

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: P676779

Luminaire Tested: **CCW-SA-2B-840-U-T4W-HSS**

Issue Date: 04/25/2023



Test Information

Test Method: LM-79-08
Report Number: P676779
Test Lab: INNOVATION CENTER(G1)
Issue Date: 04/25/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: CCW-SA-2B-840-U-T4W-HSS
Description: INVUE CLEAR CURVE Wall Pack MOUNT Light Square Luminaire @450mA w/
T4W distribution lens and House Side Shield
Light Source: (32) 4000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

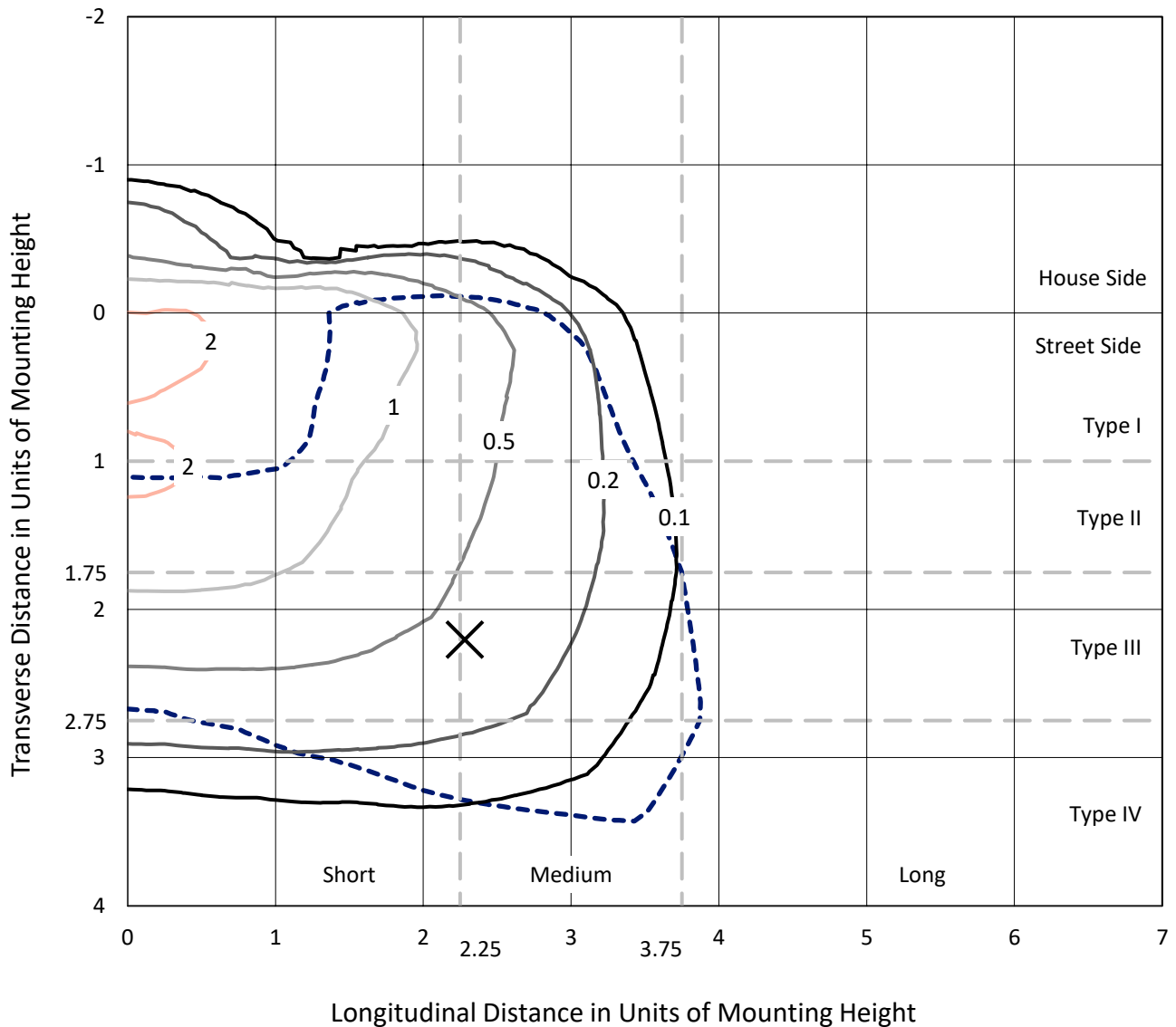
Lumens per Lamp: N/A
Luminaire Lumens: 4248.2 lumens
Efficiency: N/A
Efficacy: 92.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B1 - U0 - G2

Input Watts (W): 46
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: 25 FT

REPORT NUMBER: P676779
 CATALOG NUMBER: CCW-SA-2B-840-U-T4W-HSS

Iso-Footcandle Lines of Horizontal Illumination

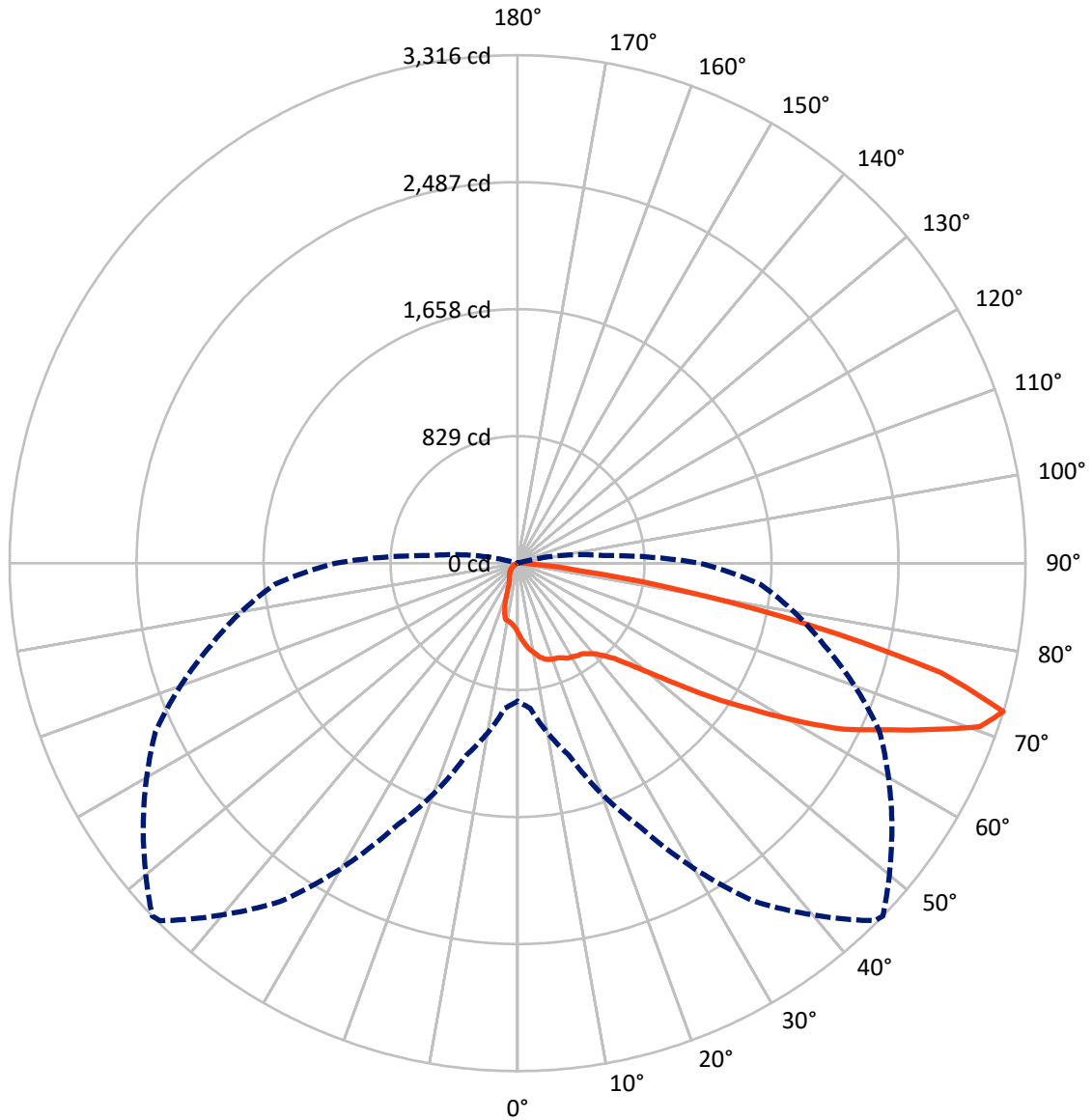
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 3 fc
 Type IV - Medium - N/A

REPORT NUMBER: P676779
CATALOG NUMBER: CCW-SA-2B-840-U-T4W-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 46-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical



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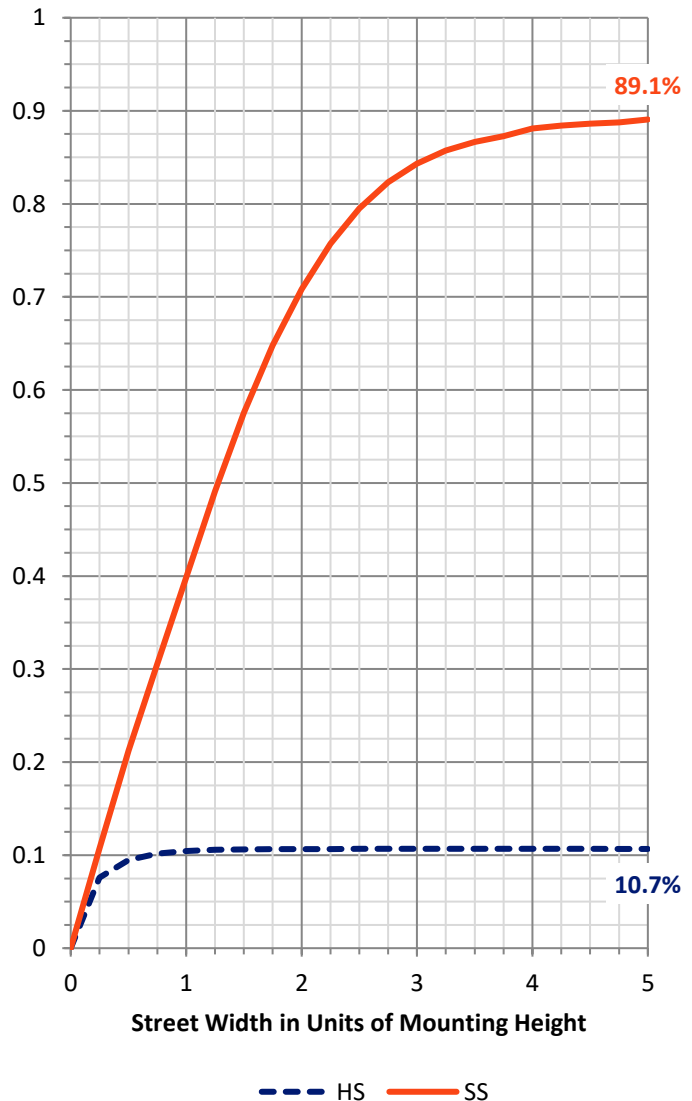
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 457.4 | 0.0 | 457.4 |
| | % Fixture | 10.8 | 0.0 | 10.8 |
| Street Side | Lumens | 3790.9 | 0.0 | 3790.9 |
| | % Fixture | 89.2 | 0.0 | 89.2 |
| Total | Lumens | 4248.2 | 0.0 | 4248.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 45.4 | 1.1 |
| 10°-20° | 137.2 | 3.2 |
| 20°-30° | 214.8 | 5.1 |
| 30°-40° | 300.8 | 7.1 |
| 40°-50° | 496.0 | 11.7 |
| 50°-60° | 891.5 | 21.0 |
| 60°-70° | 1292.1 | 30.4 |
| 70°-80° | 806.4 | 19.0 |
| 80°-90° | 63.9 | 1.5 |
| 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° | 4248.2 | 100.0 |
| 0°-180° | 4248.2 | 100.0 |



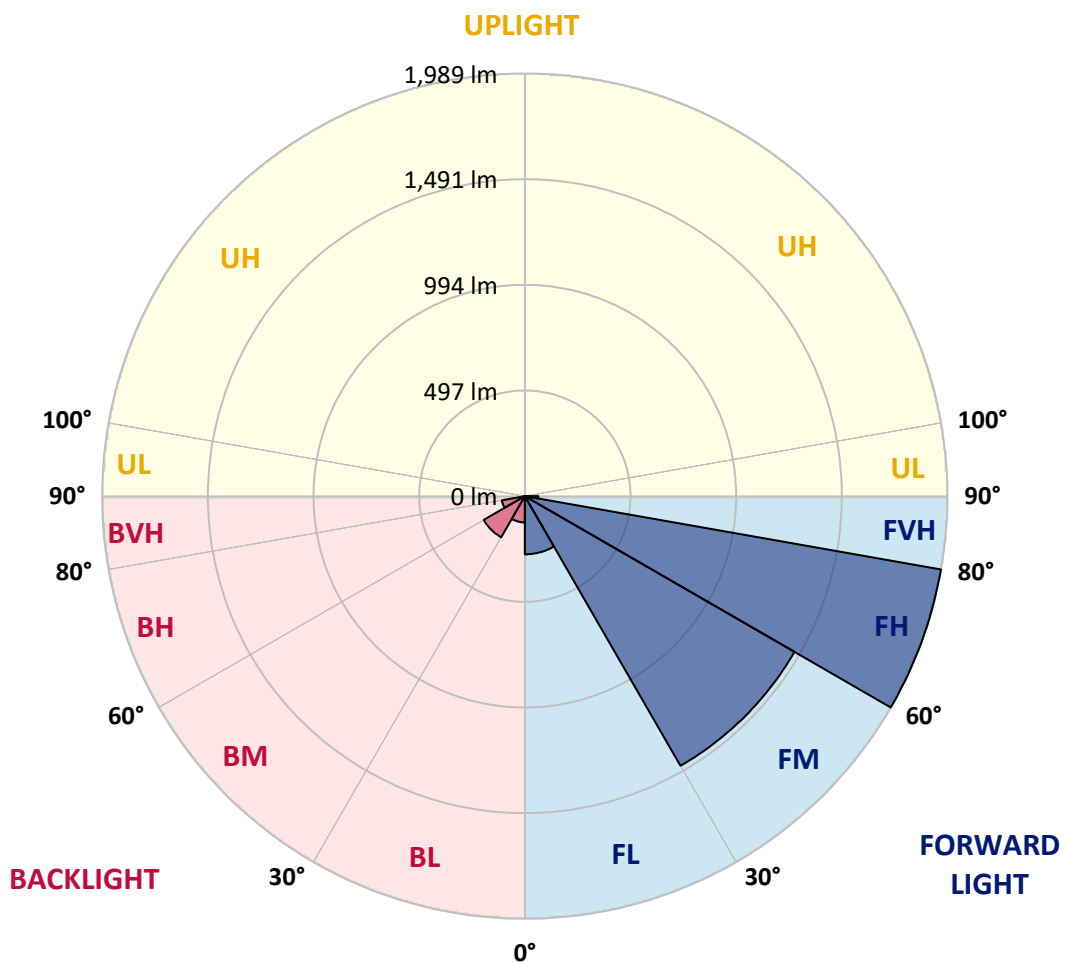
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 CATALOG NUMBER: CCW-SA-2B-840-U-T4W-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 273.8 | 6.4 | | | |
| FM (30°-60°) | 1464.9 | 34.5 | | | |
| FH (60°-80°) | 1988.6 | 46.8 | | | G2/5000 |
| FVH (80°-90°) | 63.6 | 1.5 | | | G1/100 |
| BL (0°-30°) | 123.6 | 2.9 | B1/500 | | |
| BM (30°-60°) | 223.4 | 5.3 | B1/1000 | | |
| BH (60°-80°) | 110.0 | 2.6 | B0/110 | | G0/110 |
| BVH (80°-90°) | 0.3 | 0.0 | | | G0/10 |
| 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 Medium





REPORT NUMBER: P676779

CATALOG NUMBER: CCW-SA-2B-840-U-T4W-HSS

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 46° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 454.0 | 454.0 | 454.0 | 454.0 | 454.0 | 454.0 | 454.0 | 454.0 | 454.0 | 454.0 | 454.0 |
| 2.5° | 508.2 | 506.0 | 509.3 | 508.2 | 495.2 | 497.4 | 496.3 | 487.6 | 472.5 | 463.8 | 458.4 |
| 5° | 566.7 | 572.1 | 567.8 | 558.1 | 550.5 | 535.3 | 533.1 | 519.1 | 495.2 | 480.0 | 463.8 |
| 7.5° | 627.4 | 627.4 | 618.7 | 603.6 | 587.3 | 571.1 | 568.9 | 545.1 | 524.5 | 498.5 | 475.7 |
| 10° | 672.9 | 667.5 | 661.0 | 644.7 | 626.3 | 604.7 | 593.8 | 576.5 | 553.7 | 522.3 | 493.0 |
| 12.5° | 713.0 | 704.3 | 693.5 | 669.7 | 648.0 | 624.2 | 626.3 | 598.2 | 583.0 | 554.8 | 511.5 |
| 15° | 735.8 | 728.2 | 718.4 | 696.8 | 663.2 | 652.3 | 648.0 | 630.7 | 603.6 | 575.4 | 534.2 |
| 17.5° | 741.2 | 735.8 | 722.8 | 694.6 | 676.2 | 663.2 | 662.1 | 641.5 | 629.6 | 605.7 | 560.2 |
| 20° | 730.4 | 720.6 | 710.8 | 692.4 | 675.1 | 670.8 | 667.5 | 667.5 | 652.3 | 620.9 | 576.5 |
| 22.5° | 711.9 | 701.1 | 695.7 | 684.8 | 670.8 | 669.7 | 671.8 | 669.7 | 657.8 | 637.2 | 593.8 |
| 25° | 697.8 | 692.4 | 683.8 | 680.5 | 671.8 | 688.1 | 684.8 | 681.6 | 678.3 | 654.5 | 620.9 |
| 27.5° | 702.2 | 701.1 | 694.6 | 681.6 | 675.1 | 692.4 | 702.2 | 703.3 | 702.2 | 678.3 | 645.8 |
| 30° | 704.3 | 698.9 | 692.4 | 689.2 | 691.3 | 708.7 | 708.7 | 732.5 | 722.8 | 698.9 | 670.8 |
| 32.5° | 729.3 | 726.0 | 704.3 | 696.8 | 697.8 | 718.4 | 719.5 | 743.4 | 740.1 | 723.9 | 692.4 |
| 35° | 782.4 | 760.7 | 729.3 | 707.6 | 707.6 | 734.7 | 726.0 | 760.7 | 769.4 | 743.4 | 707.6 |
| 37.5° | 861.5 | 845.2 | 788.9 | 740.1 | 721.7 | 741.2 | 749.9 | 769.4 | 795.4 | 772.6 | 737.9 |
| 40° | 1018.6 | 1015.3 | 935.2 | 830.0 | 757.4 | 774.8 | 778.0 | 808.4 | 825.7 | 794.3 | 784.5 |
| 42.5° | 1248.3 | 1232.1 | 1157.3 | 991.5 | 822.5 | 814.9 | 826.8 | 846.3 | 887.5 | 861.5 | 837.6 |
| 45° | 1472.6 | 1465.0 | 1390.3 | 1205.0 | 940.6 | 895.1 | 888.6 | 923.2 | 983.9 | 955.7 | 937.3 |
| 47.5° | 1635.2 | 1620.0 | 1577.7 | 1421.7 | 1114.0 | 989.3 | 993.7 | 1028.3 | 1105.3 | 1083.6 | 1089.0 |
| 50° | 1759.8 | 1752.2 | 1707.8 | 1622.2 | 1332.8 | 1137.8 | 1129.1 | 1163.8 | 1267.8 | 1281.9 | 1297.1 |
| 52.5° | 1896.3 | 1910.4 | 1850.8 | 1778.2 | 1591.8 | 1337.2 | 1317.7 | 1329.6 | 1464.0 | 1496.5 | 1538.7 |
| 55° | 2027.4 | 2050.2 | 1990.6 | 1980.8 | 1862.7 | 1558.2 | 1555.0 | 1526.8 | 1700.2 | 1704.5 | 1727.3 |
| 57.5° | 2113.0 | 2105.5 | 2101.1 | 2154.2 | 2133.6 | 1811.8 | 1795.5 | 1767.4 | 1924.5 | 1896.3 | 1964.6 |
| 60° | 2119.5 | 2141.2 | 2213.8 | 2344.9 | 2381.8 | 2109.8 | 2086.0 | 2009.0 | 2118.5 | 2051.3 | 2181.3 |
| 62.5° | 2168.3 | 2185.6 | 2320.0 | 2501.0 | 2548.7 | 2372.0 | 2388.3 | 2193.2 | 2284.3 | 2231.2 | 2421.9 |
| 65° | 2044.8 | 2099.0 | 2368.8 | 2622.3 | 2767.5 | 2637.5 | 2621.3 | 2430.5 | 2454.4 | 2404.5 | 2659.2 |
| 67.5° | 1933.2 | 1953.8 | 2235.5 | 2659.2 | 2940.9 | 2904.1 | 2897.6 | 2640.8 | 2629.9 | 2537.8 | 2726.4 |
| 70° | 1571.2 | 1596.2 | 1874.6 | 2470.6 | 2999.4 | 3215.1 | 3199.9 | 2935.5 | 2749.1 | 2465.2 | 2381.8 |
| 72.5° | 900.5 | 950.3 | 1299.3 | 1902.8 | 2694.9 | 3301.8 | 3315.9 | 2983.2 | 2608.3 | 2073.0 | 1590.7 |
| 75° | 294.7 | 308.8 | 539.6 | 1078.2 | 2015.5 | 2880.2 | 2855.3 | 2563.8 | 2104.4 | 1368.6 | 718.4 |
| 77.5° | 99.7 | 101.9 | 159.3 | 390.1 | 1117.2 | 1946.2 | 1960.3 | 1832.4 | 1292.7 | 568.9 | 198.3 |
| 80° | 50.9 | 54.2 | 78.0 | 146.3 | 459.5 | 1059.8 | 1082.5 | 1044.6 | 541.8 | 168.0 | 47.7 |
| 82.5° | 23.8 | 24.9 | 45.5 | 81.3 | 210.2 | 416.1 | 416.1 | 457.3 | 191.8 | 94.3 | 19.5 |
| 85° | 8.7 | 8.7 | 23.8 | 46.6 | 88.9 | 138.7 | 139.8 | 140.9 | 100.8 | 70.4 | 8.7 |
| 87.5° | 3.3 | 3.3 | 11.9 | 19.5 | 32.5 | 42.3 | 42.3 | 33.6 | 50.9 | 46.6 | 3.3 |
| 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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CATALOG NUMBER: CCW-SA-2B-840-U-T4W-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 454.0 | 454.0 | 454.0 | 454.0 | 454.0 | 454.0 | 454.0 | 454.0 | 454.0 | 454.0 | 454.0 |
| 2.5° | 456.2 | 449.7 | 444.3 | 436.7 | 426.9 | 421.5 | 422.6 | 416.1 | 416.1 | 412.9 | 411.8 |
| 5° | 456.2 | 449.7 | 435.6 | 422.6 | 413.9 | 403.1 | 397.7 | 393.4 | 393.4 | 391.2 | 392.3 |
| 7.5° | 459.5 | 449.7 | 430.2 | 412.9 | 398.8 | 387.9 | 379.3 | 378.2 | 376.0 | 370.6 | 374.9 |
| 10° | 479.0 | 464.9 | 432.4 | 408.5 | 392.3 | 380.3 | 365.2 | 360.8 | 354.3 | 344.6 | 345.7 |
| 12.5° | 495.2 | 476.8 | 447.5 | 415.0 | 394.4 | 374.9 | 340.3 | 302.3 | 286.1 | 268.7 | 269.8 |
| 15° | 519.1 | 493.0 | 452.9 | 423.7 | 394.4 | 331.6 | 268.7 | 220.0 | 194.0 | 181.0 | 181.0 |
| 17.5° | 532.1 | 510.4 | 468.1 | 429.1 | 363.0 | 269.8 | 190.7 | 148.5 | 144.1 | 146.3 | 146.3 |
| 20° | 559.1 | 529.9 | 485.5 | 433.4 | 311.0 | 191.8 | 139.8 | 135.5 | 137.6 | 142.0 | 140.9 |
| 22.5° | 576.5 | 547.2 | 498.5 | 413.9 | 240.6 | 137.6 | 131.1 | 128.9 | 131.1 | 136.5 | 136.5 |
| 25° | 590.6 | 572.1 | 519.1 | 366.3 | 170.1 | 124.6 | 122.4 | 124.6 | 126.8 | 128.9 | 132.2 |
| 27.5° | 625.2 | 593.8 | 533.1 | 304.5 | 122.4 | 115.9 | 118.1 | 119.2 | 119.2 | 122.4 | 123.5 |
| 30° | 648.0 | 623.1 | 544.0 | 235.1 | 108.4 | 107.3 | 109.4 | 110.5 | 111.6 | 114.9 | 115.9 |
| 32.5° | 669.7 | 661.0 | 529.9 | 159.3 | 101.9 | 99.7 | 98.6 | 99.7 | 104.0 | 107.3 | 106.2 |
| 35° | 701.1 | 695.7 | 509.3 | 110.5 | 95.4 | 91.0 | 88.9 | 89.9 | 93.2 | 96.4 | 95.4 |
| 37.5° | 739.0 | 744.4 | 459.5 | 96.4 | 88.9 | 83.4 | 79.1 | 79.1 | 80.2 | 83.4 | 84.5 |
| 40° | 783.5 | 797.5 | 400.9 | 89.9 | 84.5 | 78.0 | 73.7 | 68.3 | 67.2 | 66.1 | 67.2 |
| 42.5° | 864.7 | 881.0 | 334.8 | 85.6 | 78.0 | 70.4 | 63.9 | 57.4 | 52.0 | 48.8 | 48.8 |
| 45° | 978.5 | 965.5 | 248.1 | 81.3 | 74.8 | 63.9 | 54.2 | 46.6 | 39.0 | 35.8 | 35.8 |
| 47.5° | 1135.6 | 1091.2 | 170.1 | 76.9 | 69.4 | 56.3 | 45.5 | 35.8 | 29.3 | 26.0 | 26.0 |
| 50° | 1353.4 | 1207.1 | 110.5 | 72.6 | 66.1 | 48.8 | 36.8 | 26.0 | 21.7 | 20.6 | 21.7 |
| 52.5° | 1559.3 | 1325.3 | 87.8 | 67.2 | 59.6 | 42.3 | 28.2 | 21.7 | 19.5 | 18.4 | 18.4 |
| 55° | 1749.0 | 1384.9 | 78.0 | 61.8 | 54.2 | 34.7 | 23.8 | 18.4 | 17.3 | 16.3 | 16.3 |
| 57.5° | 1909.3 | 1405.4 | 67.2 | 54.2 | 43.3 | 27.1 | 19.5 | 16.3 | 14.1 | 13.0 | 13.0 |
| 60° | 2048.0 | 1410.9 | 52.0 | 43.3 | 31.4 | 20.6 | 16.3 | 14.1 | 11.9 | 9.8 | 9.8 |
| 62.5° | 2158.6 | 1372.9 | 36.8 | 30.3 | 21.7 | 16.3 | 14.1 | 9.8 | 6.5 | 4.3 | 3.3 |
| 65° | 2246.3 | 1297.1 | 24.9 | 20.6 | 14.1 | 11.9 | 8.7 | 4.3 | 1.1 | 0.0 | 0.0 |
| 67.5° | 2143.4 | 1124.8 | 19.5 | 15.2 | 9.8 | 7.6 | 4.3 | 1.1 | 0.0 | 0.0 | 0.0 |
| 70° | 1747.9 | 872.3 | 14.1 | 9.8 | 6.5 | 2.2 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 72.5° | 1189.8 | 562.4 | 10.8 | 6.5 | 3.3 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 534.2 | 201.6 | 7.6 | 4.3 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 130.0 | 47.7 | 5.4 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 34.7 | 11.9 | 3.3 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 13.0 | 4.3 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 5.4 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 2.2 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 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 |

(END OF REPORT)