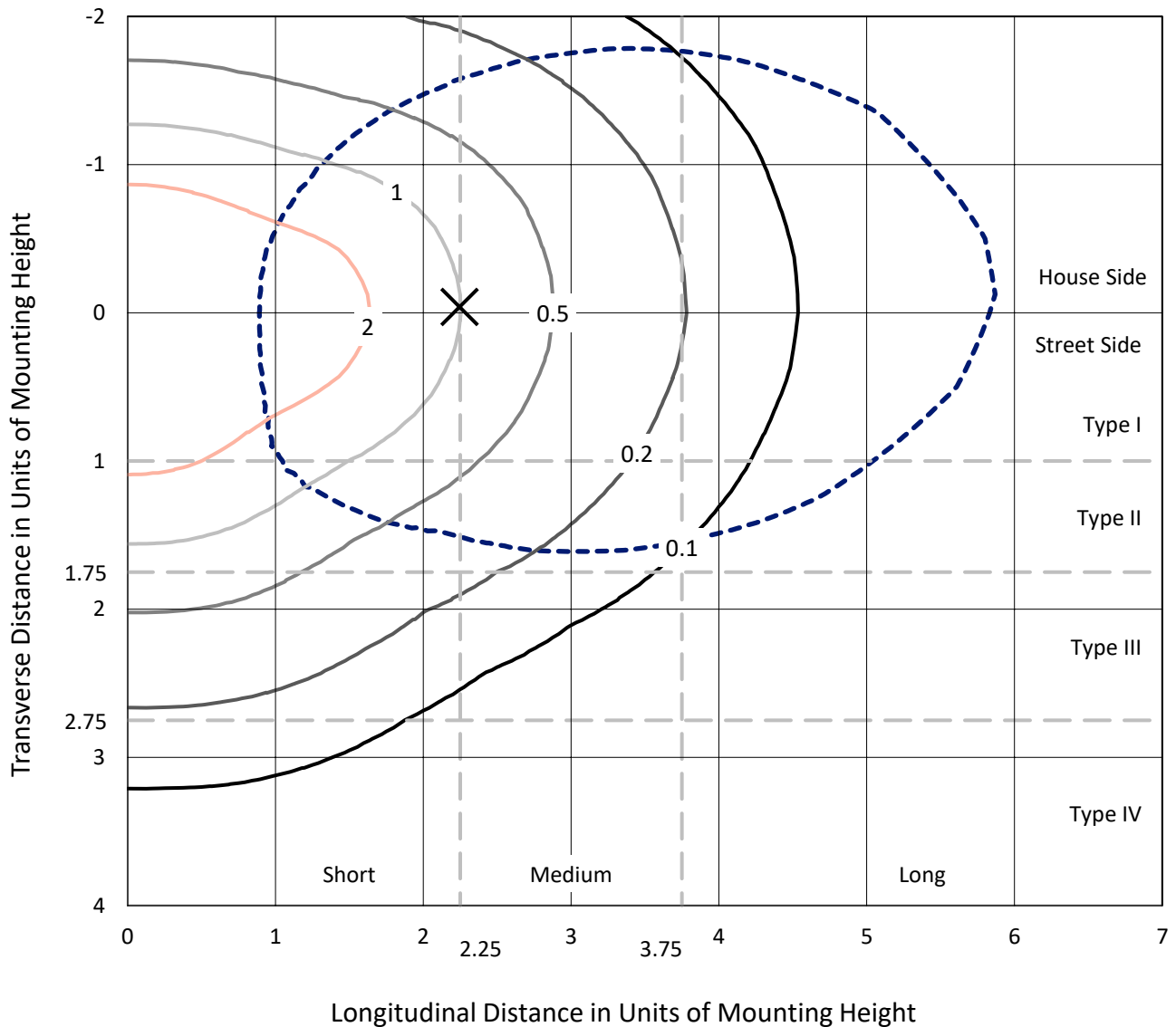
Input Watts (W): 40.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

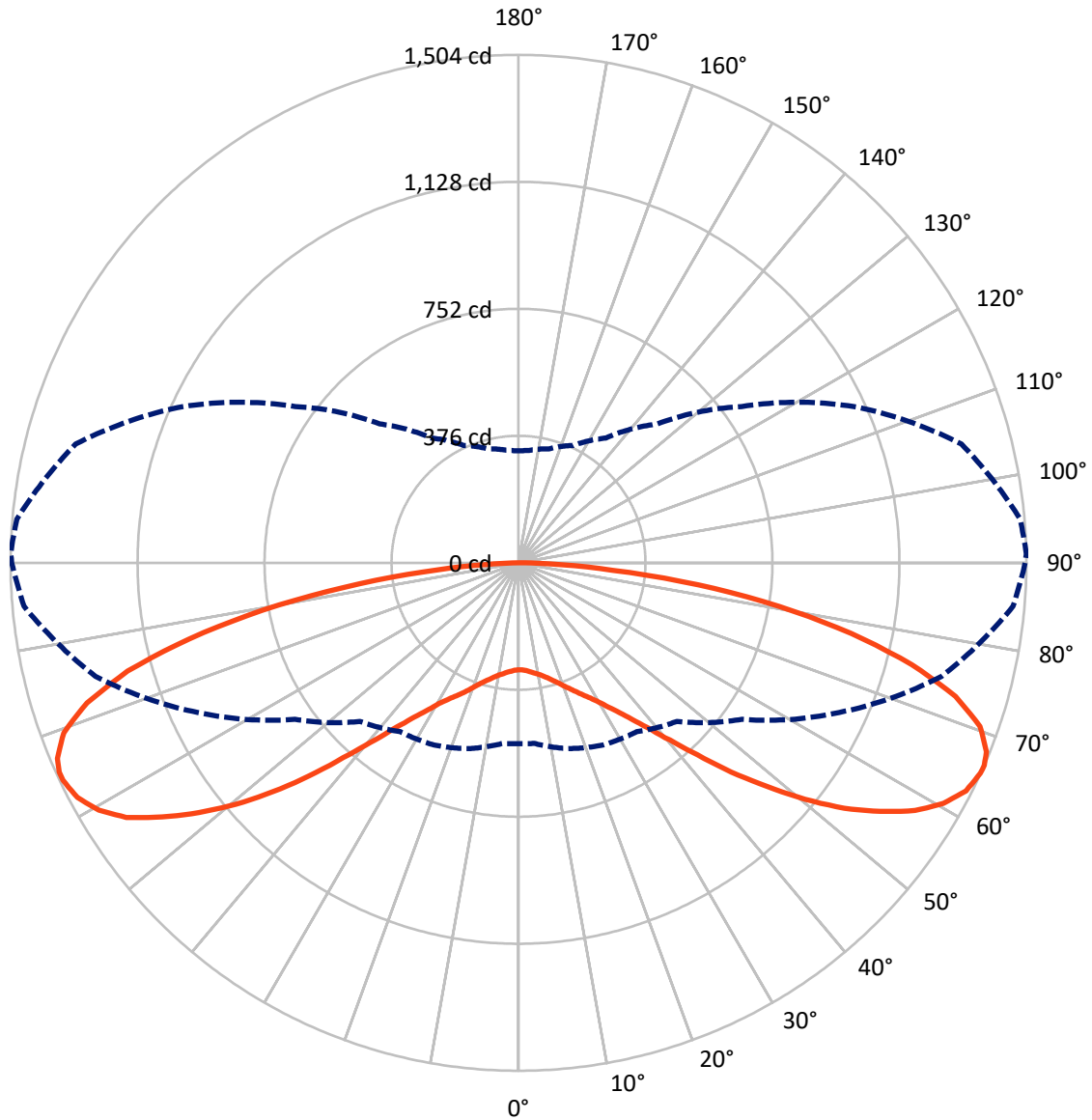
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.4 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 91-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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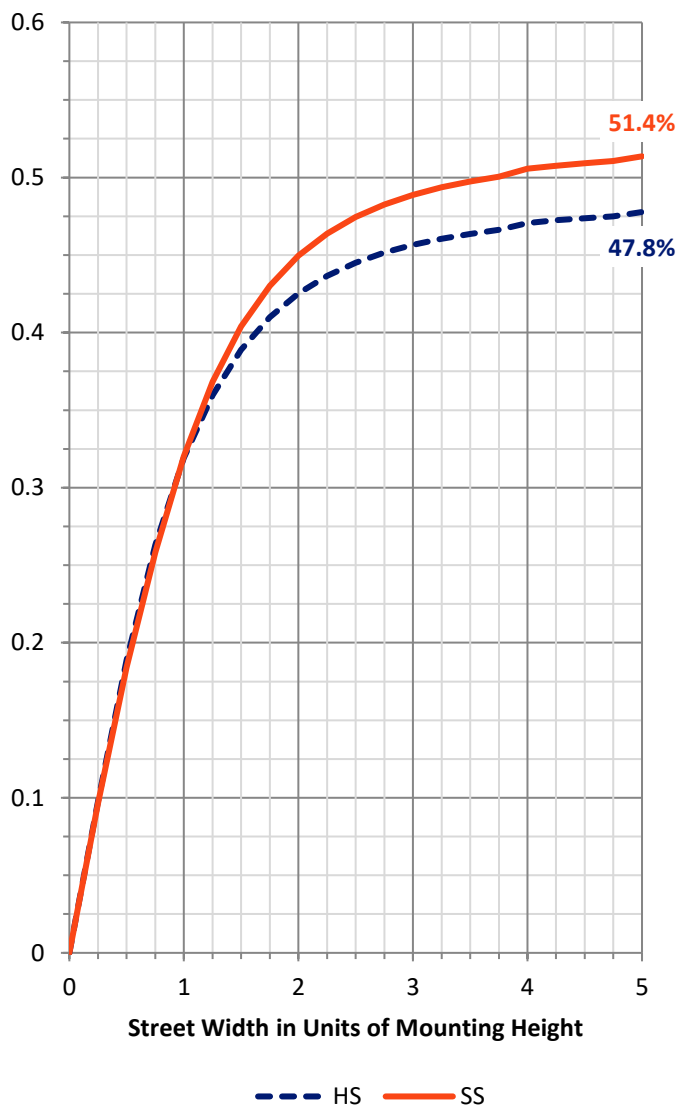
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1650.0 | 0.0 | 1650.0 |
| | % Fixture | 48.3 | 0.0 | 48.3 |
| Street Side | Lumens | 1768.6 | 0.0 | 1768.6 |
| | % Fixture | 51.7 | 0.0 | 51.7 |
| Total | Lumens | 3418.7 | 0.0 | 3418.7 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 31.2 | 0.9 |
| 10°-20° | 102.0 | 3.0 |
| 20°-30° | 197.4 | 5.8 |
| 30°-40° | 323.9 | 9.5 |
| 40°-50° | 513.0 | 15.0 |
| 50°-60° | 707.3 | 20.7 |
| 60°-70° | 794.3 | 23.2 |
| 70°-80° | 593.6 | 17.4 |
| 80°-90° | 156.0 | 4.6 |
| 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° | 3418.7 | 100.0 |
| 0°-180° | 3418.7 | 100.0 |

Coefficient of Utilization

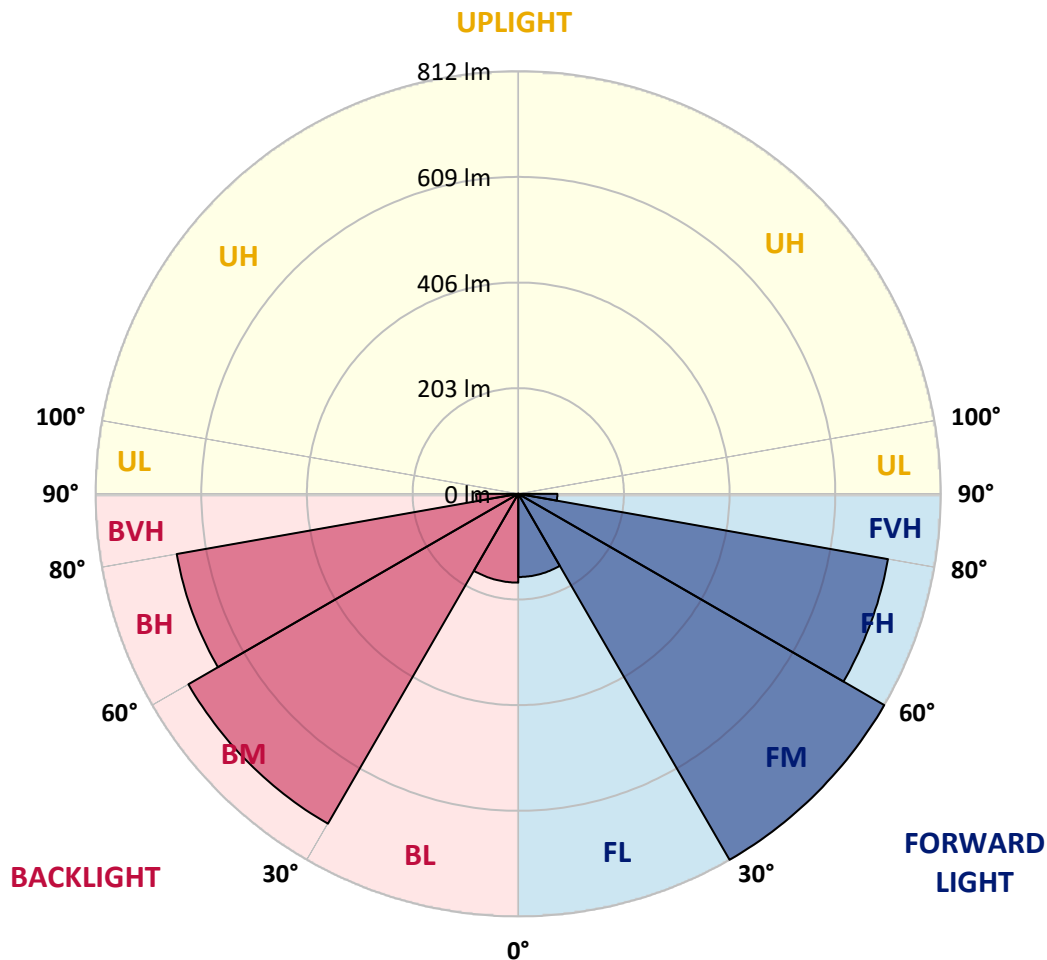


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 159.8 | 4.7 | | | |
| FM (30°-60°) | 812.2 | 23.8 | | | |
| FH (60°-80°) | 721.5 | 21.1 | | | G1/1800 |
| FVH (80°-90°) | 75.1 | 2.2 | | | G1/100 |
| BL (0°-30°) | 170.8 | 5.0 | B1/500 | | |
| BM (30°-60°) | 732.0 | 21.4 | B1/1000 | | |
| BH (60°-80°) | 666.4 | 19.5 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 80.9 | 2.4 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G2
 Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| 0° | 316.8 | 316.8 | 316.8 | 316.8 | 316.8 | 316.8 | 316.8 | 316.8 | 316.8 | 316.8 | 316.8 |
| 2.5° | 318.0 | 318.0 | 318.0 | 318.0 | 319.2 | 319.2 | 319.2 | 319.2 | 319.2 | 318.0 | 318.0 |
| 5° | 320.4 | 320.4 | 320.4 | 320.4 | 321.6 | 321.6 | 321.6 | 321.6 | 322.8 | 322.8 | 322.8 |
| 7.5° | 322.8 | 322.8 | 324.0 | 324.0 | 325.2 | 325.2 | 326.5 | 326.5 | 327.7 | 328.9 | 328.9 |
| 10° | 327.7 | 327.7 | 328.9 | 328.9 | 331.3 | 332.5 | 333.7 | 333.7 | 336.1 | 336.1 | 336.1 |
| 12.5° | 333.7 | 334.9 | 336.1 | 337.3 | 339.8 | 341.0 | 342.2 | 343.4 | 344.6 | 345.8 | 345.8 |
| 15° | 343.4 | 342.2 | 344.6 | 347.0 | 348.2 | 350.6 | 351.8 | 353.1 | 355.5 | 357.9 | 357.9 |
| 17.5° | 350.6 | 351.8 | 353.1 | 355.5 | 357.9 | 361.5 | 363.9 | 366.4 | 368.8 | 371.2 | 371.2 |
| 20° | 360.3 | 359.1 | 363.9 | 367.6 | 370.0 | 374.8 | 378.4 | 383.3 | 385.7 | 388.1 | 389.3 |
| 22.5° | 368.8 | 370.0 | 372.4 | 377.2 | 382.1 | 389.3 | 396.6 | 400.2 | 403.8 | 406.3 | 409.9 |
| 25° | 379.7 | 380.9 | 384.5 | 389.3 | 396.6 | 405.0 | 413.5 | 418.3 | 422.0 | 426.8 | 430.4 |
| 27.5° | 390.5 | 390.5 | 396.6 | 403.8 | 412.3 | 423.2 | 432.9 | 437.7 | 443.7 | 449.8 | 452.2 |
| 30° | 402.6 | 402.6 | 408.7 | 418.3 | 430.4 | 442.5 | 451.0 | 460.7 | 469.1 | 475.2 | 480.0 |
| 32.5° | 420.8 | 420.8 | 428.0 | 437.7 | 451.0 | 465.5 | 477.6 | 487.3 | 498.1 | 509.0 | 518.7 |
| 35° | 441.3 | 442.5 | 452.2 | 464.3 | 480.0 | 498.1 | 509.0 | 522.3 | 534.4 | 552.5 | 562.2 |
| 37.5° | 474.0 | 475.2 | 486.0 | 501.8 | 517.5 | 536.8 | 555.0 | 570.7 | 588.8 | 609.4 | 616.6 |
| 40° | 522.3 | 525.9 | 536.8 | 544.1 | 558.6 | 573.1 | 599.7 | 626.3 | 657.7 | 685.5 | 690.4 |
| 42.5° | 609.4 | 605.7 | 598.5 | 596.1 | 599.7 | 615.4 | 644.4 | 685.5 | 741.2 | 776.2 | 776.2 |
| 45° | 643.2 | 643.2 | 644.4 | 642.0 | 639.6 | 650.5 | 684.3 | 749.6 | 828.2 | 876.6 | 886.3 |
| 47.5° | 649.3 | 650.5 | 661.4 | 671.0 | 673.5 | 685.5 | 726.7 | 812.5 | 917.7 | 989.0 | 995.1 |
| 50° | 649.3 | 651.7 | 666.2 | 683.1 | 695.2 | 712.1 | 762.9 | 868.1 | 1006.0 | 1088.2 | 1103.9 |
| 52.5° | 646.9 | 649.3 | 665.0 | 685.5 | 704.9 | 729.1 | 794.4 | 926.2 | 1084.5 | 1195.8 | 1203.0 |
| 55° | 640.8 | 643.2 | 662.6 | 684.3 | 706.1 | 738.7 | 819.8 | 975.7 | 1160.7 | 1285.3 | 1298.6 |
| 57.5° | 633.6 | 637.2 | 657.7 | 680.7 | 701.3 | 741.2 | 836.7 | 1014.4 | 1222.4 | 1365.0 | 1389.2 |
| 60° | 619.0 | 625.1 | 648.1 | 671.0 | 690.4 | 732.7 | 845.1 | 1044.6 | 1268.3 | 1423.1 | 1447.3 |
| 62.5° | 590.0 | 596.1 | 621.5 | 646.9 | 666.2 | 712.1 | 840.3 | 1059.2 | 1294.9 | 1459.4 | 1484.7 |
| 65° | 553.8 | 556.2 | 584.0 | 610.6 | 629.9 | 678.3 | 819.8 | 1056.7 | 1301.0 | 1471.4 | 1500.5 |
| 66° | 535.6 | 536.8 | 569.5 | 594.9 | 610.6 | 663.8 | 807.7 | 1048.3 | 1297.3 | 1470.2 | 1500.5 |
| 67.5° | 503.0 | 509.0 | 536.8 | 563.4 | 581.6 | 631.1 | 778.6 | 1028.9 | 1282.8 | 1458.1 | 1489.6 |
| 70° | 446.1 | 451.0 | 474.0 | 500.6 | 519.9 | 567.1 | 715.8 | 972.1 | 1229.6 | 1408.6 | 1444.8 |
| 72.5° | 384.5 | 388.1 | 412.3 | 431.6 | 443.7 | 494.5 | 639.6 | 879.0 | 1136.5 | 1315.5 | 1350.5 |
| 75° | 319.2 | 321.6 | 343.4 | 356.7 | 367.6 | 412.3 | 538.0 | 759.3 | 990.2 | 1164.3 | 1210.3 |
| 77.5° | 251.5 | 252.7 | 270.8 | 282.9 | 282.9 | 321.6 | 426.8 | 615.4 | 812.5 | 973.3 | 1007.2 |
| 80° | 185.0 | 183.8 | 194.7 | 200.7 | 204.3 | 229.7 | 307.1 | 452.2 | 619.0 | 744.8 | 777.4 |
| 82.5° | 120.9 | 119.7 | 127.0 | 129.4 | 129.4 | 145.1 | 193.5 | 286.6 | 406.3 | 505.4 | 524.7 |
| 85° | 64.1 | 66.5 | 65.3 | 65.3 | 65.3 | 71.3 | 96.7 | 149.9 | 216.4 | 270.8 | 284.1 |
| 87.5° | 10.9 | 10.9 | 10.9 | 12.1 | 14.5 | 19.3 | 25.4 | 42.3 | 61.7 | 83.4 | 94.3 |
| 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):

| | 91° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 316.8 | 316.8 | 316.8 | 316.8 | 316.8 | 316.8 | 316.8 | 316.8 | 316.8 | 316.8 | 316.8 |
| 2.5° | 318.0 | 319.2 | 319.2 | 319.2 | 319.2 | 319.2 | 319.2 | 319.2 | 319.2 | 319.2 | 319.2 |
| 5° | 322.8 | 322.8 | 322.8 | 324.0 | 324.0 | 324.0 | 324.0 | 324.0 | 324.0 | 324.0 | 324.0 |
| 7.5° | 328.9 | 328.9 | 330.1 | 330.1 | 330.1 | 331.3 | 331.3 | 330.1 | 330.1 | 330.1 | 330.1 |
| 10° | 336.1 | 336.1 | 337.3 | 338.5 | 338.5 | 339.8 | 339.8 | 338.5 | 338.5 | 337.3 | 337.3 |
| 12.5° | 345.8 | 347.0 | 348.2 | 349.4 | 350.6 | 350.6 | 349.4 | 348.2 | 347.0 | 345.8 | 345.8 |
| 15° | 357.9 | 359.1 | 360.3 | 362.7 | 362.7 | 362.7 | 361.5 | 360.3 | 357.9 | 356.7 | 357.9 |
| 17.5° | 372.4 | 373.6 | 376.0 | 377.2 | 378.4 | 377.2 | 377.2 | 376.0 | 376.0 | 374.8 | 374.8 |
| 20° | 390.5 | 391.7 | 395.4 | 396.6 | 396.6 | 397.8 | 401.4 | 403.8 | 407.5 | 408.7 | 408.7 |
| 22.5° | 408.7 | 411.1 | 414.7 | 419.6 | 422.0 | 426.8 | 428.0 | 430.4 | 429.2 | 425.6 | 425.6 |
| 25° | 430.4 | 432.9 | 440.1 | 446.1 | 451.0 | 453.4 | 451.0 | 447.4 | 441.3 | 436.5 | 435.3 |
| 27.5° | 453.4 | 457.0 | 467.9 | 476.4 | 478.8 | 476.4 | 466.7 | 458.2 | 451.0 | 444.9 | 442.5 |
| 30° | 482.4 | 488.5 | 500.6 | 505.4 | 504.2 | 494.5 | 480.0 | 469.1 | 458.2 | 451.0 | 449.8 |
| 32.5° | 518.7 | 524.7 | 535.6 | 536.8 | 529.6 | 511.4 | 492.1 | 477.6 | 464.3 | 455.8 | 454.6 |
| 35° | 562.2 | 568.3 | 574.3 | 570.7 | 550.1 | 527.2 | 503.0 | 482.4 | 469.1 | 459.4 | 459.4 |
| 37.5° | 617.8 | 621.5 | 621.5 | 603.3 | 571.9 | 541.7 | 511.4 | 487.3 | 472.7 | 463.1 | 461.9 |
| 40° | 690.4 | 689.2 | 672.2 | 637.2 | 596.1 | 555.0 | 517.5 | 492.1 | 474.0 | 464.3 | 463.1 |
| 42.5° | 777.4 | 769.0 | 732.7 | 675.9 | 619.0 | 567.1 | 524.7 | 493.3 | 472.7 | 463.1 | 461.9 |
| 45° | 883.8 | 869.3 | 804.0 | 720.6 | 643.2 | 577.9 | 528.4 | 492.1 | 469.1 | 458.2 | 457.0 |
| 47.5° | 989.0 | 980.6 | 891.1 | 767.8 | 667.4 | 590.0 | 530.8 | 488.5 | 461.9 | 446.1 | 446.1 |
| 50° | 1100.3 | 1079.7 | 978.1 | 824.6 | 692.8 | 598.5 | 530.8 | 482.4 | 449.8 | 432.9 | 430.4 |
| 52.5° | 1207.9 | 1187.3 | 1066.4 | 881.4 | 720.6 | 607.0 | 528.4 | 474.0 | 438.9 | 420.8 | 418.3 |
| 55° | 1299.8 | 1282.8 | 1152.3 | 945.5 | 749.6 | 613.0 | 524.7 | 464.3 | 428.0 | 411.1 | 408.7 |
| 57.5° | 1384.4 | 1367.5 | 1227.2 | 999.9 | 777.4 | 616.6 | 516.3 | 452.2 | 414.7 | 397.8 | 396.6 |
| 60° | 1446.1 | 1432.8 | 1291.3 | 1050.7 | 800.4 | 616.6 | 504.2 | 437.7 | 400.2 | 383.3 | 382.1 |
| 62.5° | 1487.2 | 1473.9 | 1337.2 | 1084.5 | 814.9 | 608.2 | 486.0 | 418.3 | 382.1 | 366.4 | 362.7 |
| 65° | 1502.9 | 1490.8 | 1357.8 | 1097.8 | 812.5 | 591.2 | 461.9 | 394.2 | 359.1 | 343.4 | 341.0 |
| 66° | 1504.1 | 1490.8 | 1357.8 | 1095.4 | 806.5 | 581.6 | 451.0 | 383.3 | 349.4 | 333.7 | 331.3 |
| 67.5° | 1494.4 | 1482.3 | 1349.3 | 1083.3 | 789.5 | 563.4 | 429.2 | 365.1 | 331.3 | 315.6 | 314.4 |
| 70° | 1449.7 | 1440.0 | 1303.4 | 1037.4 | 749.6 | 523.5 | 393.0 | 330.1 | 297.4 | 286.6 | 282.9 |
| 72.5° | 1353.0 | 1342.1 | 1211.5 | 951.5 | 684.3 | 469.1 | 347.0 | 289.0 | 262.4 | 249.1 | 247.9 |
| 75° | 1203.0 | 1198.2 | 1071.2 | 837.9 | 590.0 | 403.8 | 293.8 | 244.2 | 222.5 | 212.8 | 212.8 |
| 77.5° | 1007.2 | 997.5 | 889.9 | 692.8 | 484.8 | 326.5 | 235.8 | 198.3 | 181.4 | 172.9 | 174.1 |
| 80° | 783.5 | 776.2 | 685.5 | 519.9 | 366.4 | 245.4 | 176.5 | 151.1 | 139.0 | 134.2 | 131.8 |
| 82.5° | 536.8 | 517.5 | 457.0 | 344.6 | 238.2 | 165.6 | 122.1 | 105.2 | 99.1 | 97.9 | 96.7 |
| 85° | 279.3 | 286.6 | 240.6 | 182.6 | 129.4 | 91.9 | 73.8 | 67.7 | 65.3 | 66.5 | 66.5 |
| 87.5° | 91.9 | 94.3 | 72.5 | 55.6 | 42.3 | 32.6 | 27.8 | 26.6 | 23.0 | 25.4 | 26.6 |
| 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)