

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: P676740

Luminaire Tested: **CCW-SA-1B-827-U-T4W-HSS**

Issue Date: 04/25/2023



Test Information

Test Method: LM-79-08
Report Number: P676740
Test Lab: INNOVATION CENTER(G1)
Issue Date: 04/25/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: CCW-SA-1B-827-U-T4W-HSS
Description: INVUE CLEAR CURVE Wall Pack MOUNT Light Square Luminaire @450mA w/
T4W distribution lens and House Side Shield
Light Source: (16) 2700K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

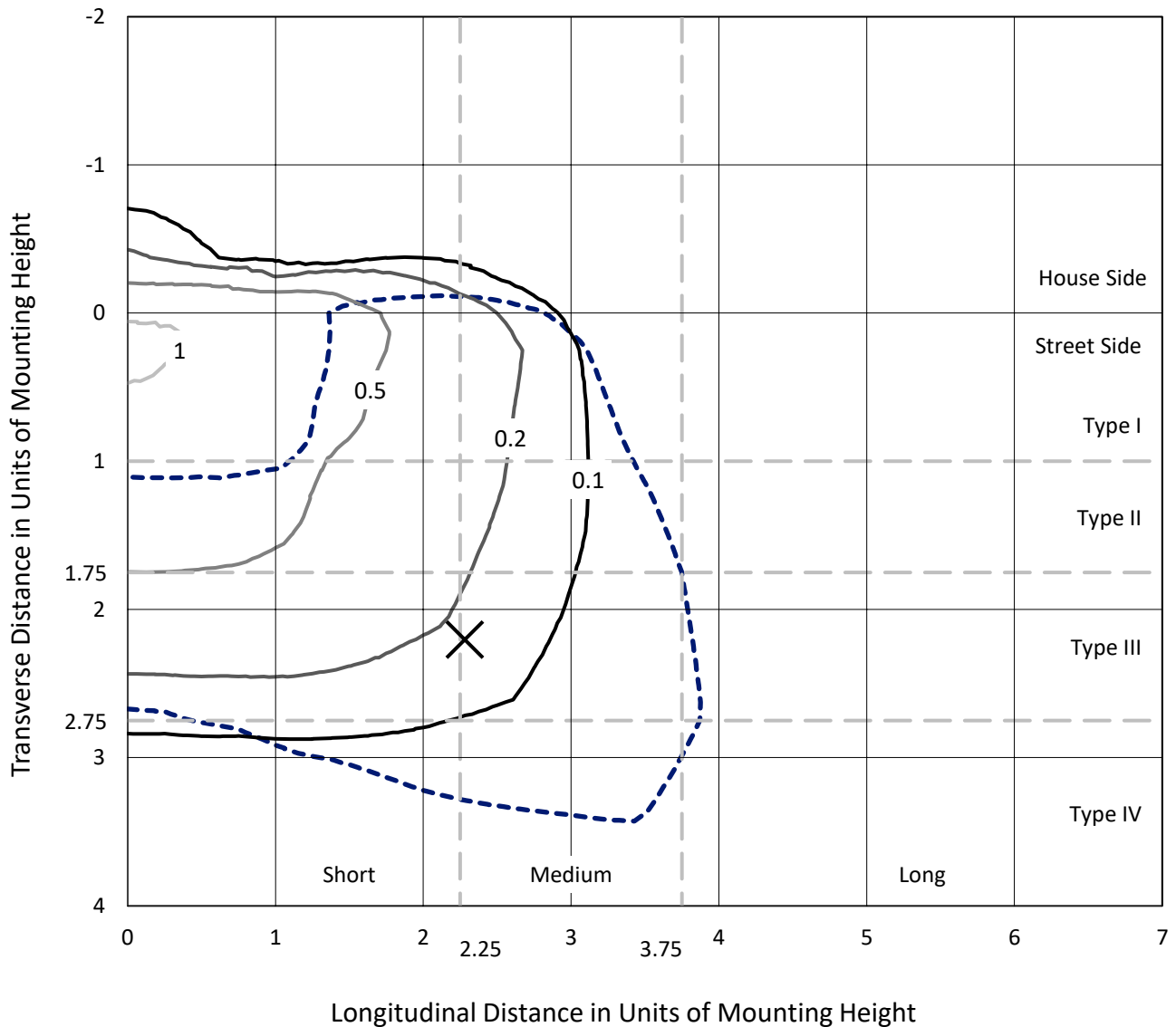
Lumens per Lamp: N/A
Luminaire Lumens: 1831.7 lumens
Efficiency: N/A
Efficacy: 76.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B0 - U0 - G1

Input Watts (W): 24
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

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Iso-Footcandle Lines of Horizontal Illumination

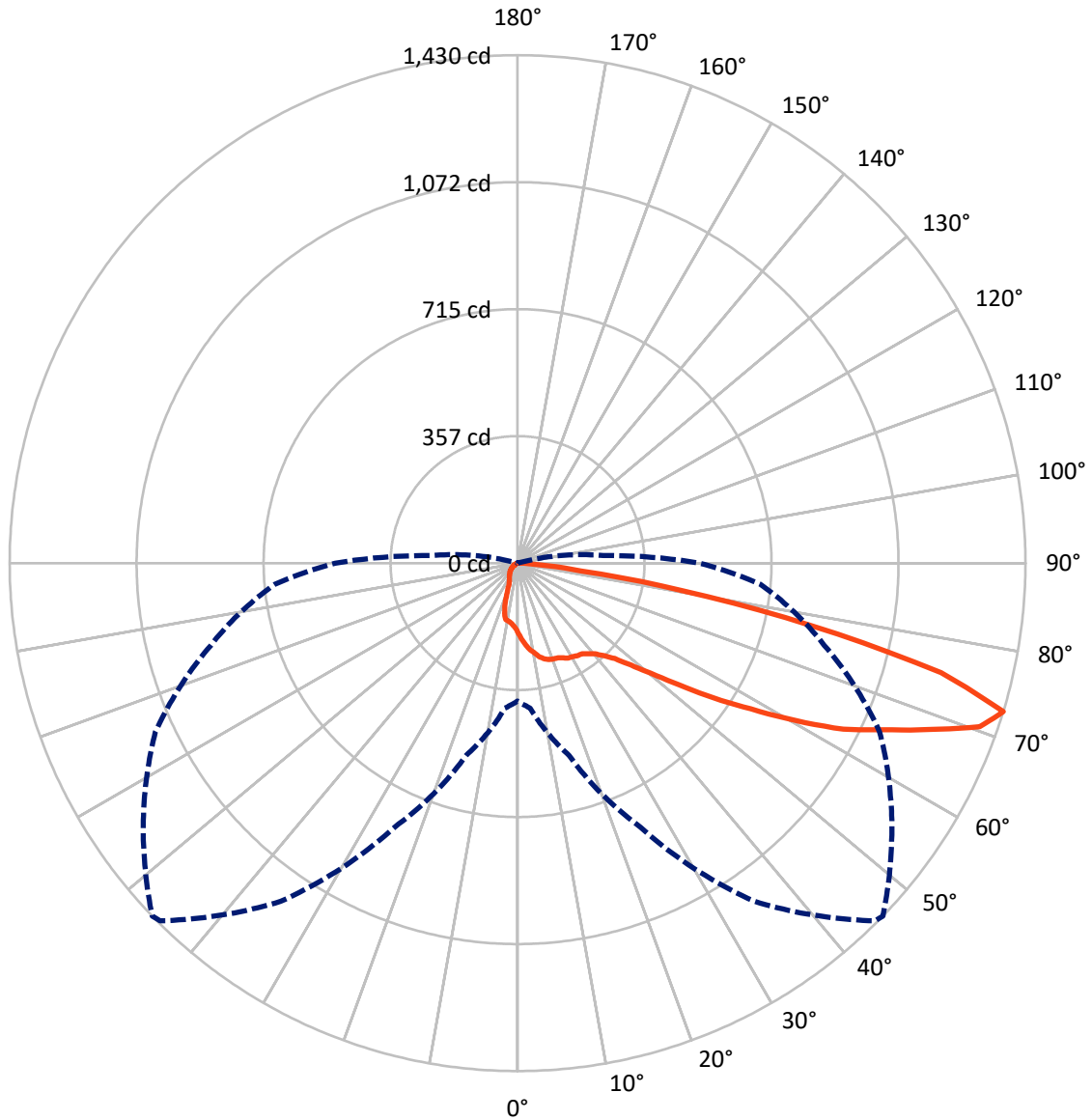
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 1.3 fc
 Type IV - Medium - N/A

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Luminous Intensity Polar Plot



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

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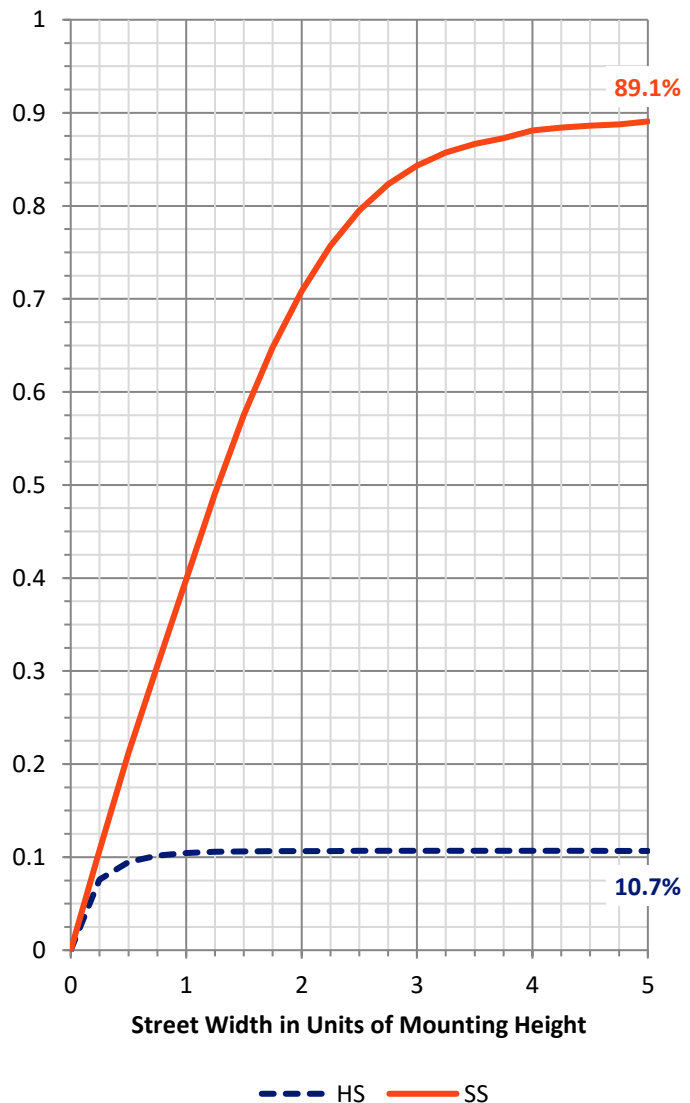
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 197.2 | 0.0 | 197.2 |
| | % Fixture | 10.8 | 0.0 | 10.8 |
| Street Side | Lumens | 1634.5 | 0.0 | 1634.5 |
| | % Fixture | 89.2 | 0.0 | 89.2 |
| Total | Lumens | 1831.7 | 0.0 | 1831.7 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 19.6 | 1.1 |
| 10°-20° | 59.2 | 3.2 |
| 20°-30° | 92.6 | 5.1 |
| 30°-40° | 129.7 | 7.1 |
| 40°-50° | 213.9 | 11.7 |
| 50°-60° | 384.4 | 21.0 |
| 60°-70° | 557.1 | 30.4 |
| 70°-80° | 347.7 | 19.0 |
| 80°-90° | 27.6 | 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° | 1831.7 | 100.0 |
| 0°-180° | 1831.7 | 100.0 |

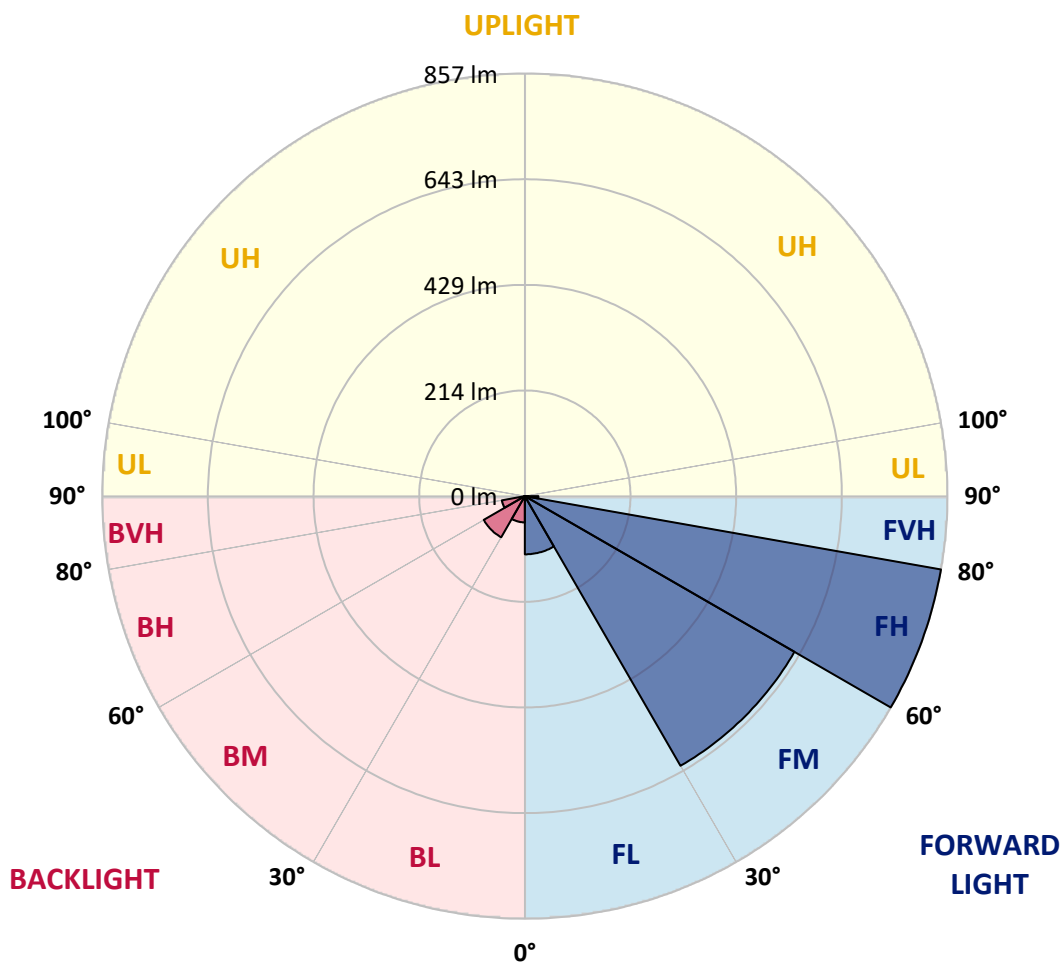


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 118.1 | 6.4 | | | |
| FM (30°-60°) | 631.6 | 34.5 | | | |
| FH (60°-80°) | 857.4 | 46.8 | | | G1/1800 |
| FVH (80°-90°) | 27.4 | 1.5 | | | G1/100 |
| BL (0°-30°) | 53.3 | 2.9 | B0/110 | | |
| BM (30°-60°) | 96.3 | 5.3 | B0/220 | | |
| BH (60°-80°) | 47.4 | 2.6 | B0/110 | | G0/110 |
| BVH (80°-90°) | 0.1 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B0-U0-G1
 Type IV Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 46° | 55° | 65° | 75° | 85° |
|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 195.8 | 195.8 | 195.8 | 195.8 | 195.8 | 195.8 | 195.8 | 195.8 | 195.8 | 195.8 | 195.8 |
| 2.5° | 219.1 | 218.2 | 219.6 | 219.1 | 213.5 | 214.4 | 214.0 | 210.2 | 203.7 | 200.0 | 197.6 |
| 5° | 244.3 | 246.7 | 244.8 | 240.6 | 237.3 | 230.8 | 229.9 | 223.8 | 213.5 | 207.0 | 200.0 |
| 7.5° | 270.5 | 270.5 | 266.8 | 260.2 | 253.2 | 246.2 | 245.3 | 235.0 | 226.1 | 214.9 | 205.1 |
| 10° | 290.1 | 287.8 | 285.0 | 278.0 | 270.0 | 260.7 | 256.0 | 248.6 | 238.7 | 225.2 | 212.6 |
| 12.5° | 307.4 | 303.7 | 299.0 | 288.7 | 279.4 | 269.1 | 270.0 | 257.9 | 251.4 | 239.2 | 220.5 |
| 15° | 317.2 | 314.0 | 309.8 | 300.4 | 285.9 | 281.3 | 279.4 | 271.9 | 260.2 | 248.1 | 230.3 |
| 17.5° | 319.6 | 317.2 | 311.6 | 299.5 | 291.5 | 285.9 | 285.5 | 276.6 | 271.4 | 261.2 | 241.5 |
| 20° | 314.9 | 310.7 | 306.5 | 298.5 | 291.1 | 289.2 | 287.8 | 287.8 | 281.3 | 267.7 | 248.6 |
| 22.5° | 307.0 | 302.3 | 299.9 | 295.3 | 289.2 | 288.7 | 289.7 | 288.7 | 283.6 | 274.7 | 256.0 |
| 25° | 300.9 | 298.5 | 294.8 | 293.4 | 289.7 | 296.7 | 295.3 | 293.9 | 292.5 | 282.2 | 267.7 |
| 27.5° | 302.7 | 302.3 | 299.5 | 293.9 | 291.1 | 298.5 | 302.7 | 303.2 | 302.7 | 292.5 | 278.5 |
| 30° | 303.7 | 301.3 | 298.5 | 297.1 | 298.1 | 305.6 | 305.6 | 315.8 | 311.6 | 301.3 | 289.2 |
| 32.5° | 314.4 | 313.0 | 303.7 | 300.4 | 300.9 | 309.8 | 310.2 | 320.5 | 319.1 | 312.1 | 298.5 |
| 35° | 337.3 | 328.0 | 314.4 | 305.1 | 305.1 | 316.8 | 313.0 | 328.0 | 331.7 | 320.5 | 305.1 |
| 37.5° | 371.4 | 364.4 | 340.1 | 319.1 | 311.2 | 319.6 | 323.3 | 331.7 | 342.9 | 333.1 | 318.2 |
| 40° | 439.2 | 437.8 | 403.2 | 357.9 | 326.6 | 334.1 | 335.5 | 348.5 | 356.0 | 342.5 | 338.3 |
| 42.5° | 538.2 | 531.2 | 499.0 | 427.5 | 354.6 | 351.3 | 356.5 | 364.9 | 382.6 | 371.4 | 361.1 |
| 45° | 634.9 | 631.7 | 599.4 | 519.5 | 405.5 | 385.9 | 383.1 | 398.1 | 424.2 | 412.1 | 404.1 |
| 47.5° | 705.0 | 698.5 | 680.3 | 613.0 | 480.3 | 426.6 | 428.4 | 443.4 | 476.5 | 467.2 | 469.5 |
| 50° | 758.7 | 755.5 | 736.3 | 699.4 | 574.7 | 490.6 | 486.8 | 501.8 | 546.6 | 552.7 | 559.2 |
| 52.5° | 817.6 | 823.7 | 798.0 | 766.7 | 686.3 | 576.5 | 568.1 | 573.3 | 631.2 | 645.2 | 663.4 |
| 55° | 874.1 | 884.0 | 858.3 | 854.1 | 803.1 | 671.8 | 670.4 | 658.3 | 733.0 | 734.9 | 744.7 |
| 57.5° | 911.1 | 907.8 | 905.9 | 928.8 | 919.9 | 781.2 | 774.2 | 762.0 | 829.8 | 817.6 | 847.0 |
| 60° | 913.9 | 923.2 | 954.5 | 1011.0 | 1026.9 | 909.6 | 899.4 | 866.2 | 913.4 | 884.4 | 940.5 |
| 62.5° | 934.9 | 942.4 | 1000.3 | 1078.3 | 1098.9 | 1022.7 | 1029.7 | 945.6 | 984.9 | 962.0 | 1044.2 |
| 65° | 881.6 | 905.0 | 1021.3 | 1130.6 | 1193.2 | 1137.2 | 1130.2 | 1047.9 | 1058.2 | 1036.7 | 1146.5 |
| 67.5° | 833.5 | 842.4 | 963.8 | 1146.5 | 1268.0 | 1252.1 | 1249.3 | 1138.6 | 1133.9 | 1094.2 | 1175.5 |
| 70° | 677.4 | 688.2 | 808.3 | 1065.2 | 1293.2 | 1386.2 | 1379.7 | 1265.7 | 1185.3 | 1062.9 | 1026.9 |
| 72.5° | 388.2 | 409.7 | 560.2 | 820.4 | 1161.9 | 1423.6 | 1429.6 | 1286.2 | 1124.6 | 893.8 | 685.9 |
| 75° | 127.1 | 133.2 | 232.7 | 464.9 | 869.0 | 1241.8 | 1231.1 | 1105.4 | 907.3 | 590.1 | 309.8 |
| 77.5° | 43.0 | 43.9 | 68.7 | 168.2 | 481.7 | 839.1 | 845.2 | 790.0 | 557.4 | 245.3 | 85.5 |
| 80° | 22.0 | 23.4 | 33.6 | 63.1 | 198.1 | 456.9 | 466.7 | 450.4 | 233.6 | 72.4 | 20.6 |
| 82.5° | 10.3 | 10.7 | 19.6 | 35.0 | 90.6 | 179.4 | 179.4 | 197.2 | 82.7 | 40.6 | 8.4 |
| 85° | 3.7 | 3.7 | 10.3 | 20.1 | 38.3 | 59.8 | 60.3 | 60.7 | 43.5 | 30.4 | 3.7 |
| 87.5° | 1.4 | 1.4 | 5.1 | 8.4 | 14.0 | 18.2 | 18.2 | 14.5 | 22.0 | 20.1 | 1.4 |
| 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° | 195.8 | 195.8 | 195.8 | 195.8 | 195.8 | 195.8 | 195.8 | 195.8 | 195.8 | 195.8 | 195.8 |
| 2.5° | 196.7 | 193.9 | 191.6 | 188.3 | 184.1 | 181.7 | 182.2 | 179.4 | 179.4 | 178.0 | 177.5 |
| 5° | 196.7 | 193.9 | 187.8 | 182.2 | 178.5 | 173.8 | 171.5 | 169.6 | 169.6 | 168.7 | 169.1 |
| 7.5° | 198.1 | 193.9 | 185.5 | 178.0 | 171.9 | 167.3 | 163.5 | 163.1 | 162.1 | 159.8 | 161.7 |
| 10° | 206.5 | 200.4 | 186.4 | 176.1 | 169.1 | 164.0 | 157.4 | 155.6 | 152.8 | 148.6 | 149.0 |
| 12.5° | 213.5 | 205.6 | 193.0 | 178.9 | 170.1 | 161.7 | 146.7 | 130.4 | 123.3 | 115.9 | 116.3 |
| 15° | 223.8 | 212.6 | 195.3 | 182.7 | 170.1 | 143.0 | 115.9 | 94.8 | 83.6 | 78.0 | 78.0 |
| 17.5° | 229.4 | 220.1 | 201.8 | 185.0 | 156.5 | 116.3 | 82.2 | 64.0 | 62.1 | 63.1 | 63.1 |
| 20° | 241.1 | 228.5 | 209.3 | 186.9 | 134.1 | 82.7 | 60.3 | 58.4 | 59.3 | 61.2 | 60.7 |
| 22.5° | 248.6 | 235.9 | 214.9 | 178.5 | 103.7 | 59.3 | 56.5 | 55.6 | 56.5 | 58.9 | 58.9 |
| 25° | 254.6 | 246.7 | 223.8 | 157.9 | 73.4 | 53.7 | 52.8 | 53.7 | 54.7 | 55.6 | 57.0 |
| 27.5° | 269.6 | 256.0 | 229.9 | 131.3 | 52.8 | 50.0 | 50.9 | 51.4 | 51.4 | 52.8 | 53.3 |
| 30° | 279.4 | 268.6 | 234.5 | 101.4 | 46.7 | 46.3 | 47.2 | 47.7 | 48.1 | 49.5 | 50.0 |
| 32.5° | 288.7 | 285.0 | 228.5 | 68.7 | 43.9 | 43.0 | 42.5 | 43.0 | 44.9 | 46.3 | 45.8 |
| 35° | 302.3 | 299.9 | 219.6 | 47.7 | 41.1 | 39.2 | 38.3 | 38.8 | 40.2 | 41.6 | 41.1 |
| 37.5° | 318.6 | 321.0 | 198.1 | 41.6 | 38.3 | 36.0 | 34.1 | 34.1 | 34.6 | 36.0 | 36.4 |
| 40° | 337.8 | 343.9 | 172.9 | 38.8 | 36.4 | 33.6 | 31.8 | 29.4 | 29.0 | 28.5 | 29.0 |
| 42.5° | 372.8 | 379.8 | 144.4 | 36.9 | 33.6 | 30.4 | 27.6 | 24.8 | 22.4 | 21.0 | 21.0 |
| 45° | 421.9 | 416.3 | 107.0 | 35.0 | 32.2 | 27.6 | 23.4 | 20.1 | 16.8 | 15.4 | 15.4 |
| 47.5° | 489.6 | 470.5 | 73.4 | 33.2 | 29.9 | 24.3 | 19.6 | 15.4 | 12.6 | 11.2 | 11.2 |
| 50° | 583.5 | 520.5 | 47.7 | 31.3 | 28.5 | 21.0 | 15.9 | 11.2 | 9.3 | 8.9 | 9.3 |
| 52.5° | 672.3 | 571.4 | 37.8 | 29.0 | 25.7 | 18.2 | 12.1 | 9.3 | 8.4 | 7.9 | 7.9 |
| 55° | 754.1 | 597.1 | 33.6 | 26.6 | 23.4 | 15.0 | 10.3 | 7.9 | 7.5 | 7.0 | 7.0 |
| 57.5° | 823.2 | 606.0 | 29.0 | 23.4 | 18.7 | 11.7 | 8.4 | 7.0 | 6.1 | 5.6 | 5.6 |
| 60° | 883.0 | 608.3 | 22.4 | 18.7 | 13.5 | 8.9 | 7.0 | 6.1 | 5.1 | 4.2 | 4.2 |
| 62.5° | 930.7 | 591.9 | 15.9 | 13.1 | 9.3 | 7.0 | 6.1 | 4.2 | 2.8 | 1.9 | 1.4 |
| 65° | 968.5 | 559.2 | 10.7 | 8.9 | 6.1 | 5.1 | 3.7 | 1.9 | 0.5 | 0.0 | 0.0 |
| 67.5° | 924.1 | 485.0 | 8.4 | 6.5 | 4.2 | 3.3 | 1.9 | 0.5 | 0.0 | 0.0 | 0.0 |
| 70° | 753.6 | 376.1 | 6.1 | 4.2 | 2.8 | 0.9 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 72.5° | 513.0 | 242.5 | 4.7 | 2.8 | 1.4 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 230.3 | 86.9 | 3.3 | 1.9 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 56.1 | 20.6 | 2.3 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 15.0 | 5.1 | 1.4 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 5.6 | 1.9 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 2.3 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.9 | 0.5 | 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)