

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: P472249

Luminaire Tested: **CCW-VA-1-840-U-T2**

Issue Date: 01/27/2021

Test Information

Test Method: LM-79-08
Report Number: P472249
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: CCW-VA-1-840-U-T2
Description: INVUE WALL PACK Wave Stream LUMINAIRE WITH T2 DISTRIBUTION LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2672 lumens
Efficiency: N/A
Efficacy: 89.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.54' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G2

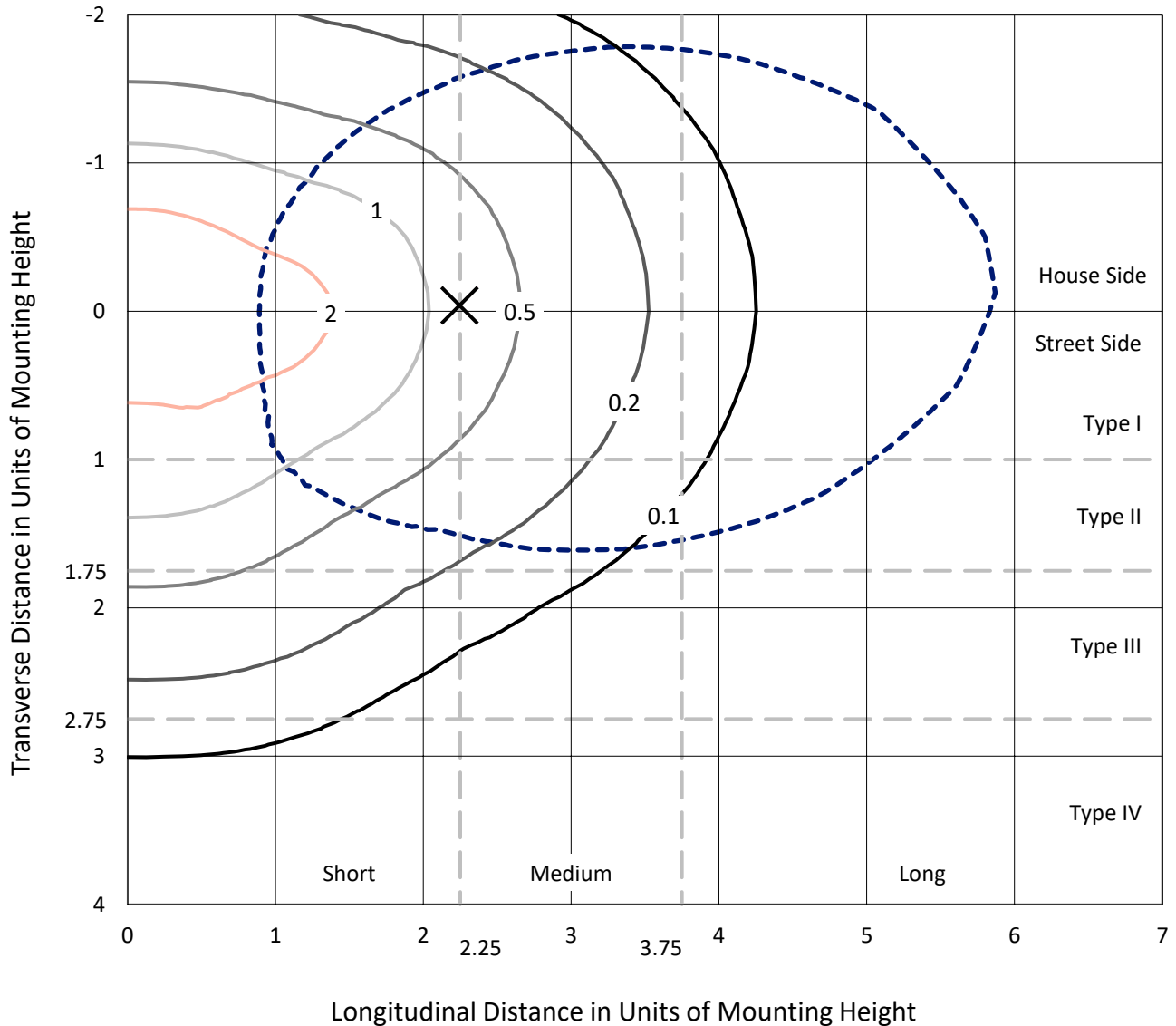
Input Watts (W): 29.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

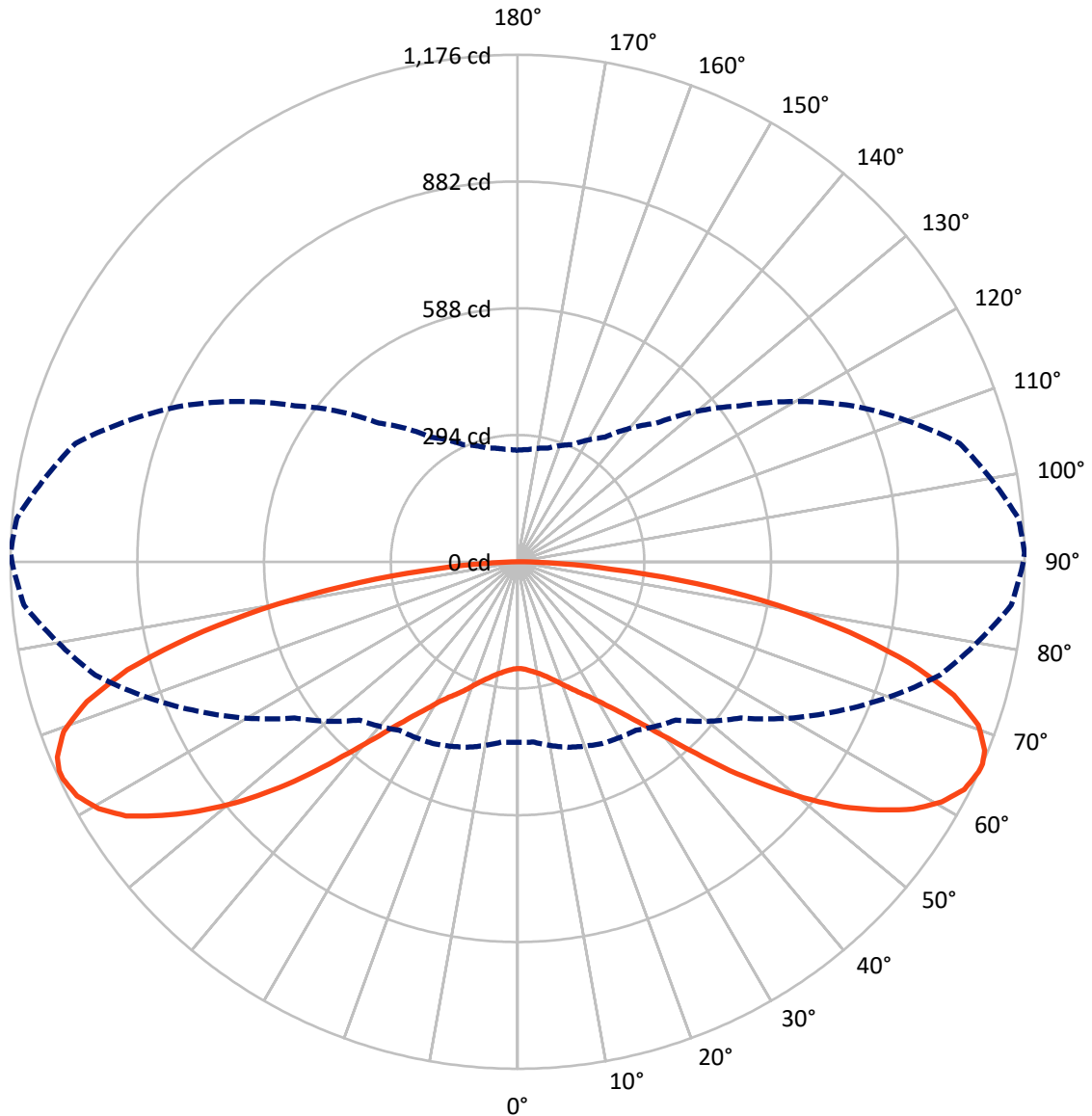
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2.6 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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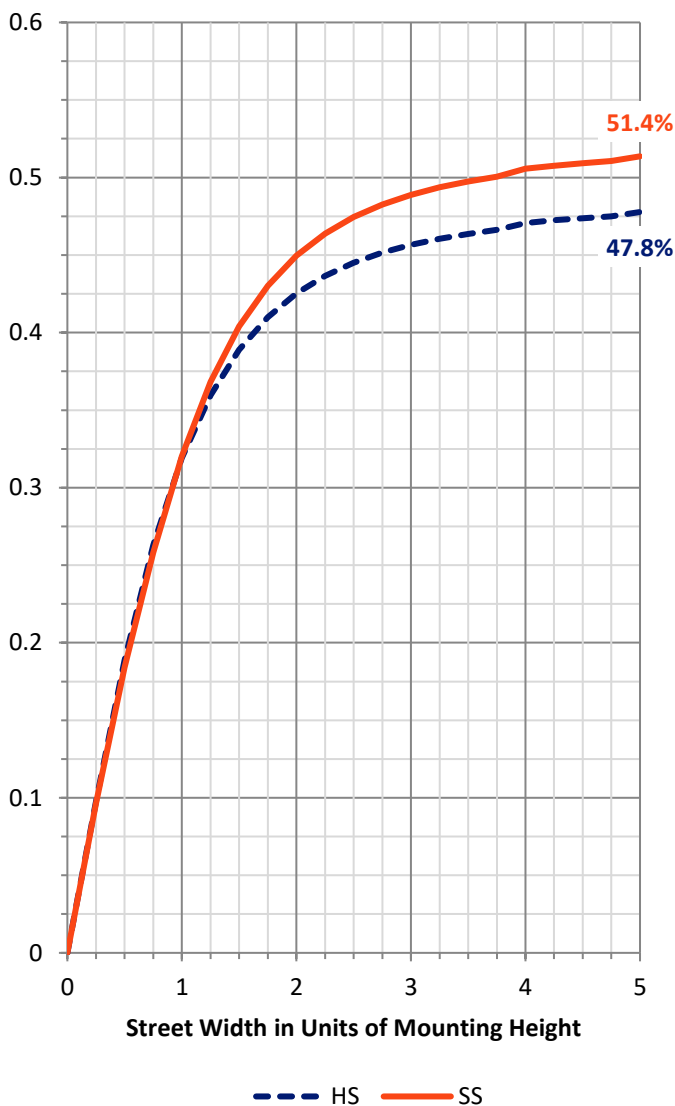
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1289.7 | 0.0 | 1289.7 |
| | % Fixture | 48.3 | 0.0 | 48.3 |
| Street Side | Lumens | 1382.3 | 0.0 | 1382.3 |
| | % Fixture | 51.7 | 0.0 | 51.7 |
| Total | Lumens | 2672.0 | 0.0 | 2672.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 24.4 | 0.9 |
| 10°-20° | 79.8 | 3.0 |
| 20°-30° | 154.3 | 5.8 |
| 30°-40° | 253.1 | 9.5 |
| 40°-50° | 400.9 | 15.0 |
| 50°-60° | 552.8 | 20.7 |
| 60°-70° | 620.8 | 23.2 |
| 70°-80° | 464.0 | 17.4 |
| 80°-90° | 121.9 | 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° | 2672.0 | 100.0 |
| 0°-180° | 2672.0 | 100.0 |

Coefficient of Utilization

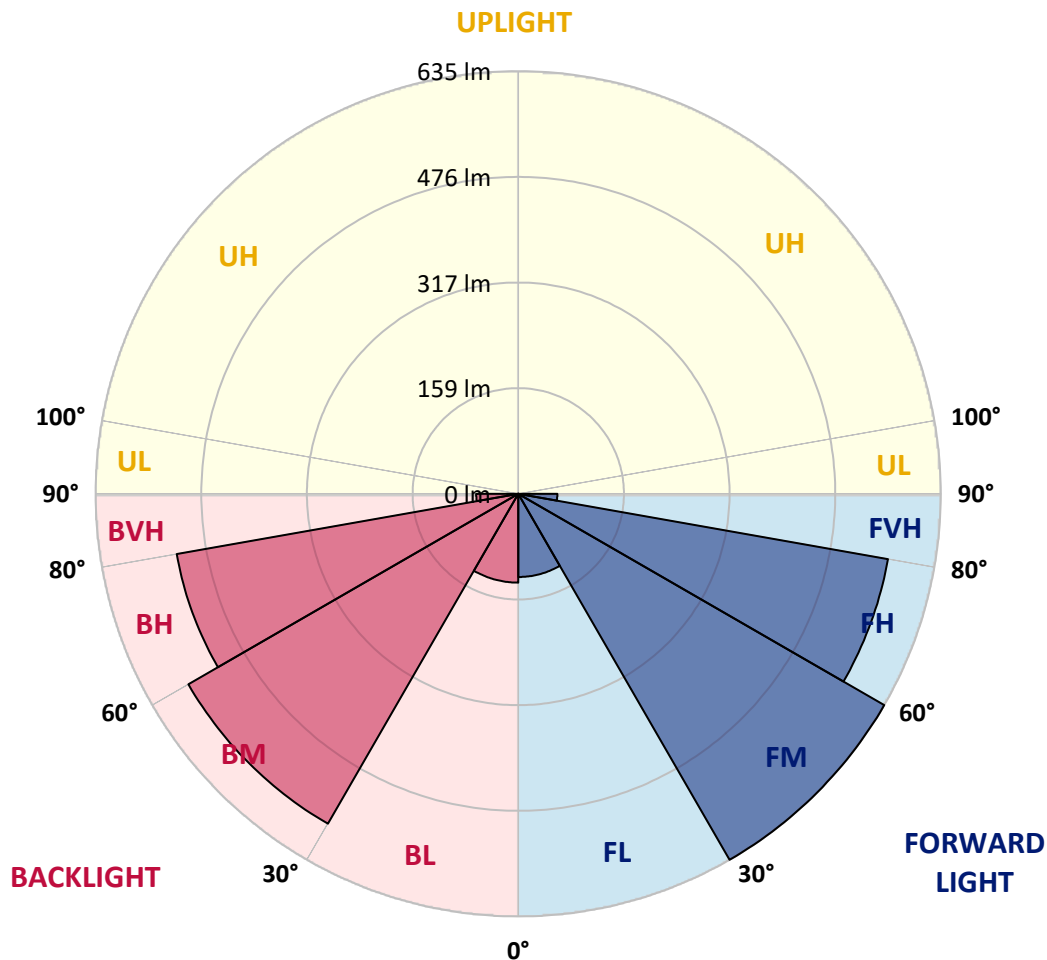


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 124.9 | 4.7 | | | |
| FM (30°-60°) | 634.8 | 23.8 | | | |
| FH (60°-80°) | 563.9 | 21.1 | | | G0/660 |
| FVH (80°-90°) | 58.7 | 2.2 | | | G1/100 |
| BL (0°-30°) | 133.5 | 5.0 | B1/500 | | |
| BM (30°-60°) | 572.1 | 21.4 | B1/1000 | | |
| BH (60°-80°) | 520.9 | 19.5 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 63.2 | 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° | 247.6 | 247.6 | 247.6 | 247.6 | 247.6 | 247.6 | 247.6 | 247.6 | 247.6 | 247.6 | 247.6 |
| 2.5° | 248.5 | 248.5 | 248.5 | 248.5 | 249.5 | 249.5 | 249.5 | 249.5 | 249.5 | 248.5 | 248.5 |
| 5° | 250.4 | 250.4 | 250.4 | 250.4 | 251.4 | 251.4 | 251.4 | 251.4 | 252.3 | 252.3 | 252.3 |
| 7.5° | 252.3 | 252.3 | 253.3 | 253.3 | 254.2 | 254.2 | 255.2 | 255.2 | 256.1 | 257.0 | 257.0 |
| 10° | 256.1 | 256.1 | 257.0 | 257.0 | 258.9 | 259.9 | 260.8 | 260.8 | 262.7 | 262.7 | 262.7 |
| 12.5° | 260.8 | 261.8 | 262.7 | 263.7 | 265.5 | 266.5 | 267.4 | 268.4 | 269.3 | 270.3 | 270.3 |
| 15° | 268.4 | 267.4 | 269.3 | 271.2 | 272.2 | 274.1 | 275.0 | 275.9 | 277.8 | 279.7 | 279.7 |
| 17.5° | 274.1 | 275.0 | 275.9 | 277.8 | 279.7 | 282.6 | 284.4 | 286.3 | 288.2 | 290.1 | 290.1 |
| 20° | 281.6 | 280.7 | 284.4 | 287.3 | 289.2 | 293.0 | 295.8 | 299.6 | 301.5 | 303.3 | 304.3 |
| 22.5° | 288.2 | 289.2 | 291.1 | 294.8 | 298.6 | 304.3 | 310.0 | 312.8 | 315.6 | 317.5 | 320.4 |
| 25° | 296.7 | 297.7 | 300.5 | 304.3 | 310.0 | 316.6 | 323.2 | 327.0 | 329.8 | 333.6 | 336.4 |
| 27.5° | 305.2 | 305.2 | 310.0 | 315.6 | 322.2 | 330.8 | 338.3 | 342.1 | 346.8 | 351.5 | 353.4 |
| 30° | 314.7 | 314.7 | 319.4 | 327.0 | 336.4 | 345.9 | 352.5 | 360.0 | 366.7 | 371.4 | 375.2 |
| 32.5° | 328.9 | 328.9 | 334.5 | 342.1 | 352.5 | 363.8 | 373.3 | 380.8 | 389.3 | 397.8 | 405.4 |
| 35° | 344.9 | 345.9 | 353.4 | 362.9 | 375.2 | 389.3 | 397.8 | 408.2 | 417.7 | 431.9 | 439.4 |
| 37.5° | 370.4 | 371.4 | 379.9 | 392.2 | 404.5 | 419.6 | 433.8 | 446.0 | 460.2 | 476.3 | 482.0 |
| 40° | 408.2 | 411.1 | 419.6 | 425.3 | 436.6 | 447.9 | 468.7 | 489.5 | 514.1 | 535.8 | 539.6 |
| 42.5° | 476.3 | 473.4 | 467.8 | 465.9 | 468.7 | 481.0 | 503.7 | 535.8 | 579.3 | 606.7 | 606.7 |
| 45° | 502.7 | 502.7 | 503.7 | 501.8 | 499.9 | 508.4 | 534.9 | 585.9 | 647.3 | 685.1 | 692.7 |
| 47.5° | 507.5 | 508.4 | 516.9 | 524.5 | 526.4 | 535.8 | 567.9 | 635.0 | 717.3 | 773.0 | 777.7 |
| 50° | 507.5 | 509.4 | 520.7 | 533.9 | 543.4 | 556.6 | 596.3 | 678.5 | 786.2 | 850.5 | 862.8 |
| 52.5° | 505.6 | 507.5 | 519.8 | 535.8 | 550.9 | 569.8 | 620.9 | 723.9 | 847.7 | 934.6 | 940.3 |
| 55° | 500.9 | 502.7 | 517.9 | 534.9 | 551.9 | 577.4 | 640.7 | 762.6 | 907.2 | 1004.5 | 1014.9 |
| 57.5° | 495.2 | 498.0 | 514.1 | 532.0 | 548.1 | 579.3 | 653.9 | 792.9 | 955.4 | 1066.9 | 1085.8 |
| 60° | 483.8 | 488.6 | 506.5 | 524.5 | 539.6 | 572.7 | 660.6 | 816.5 | 991.3 | 1112.3 | 1131.2 |
| 62.5° | 461.2 | 465.9 | 485.7 | 505.6 | 520.7 | 556.6 | 656.8 | 827.8 | 1012.1 | 1140.6 | 1160.5 |
| 65° | 432.8 | 434.7 | 456.4 | 477.2 | 492.3 | 530.1 | 640.7 | 825.9 | 1016.8 | 1150.1 | 1172.7 |
| 66° | 418.6 | 419.6 | 445.1 | 464.9 | 477.2 | 518.8 | 631.3 | 819.3 | 1014.0 | 1149.1 | 1172.7 |
| 67.5° | 393.1 | 397.8 | 419.6 | 440.4 | 454.5 | 493.3 | 608.6 | 804.2 | 1002.6 | 1139.7 | 1164.2 |
| 70° | 348.7 | 352.5 | 370.4 | 391.2 | 406.4 | 443.2 | 559.4 | 759.8 | 961.1 | 1100.9 | 1129.3 |
| 72.5° | 300.5 | 303.3 | 322.2 | 337.4 | 346.8 | 386.5 | 499.9 | 687.0 | 888.3 | 1028.2 | 1055.6 |
| 75° | 249.5 | 251.4 | 268.4 | 278.8 | 287.3 | 322.2 | 420.5 | 593.5 | 774.0 | 910.0 | 945.9 |
| 77.5° | 196.6 | 197.5 | 211.7 | 221.1 | 221.1 | 251.4 | 333.6 | 481.0 | 635.0 | 760.7 | 787.2 |
| 80° | 144.6 | 143.6 | 152.1 | 156.9 | 159.7 | 179.6 | 240.0 | 353.4 | 483.8 | 582.1 | 607.6 |
| 82.5° | 94.5 | 93.6 | 99.2 | 101.1 | 101.1 | 113.4 | 151.2 | 224.0 | 317.5 | 395.0 | 410.1 |
| 85° | 50.1 | 52.0 | 51.0 | 51.0 | 51.0 | 55.8 | 75.6 | 117.2 | 169.2 | 211.7 | 222.1 |
| 87.5° | 8.5 | 8.5 | 8.5 | 9.5 | 11.3 | 15.1 | 19.8 | 33.1 | 48.2 | 65.2 | 73.7 |
| 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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 CATALOG NUMBER: CCW-VA-1-840-U-T2

CANDELA DISTRIBUTION (continued):

| | 91° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 247.6 | 247.6 | 247.6 | 247.6 | 247.6 | 247.6 | 247.6 | 247.6 | 247.6 | 247.6 | 247.6 |
| 2.5° | 248.5 | 249.5 | 249.5 | 249.5 | 249.5 | 249.5 | 249.5 | 249.5 | 249.5 | 249.5 | 249.5 |
| 5° | 252.3 | 252.3 | 252.3 | 253.3 | 253.3 | 253.3 | 253.3 | 253.3 | 253.3 | 253.3 | 253.3 |
| 7.5° | 257.0 | 257.0 | 258.0 | 258.0 | 258.0 | 258.9 | 258.9 | 258.0 | 258.0 | 258.0 | 258.0 |
| 10° | 262.7 | 262.7 | 263.7 | 264.6 | 264.6 | 265.5 | 265.5 | 264.6 | 264.6 | 263.7 | 263.7 |
| 12.5° | 270.3 | 271.2 | 272.2 | 273.1 | 274.1 | 274.1 | 273.1 | 272.2 | 271.2 | 270.3 | 270.3 |
| 15° | 279.7 | 280.7 | 281.6 | 283.5 | 283.5 | 283.5 | 282.6 | 281.6 | 279.7 | 278.8 | 279.7 |
| 17.5° | 291.1 | 292.0 | 293.9 | 294.8 | 295.8 | 294.8 | 294.8 | 293.9 | 293.9 | 293.0 | 293.0 |
| 20° | 305.2 | 306.2 | 309.0 | 310.0 | 310.0 | 310.9 | 313.7 | 315.6 | 318.5 | 319.4 | 319.4 |
| 22.5° | 319.4 | 321.3 | 324.1 | 327.9 | 329.8 | 333.6 | 334.5 | 336.4 | 335.5 | 332.6 | 332.6 |
| 25° | 336.4 | 338.3 | 344.0 | 348.7 | 352.5 | 354.4 | 352.5 | 349.7 | 344.9 | 341.1 | 340.2 |
| 27.5° | 354.4 | 357.2 | 365.7 | 372.3 | 374.2 | 372.3 | 364.8 | 358.2 | 352.5 | 347.8 | 345.9 |
| 30° | 377.1 | 381.8 | 391.2 | 395.0 | 394.1 | 386.5 | 375.2 | 366.7 | 358.2 | 352.5 | 351.5 |
| 32.5° | 405.4 | 410.1 | 418.6 | 419.6 | 413.9 | 399.7 | 384.6 | 373.3 | 362.9 | 356.3 | 355.3 |
| 35° | 439.4 | 444.2 | 448.9 | 446.0 | 430.0 | 412.0 | 393.1 | 377.1 | 366.7 | 359.1 | 359.1 |
| 37.5° | 482.9 | 485.7 | 485.7 | 471.6 | 447.0 | 423.4 | 399.7 | 380.8 | 369.5 | 361.9 | 361.0 |
| 40° | 539.6 | 538.7 | 525.4 | 498.0 | 465.9 | 433.8 | 404.5 | 384.6 | 370.4 | 362.9 | 361.9 |
| 42.5° | 607.6 | 601.0 | 572.7 | 528.3 | 483.8 | 443.2 | 410.1 | 385.6 | 369.5 | 361.9 | 361.0 |
| 45° | 690.8 | 679.5 | 628.4 | 563.2 | 502.7 | 451.7 | 413.0 | 384.6 | 366.7 | 358.2 | 357.2 |
| 47.5° | 773.0 | 766.4 | 696.5 | 600.1 | 521.6 | 461.2 | 414.9 | 381.8 | 361.0 | 348.7 | 348.7 |
| 50° | 860.0 | 843.9 | 764.5 | 644.5 | 541.5 | 467.8 | 414.9 | 377.1 | 351.5 | 338.3 | 336.4 |
| 52.5° | 944.1 | 928.0 | 833.5 | 688.9 | 563.2 | 474.4 | 413.0 | 370.4 | 343.0 | 328.9 | 327.0 |
| 55° | 1015.9 | 1002.6 | 900.6 | 739.0 | 585.9 | 479.1 | 410.1 | 362.9 | 334.5 | 321.3 | 319.4 |
| 57.5° | 1082.0 | 1068.8 | 959.2 | 781.5 | 607.6 | 482.0 | 403.5 | 353.4 | 324.1 | 310.9 | 310.0 |
| 60° | 1130.2 | 1119.8 | 1009.3 | 821.2 | 625.6 | 482.0 | 394.1 | 342.1 | 312.8 | 299.6 | 298.6 |
| 62.5° | 1162.4 | 1152.0 | 1045.2 | 847.7 | 636.9 | 475.3 | 379.9 | 327.0 | 298.6 | 286.3 | 283.5 |
| 65° | 1174.6 | 1165.2 | 1061.2 | 858.1 | 635.0 | 462.1 | 361.0 | 308.1 | 280.7 | 268.4 | 266.5 |
| 66° | 1175.6 | 1165.2 | 1061.2 | 856.2 | 630.3 | 454.5 | 352.5 | 299.6 | 273.1 | 260.8 | 258.9 |
| 67.5° | 1168.0 | 1158.6 | 1054.6 | 846.7 | 617.1 | 440.4 | 335.5 | 285.4 | 258.9 | 246.6 | 245.7 |
| 70° | 1133.1 | 1125.5 | 1018.7 | 810.8 | 585.9 | 409.2 | 307.1 | 258.0 | 232.5 | 224.0 | 221.1 |
| 72.5° | 1057.5 | 1049.0 | 946.9 | 743.7 | 534.9 | 366.7 | 271.2 | 225.9 | 205.1 | 194.7 | 193.7 |
| 75° | 940.3 | 936.5 | 837.3 | 654.9 | 461.2 | 315.6 | 229.6 | 190.9 | 173.9 | 166.3 | 166.3 |
| 77.5° | 787.2 | 779.6 | 695.5 | 541.5 | 378.9 | 255.2 | 184.3 | 155.0 | 141.8 | 135.1 | 136.1 |
| 80° | 612.4 | 606.7 | 535.8 | 406.4 | 286.3 | 191.8 | 138.0 | 118.1 | 108.7 | 104.9 | 103.0 |
| 82.5° | 419.6 | 404.5 | 357.2 | 269.3 | 186.2 | 129.5 | 95.4 | 82.2 | 77.5 | 76.5 | 75.6 |
| 85° | 218.3 | 224.0 | 188.1 | 142.7 | 101.1 | 71.8 | 57.6 | 52.9 | 51.0 | 52.0 | 52.0 |
| 87.5° | 71.8 | 73.7 | 56.7 | 43.5 | 33.1 | 25.5 | 21.7 | 20.8 | 18.0 | 19.8 | 20.8 |
| 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)