

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: P472303

Luminaire Tested: **CCW-VA-3-850-U-T4FT**

Issue Date: 01/27/2021

Test Information

Test Method: LM-79-08
Report Number: P472303
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: CCW-VA-3-850-U-T4FT
Description: INVUE WALL PACK Wave Stream LUMINAIRE WITH T4FT DISTRIBUTION LENS
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5120.8 lumens
Efficiency: N/A
Efficacy: 104.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

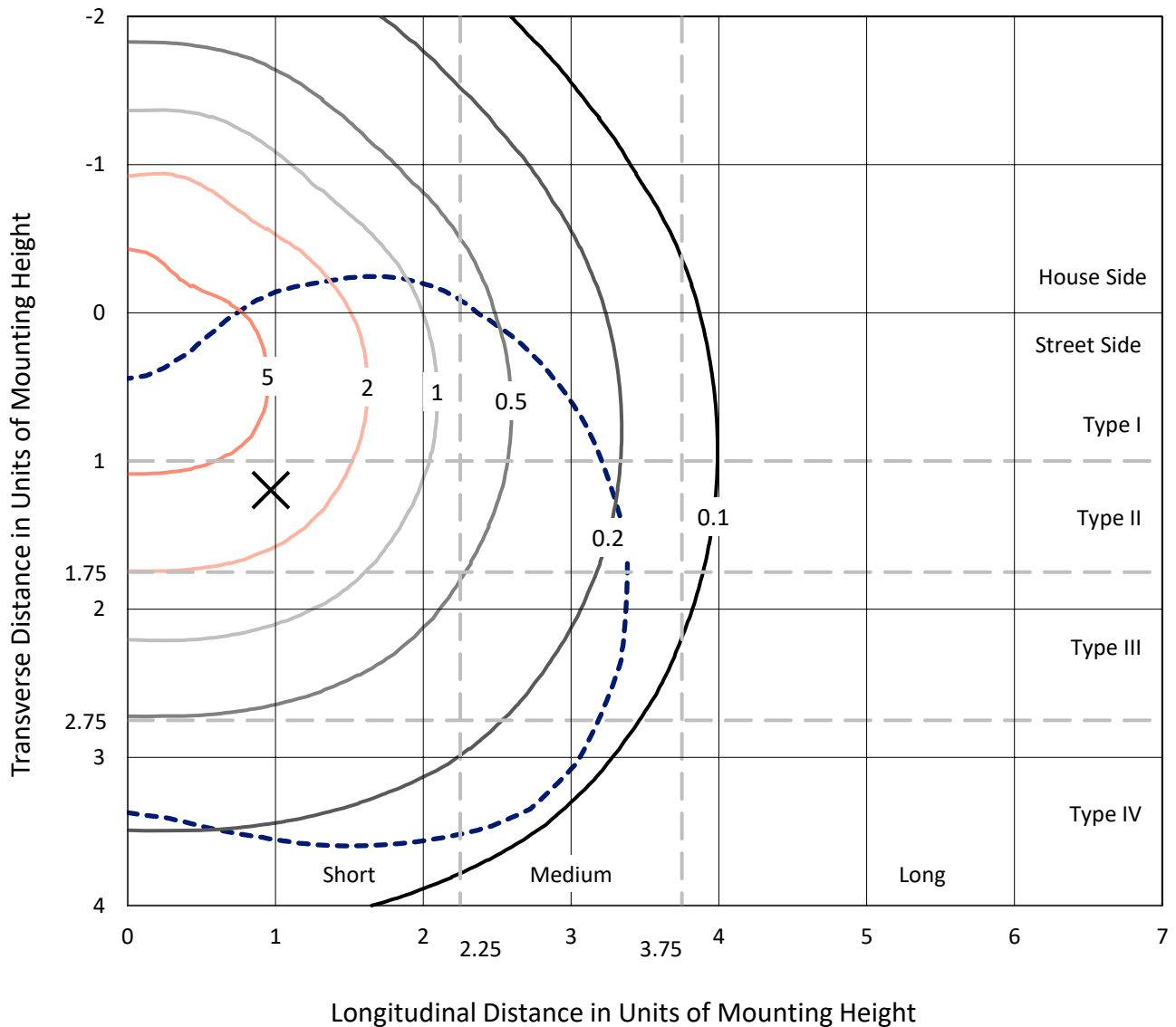
Input Watts (W): 49.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

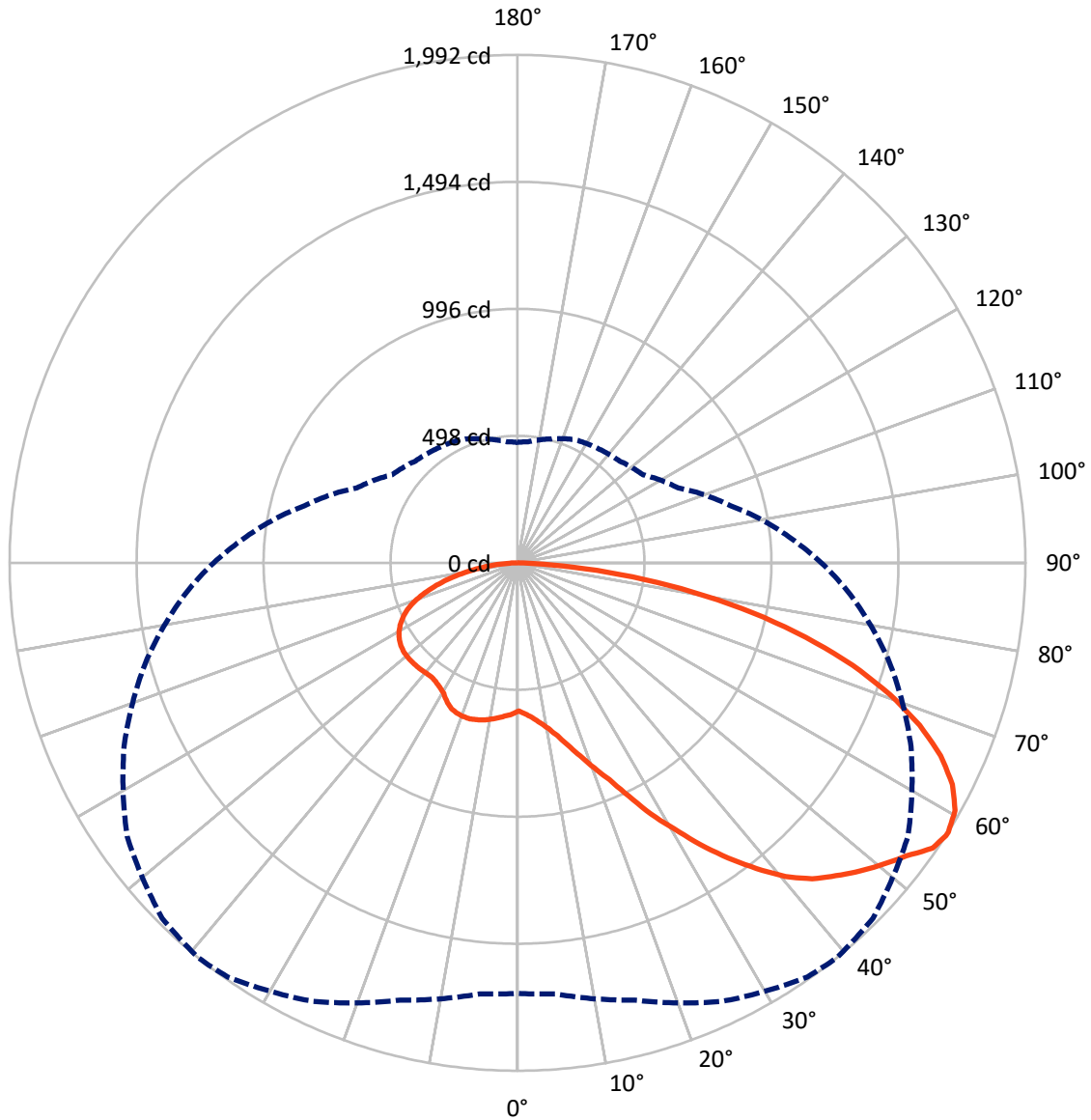
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 57-Deg Vertical

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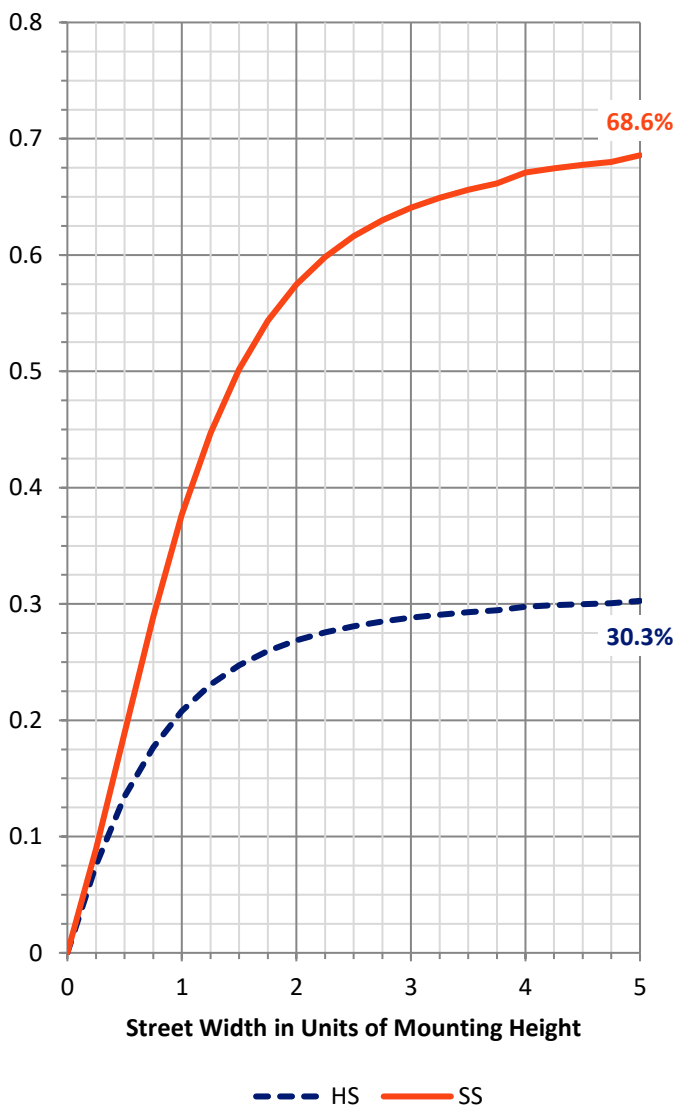
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1571.2 | 0.0 | 1571.2 |
| | % Fixture | 30.7 | 0.0 | 30.7 |
| Street Side | Lumens | 3549.5 | 0.0 | 3549.5 |
| | % Fixture | 69.3 | 0.0 | 69.3 |
| Total | Lumens | 5120.8 | 0.0 | 5120.8 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 58.8 | 1.1 |
| 10°-20° | 196.1 | 3.8 |
| 20°-30° | 378.8 | 7.4 |
| 30°-40° | 612.7 | 12.0 |
| 40°-50° | 860.8 | 16.8 |
| 50°-60° | 1063.3 | 20.8 |
| 60°-70° | 1056.8 | 20.6 |
| 70°-80° | 715.1 | 14.0 |
| 80°-90° | 178.5 | 3.5 |
| 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° | 5120.8 | 100.0 |
| 0°-180° | 5120.8 | 100.0 |

Coefficient of Utilization



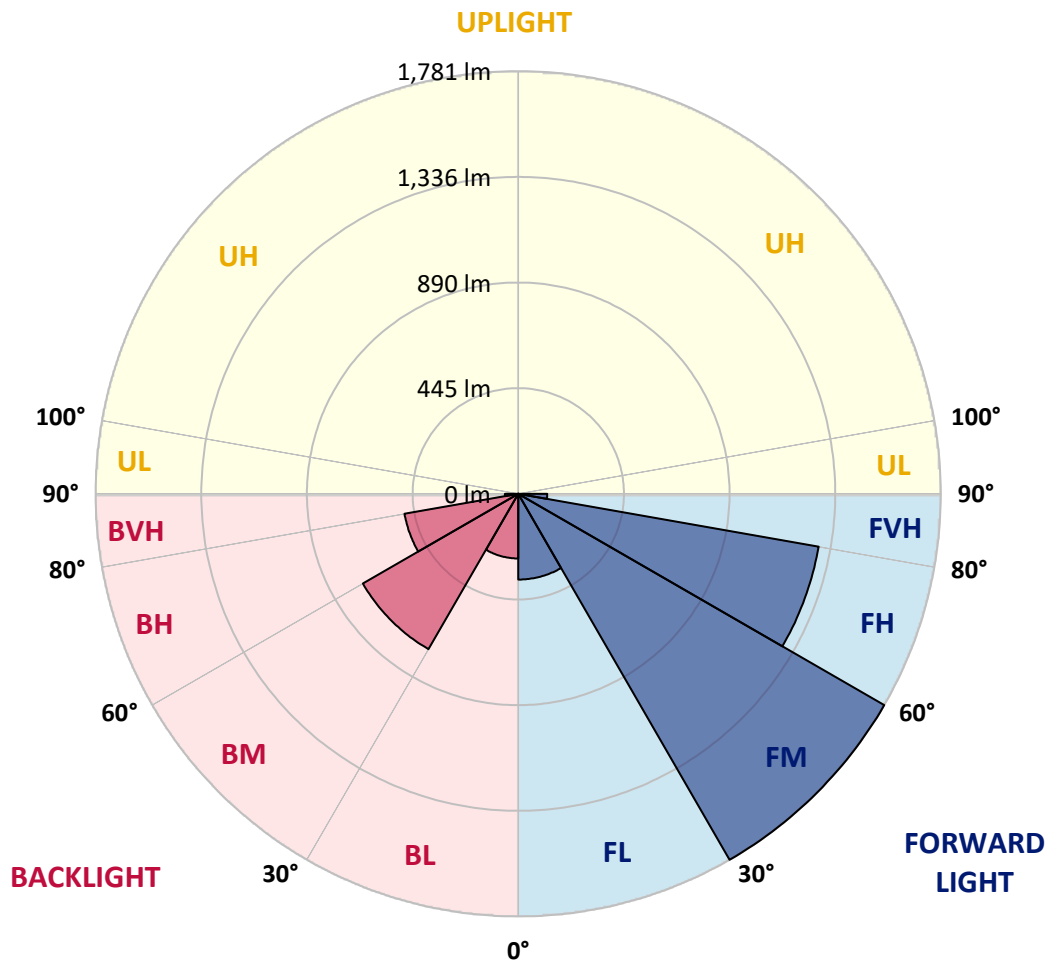
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 361.3 | 7.1 | | | |
| FM (30°-60°) | 1780.8 | 34.8 | | | |
| FH (60°-80°) | 1285.3 | 25.1 | | | G1/1800 |
| FVH (80°-90°) | 122.1 | 2.4 | | | G2/225 |
| BL (0°-30°) | 272.3 | 5.3 | B1/500 | | |
| BM (30°-60°) | 756.0 | 14.8 | B1/1000 | | |
| BH (60°-80°) | 486.6 | 9.5 | B1/500 | | G1/500 |
| BVH (80°-90°) | 56.3 | 1.1 | | | 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° | 35° | 39° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 580.7 | 580.7 | 580.7 | 580.7 | 580.7 | 580.7 | 580.7 | 580.7 | 580.7 | 580.7 | 580.7 |
| 2.5° | 597.9 | 597.1 | 596.4 | 596.4 | 594.8 | 593.2 | 592.4 | 590.9 | 591.7 | 593.2 | 594.0 |
| 5° | 615.2 | 613.6 | 613.6 | 612.1 | 609.7 | 609.7 | 607.3 | 604.2 | 603.4 | 602.6 | 602.6 |
| 7.5° | 641.9 | 639.5 | 640.3 | 638.0 | 635.6 | 632.5 | 628.5 | 624.6 | 623.0 | 617.6 | 612.8 |
| 10° | 672.5 | 671.7 | 669.3 | 665.4 | 663.1 | 659.9 | 656.0 | 648.9 | 643.4 | 637.2 | 633.2 |
| 12.5° | 708.6 | 707.0 | 707.8 | 704.7 | 700.7 | 695.2 | 689.0 | 681.9 | 671.7 | 659.9 | 652.1 |
| 15° | 755.7 | 752.5 | 752.5 | 751.7 | 743.9 | 742.3 | 736.0 | 720.3 | 706.2 | 690.5 | 672.5 |
| 17.5° | 812.9 | 812.2 | 809.0 | 805.9 | 801.2 | 795.7 | 789.4 | 772.1 | 750.9 | 726.6 | 702.3 |
| 20° | 874.1 | 872.6 | 874.9 | 870.2 | 860.8 | 858.5 | 848.2 | 828.6 | 802.7 | 774.5 | 737.6 |
| 22.5° | 940.8 | 942.4 | 942.4 | 940.8 | 933.0 | 923.6 | 914.9 | 889.1 | 859.2 | 824.7 | 781.6 |
| 25° | 1021.7 | 1022.5 | 1027.2 | 1031.9 | 1027.2 | 1012.2 | 1000.5 | 960.5 | 920.4 | 876.5 | 825.5 |
| 27.5° | 1112.7 | 1107.2 | 1120.5 | 1129.2 | 1120.5 | 1116.6 | 1090.7 | 1046.8 | 991.8 | 936.9 | 873.4 |
| 30° | 1200.6 | 1200.6 | 1211.6 | 1224.1 | 1218.6 | 1209.2 | 1188.0 | 1131.5 | 1068.7 | 998.9 | 922.0 |
| 32.5° | 1282.2 | 1291.6 | 1296.3 | 1325.3 | 1322.2 | 1317.5 | 1293.2 | 1218.6 | 1140.2 | 1060.9 | 969.1 |
| 35° | 1378.7 | 1375.6 | 1395.2 | 1413.2 | 1427.4 | 1421.1 | 1403.0 | 1327.7 | 1224.9 | 1126.0 | 1020.9 |
| 37.5° | 1451.7 | 1458.0 | 1475.2 | 1507.4 | 1517.6 | 1520.7 | 1498.0 | 1420.3 | 1303.4 | 1195.9 | 1078.2 |
| 40° | 1507.4 | 1512.1 | 1545.1 | 1585.9 | 1607.0 | 1618.0 | 1595.3 | 1501.1 | 1377.1 | 1251.6 | 1122.9 |
| 42.5° | 1552.1 | 1555.3 | 1589.8 | 1647.8 | 1683.2 | 1694.1 | 1673.7 | 1574.1 | 1439.9 | 1296.3 | 1159.8 |
| 45° | 1581.9 | 1587.4 | 1628.2 | 1687.9 | 1742.8 | 1750.6 | 1740.4 | 1638.4 | 1495.6 | 1338.7 | 1186.5 |
| 47.5° | 1607.8 | 1614.1 | 1659.6 | 1734.9 | 1796.2 | 1806.4 | 1796.9 | 1694.9 | 1549.0 | 1377.1 | 1209.2 |
| 50° | 1642.4 | 1649.4 | 1694.9 | 1778.9 | 1846.4 | 1858.1 | 1855.0 | 1754.6 | 1599.2 | 1420.3 | 1232.7 |
| 52.5° | 1675.3 | 1680.8 | 1734.9 | 1828.3 | 1901.3 | 1909.2 | 1906.8 | 1810.3 | 1650.2 | 1466.6 | 1262.6 |
| 55° | 1701.2 | 1707.5 | 1771.8 | 1887.2 | 1965.6 | 1974.3 | 1957.8 | 1853.4 | 1690.2 | 1500.3 | 1290.8 |
| 57° | 1687.9 | 1696.5 | 1775.0 | 1897.4 | 1982.1 | 1991.5 | 1970.4 | 1869.1 | 1702.0 | 1509.7 | 1301.0 |
| 57.5° | 1683.9 | 1690.2 | 1771.8 | 1896.6 | 1982.9 | 1991.5 | 1970.4 | 1868.3 | 1701.2 | 1509.0 | 1301.0 |
| 60° | 1626.7 | 1641.6 | 1733.4 | 1868.3 | 1960.2 | 1971.1 | 1950.7 | 1837.0 | 1681.6 | 1487.0 | 1279.8 |
| 62.5° | 1549.8 | 1570.2 | 1666.7 | 1801.6 | 1905.2 | 1913.1 | 1892.7 | 1784.4 | 1637.6 | 1440.7 | 1235.9 |
| 65° | 1439.1 | 1470.5 | 1571.7 | 1702.0 | 1814.2 | 1823.6 | 1803.2 | 1696.5 | 1564.7 | 1370.1 | 1170.0 |
| 67.5° | 1330.8 | 1349.7 | 1458.0 | 1581.9 | 1686.3 | 1700.4 | 1683.2 | 1588.2 | 1464.2 | 1275.9 | 1082.1 |
| 70° | 1207.6 | 1221.0 | 1310.4 | 1432.1 | 1537.2 | 1549.0 | 1534.1 | 1445.4 | 1328.5 | 1159.0 | 979.3 |
| 72.5° | 1059.3 | 1073.5 | 1149.6 | 1261.8 | 1355.2 | 1374.0 | 1363.8 | 1272.0 | 1166.0 | 1019.3 | 864.7 |
| 75° | 892.2 | 907.9 | 976.2 | 1065.6 | 1156.6 | 1167.6 | 1155.8 | 1088.4 | 992.6 | 860.0 | 725.1 |
| 77.5° | 723.5 | 733.7 | 783.1 | 850.6 | 921.2 | 944.8 | 941.6 | 893.8 | 797.2 | 692.1 | 582.2 |
| 80° | 541.4 | 543.0 | 568.9 | 624.6 | 681.1 | 698.4 | 702.3 | 659.1 | 595.6 | 516.3 | 436.3 |
| 82.5° | 342.1 | 347.6 | 361.7 | 403.3 | 430.8 | 454.3 | 459.8 | 434.7 | 394.7 | 345.3 | 295.8 |
| 85° | 159.3 | 154.6 | 165.6 | 179.7 | 218.9 | 218.9 | 226.0 | 212.7 | 200.9 | 184.4 | 153.0 |
| 87.5° | 13.3 | 12.6 | 12.6 | 13.3 | 21.2 | 22.8 | 36.1 | 40.0 | 43.2 | 43.2 | 45.5 |
| 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-3-850-U-T4FT

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 580.7 | 580.7 | 580.7 | 580.7 | 580.7 | 580.7 | 580.7 | 580.7 | 580.7 | 580.7 | 580.7 |
| 2.5° | 592.4 | 591.7 | 589.3 | 589.3 | 590.9 | 593.2 | 594.0 | 594.8 | 595.6 | 596.4 | 596.4 |
| 5° | 601.9 | 601.1 | 599.5 | 597.9 | 599.5 | 600.3 | 602.6 | 604.2 | 604.2 | 605.8 | 605.0 |
| 7.5° | 610.5 | 611.3 | 609.7 | 608.9 | 608.9 | 610.5 | 613.6 | 616.0 | 617.6 | 618.3 | 619.9 |
| 10° | 630.1 | 625.4 | 619.1 | 616.0 | 616.0 | 619.1 | 622.3 | 625.4 | 628.5 | 630.1 | 630.1 |
| 12.5° | 647.4 | 641.9 | 630.1 | 625.4 | 624.6 | 627.8 | 631.7 | 636.4 | 638.7 | 641.1 | 641.1 |
| 15° | 663.1 | 658.4 | 644.2 | 633.2 | 630.1 | 632.5 | 637.2 | 642.7 | 646.6 | 648.9 | 648.9 |
| 17.5° | 692.9 | 678.8 | 659.9 | 641.9 | 635.6 | 636.4 | 641.9 | 647.4 | 652.1 | 653.6 | 652.9 |
| 20° | 721.1 | 703.1 | 674.8 | 648.9 | 638.7 | 635.6 | 641.1 | 648.2 | 652.1 | 654.4 | 654.4 |
| 22.5° | 753.3 | 733.7 | 689.7 | 656.0 | 637.2 | 632.5 | 637.2 | 643.4 | 648.2 | 649.7 | 651.3 |
| 25° | 798.8 | 764.3 | 706.2 | 661.5 | 634.8 | 625.4 | 628.5 | 634.8 | 640.3 | 641.1 | 640.3 |
| 27.5° | 839.6 | 800.4 | 728.2 | 667.0 | 629.3 | 612.1 | 608.9 | 613.6 | 622.3 | 627.8 | 629.3 |
| 30° | 874.9 | 838.8 | 750.9 | 671.7 | 619.1 | 590.1 | 586.2 | 587.7 | 593.2 | 608.1 | 608.9 |
| 32.5° | 927.5 | 871.8 | 773.7 | 675.6 | 607.3 | 578.3 | 572.8 | 571.3 | 572.8 | 580.7 | 580.7 |
| 35° | 963.6 | 908.7 | 796.5 | 682.7 | 598.7 | 568.9 | 563.4 | 561.1 | 559.5 | 551.6 | 549.3 |
| 37.5° | 1010.7 | 949.5 | 818.4 | 689.0 | 594.8 | 565.0 | 557.1 | 558.7 | 550.9 | 528.9 | 522.6 |
| 40° | 1062.5 | 986.4 | 840.4 | 695.2 | 596.4 | 565.8 | 558.7 | 557.9 | 544.6 | 514.0 | 507.7 |
| 42.5° | 1087.6 | 1017.7 | 863.2 | 703.9 | 602.6 | 568.1 | 561.8 | 559.5 | 543.0 | 508.5 | 499.8 |
| 45° | 1111.9 | 1040.5 | 879.6 | 710.9 | 608.9 | 571.3 | 563.4 | 561.1 | 542.2 | 503.8 | 497.5 |
| 47.5° | 1133.9 | 1054.6 | 887.5 | 714.9 | 613.6 | 573.6 | 564.2 | 560.3 | 538.3 | 501.4 | 495.1 |
| 50° | 1144.1 | 1062.5 | 887.5 | 714.9 | 615.2 | 576.0 | 562.6 | 557.1 | 532.0 | 497.5 | 492.0 |
| 52.5° | 1159.8 | 1067.2 | 880.4 | 710.1 | 612.8 | 576.0 | 559.5 | 550.9 | 524.2 | 492.0 | 487.3 |
| 55° | 1183.3 | 1075.8 | 871.0 | 703.1 | 607.3 | 571.3 | 554.0 | 542.2 | 513.2 | 484.2 | 480.2 |
| 57° | 1191.2 | 1078.9 | 864.7 | 694.5 | 601.1 | 565.0 | 547.7 | 532.8 | 503.0 | 476.3 | 472.4 |
| 57.5° | 1189.6 | 1077.4 | 862.4 | 692.1 | 598.7 | 562.6 | 546.1 | 530.5 | 500.6 | 474.7 | 470.8 |
| 60° | 1168.4 | 1062.5 | 847.5 | 677.2 | 586.2 | 550.1 | 532.0 | 514.8 | 484.2 | 461.4 | 458.3 |
| 62.5° | 1133.9 | 1028.7 | 820.8 | 657.6 | 568.9 | 532.8 | 514.0 | 494.4 | 463.8 | 444.1 | 442.6 |
| 65° | 1075.0 | 972.2 | 782.3 | 629.3 | 546.9 | 510.0 | 489.6 | 468.5 | 441.8 | 424.5 | 419.8 |
| 67.5° | 976.9 | 896.9 | 728.2 | 590.1 | 513.2 | 481.8 | 459.8 | 437.9 | 413.5 | 398.6 | 395.5 |
| 70° | 895.3 | 814.5 | 659.1 | 540.7 | 472.4 | 442.6 | 422.2 | 401.0 | 379.8 | 366.5 | 365.7 |
| 72.5° | 791.8 | 714.1 | 572.8 | 479.4 | 420.6 | 391.6 | 375.9 | 357.0 | 340.6 | 328.8 | 328.8 |
| 75° | 666.2 | 605.0 | 483.4 | 406.5 | 358.6 | 337.4 | 324.1 | 309.2 | 295.0 | 287.2 | 288.8 |
| 77.5° | 529.7 | 483.4 | 394.7 | 328.8 | 293.5 | 279.3 | 266.8 | 258.2 | 249.5 | 242.5 | 243.3 |
| 80° | 390.8 | 356.2 | 290.3 | 241.7 | 224.4 | 211.9 | 209.5 | 204.0 | 199.3 | 197.0 | 193.0 |
| 82.5° | 267.6 | 237.0 | 193.0 | 165.6 | 153.0 | 149.1 | 149.9 | 149.9 | 150.7 | 150.7 | 149.1 |
| 85° | 138.9 | 127.1 | 98.1 | 88.7 | 87.1 | 91.0 | 95.7 | 98.9 | 98.1 | 98.1 | 95.7 |
| 87.5° | 40.0 | 36.1 | 31.4 | 28.2 | 29.8 | 32.2 | 28.2 | 27.5 | 26.7 | 25.9 | 25.9 |
| 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)