

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: P675299

Luminaire Tested: **CCW-SA-1A-827-U-T4W**

Issue Date: 04/25/2023

**Test Information**

Test Method: LM-79-08  
Report Number: P675299  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 04/25/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: CCW-SA-1A-827-U-T4W  
Description: INVUE CLEAR CURVE Wall Pack MOUNT LIGHT SQUARE LUMINAIRE @350mA w/  
T4W distribution lens  
Light Source: (16) 2700K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2028.8 lumens  
Efficiency: N/A  
Efficacy: 112.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')  
IES Classification: Type IV - Medium  
BUG Rating: B1 - U0 - G1

Input Watts (W): 18  
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

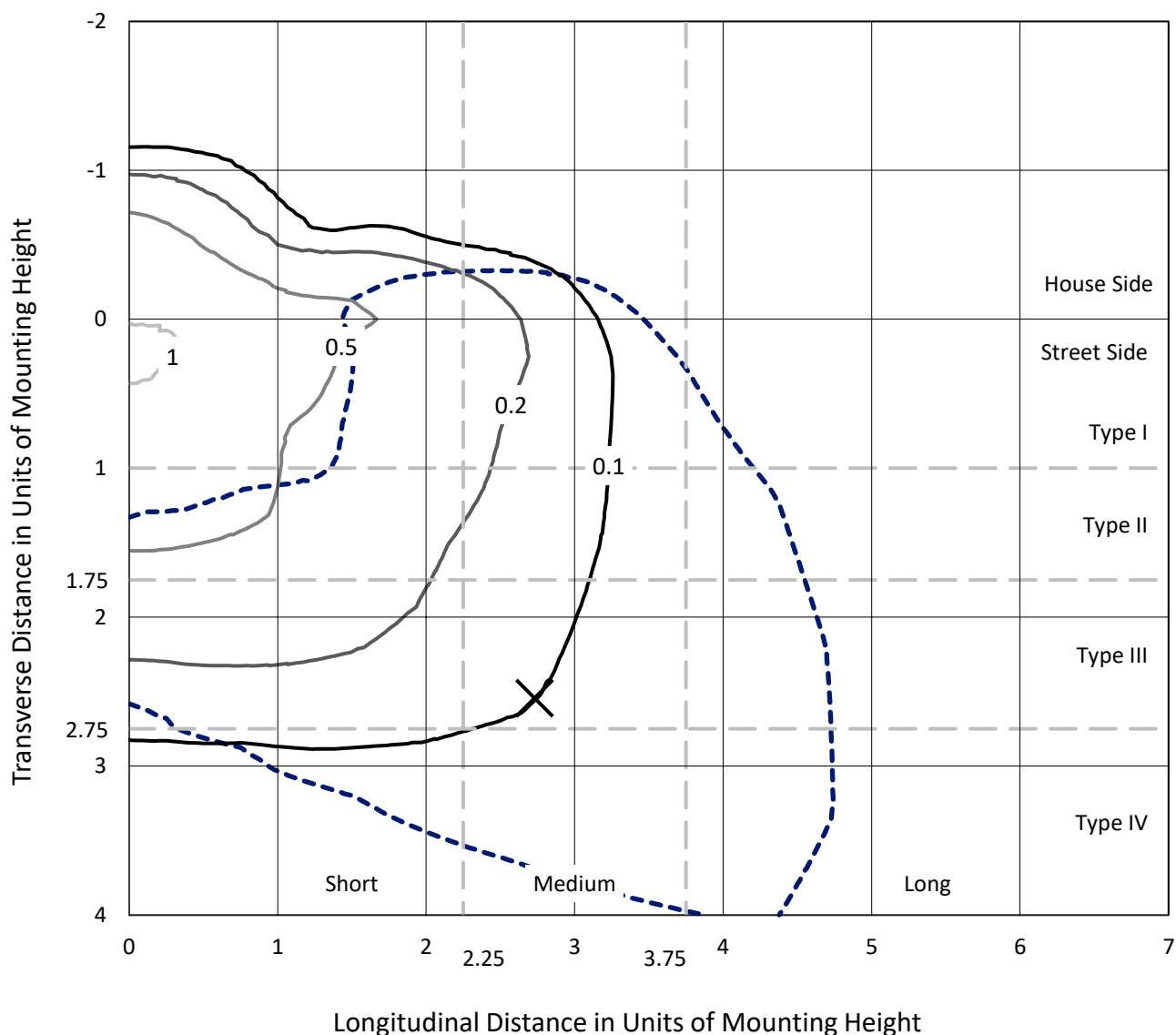
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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

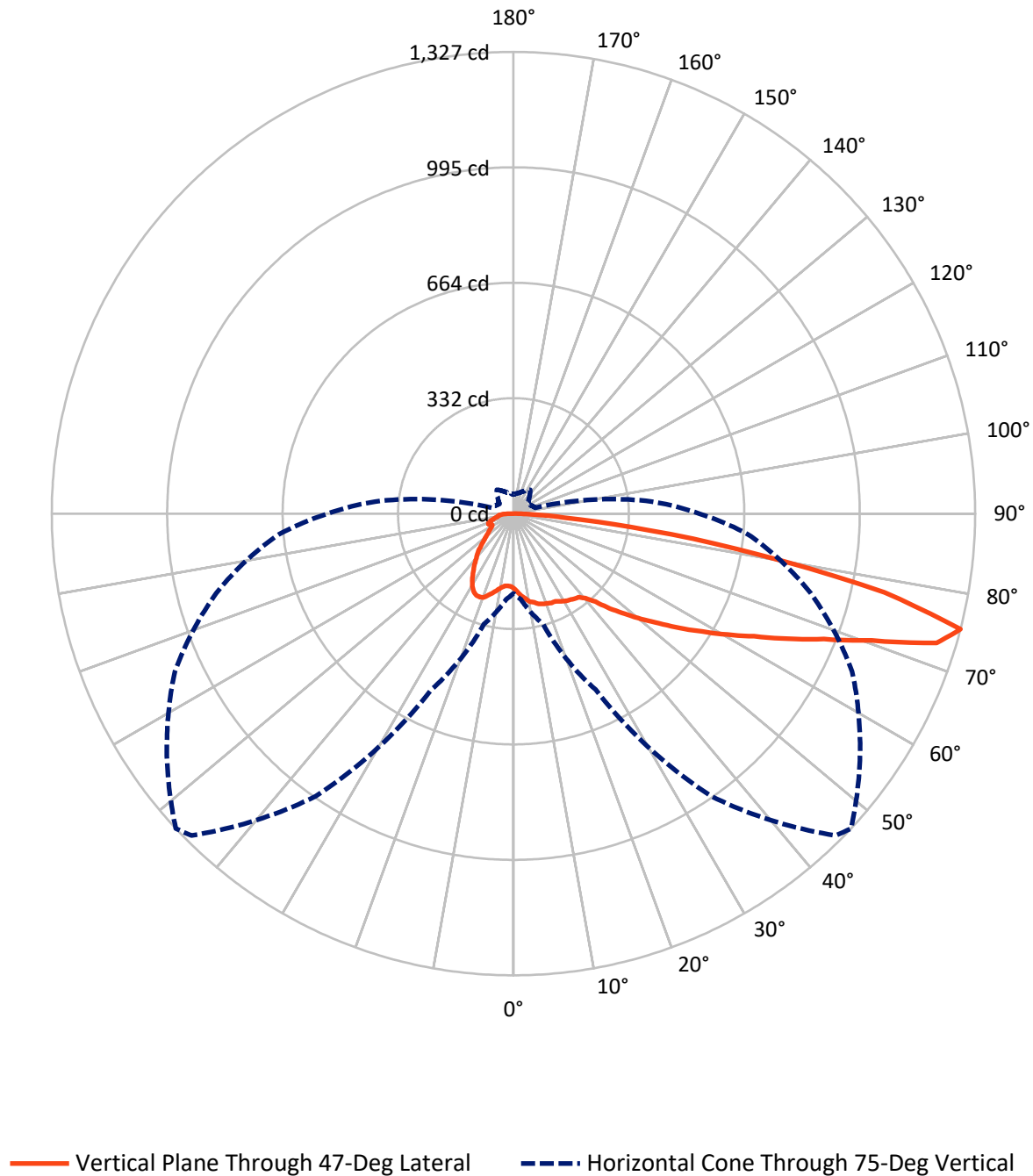
--- 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 1.2 fc  
 Type IV - Medium - N/A

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## Luminous Intensity Polar Plot



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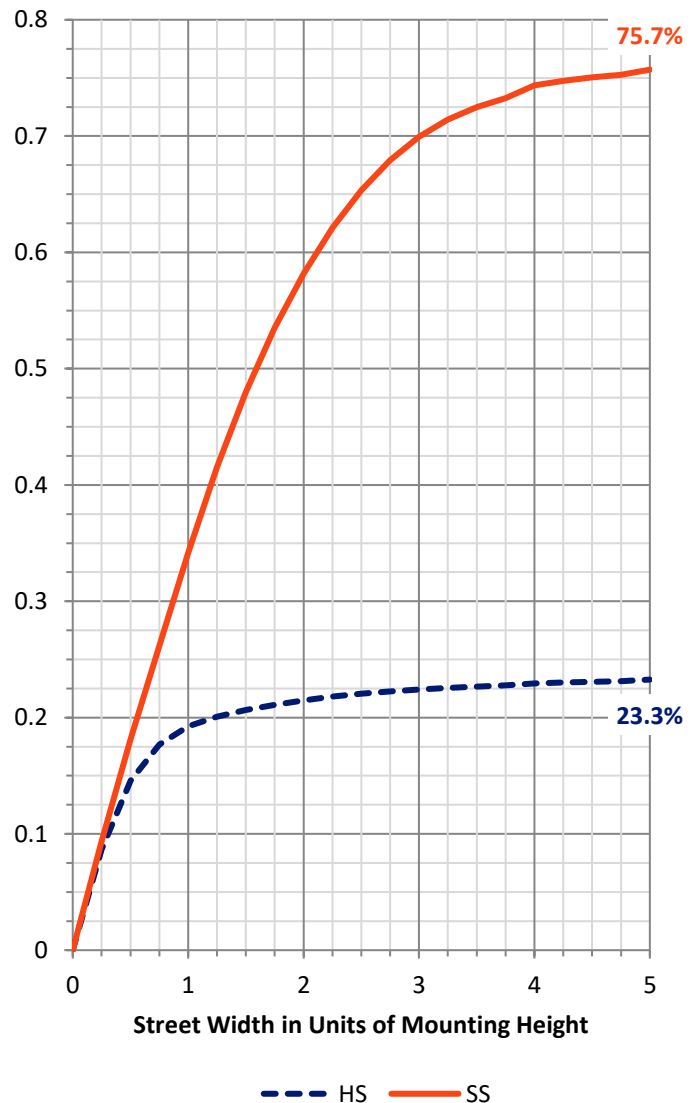
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 485.2    | 0.0    | 485.2  |
|                    | % Fixture | 23.9     | 0.0    | 23.9   |
| <b>Street Side</b> | Lumens    | 1543.6   | 0.0    | 1543.6 |
|                    | % Fixture | 76.1     | 0.0    | 76.1   |
| <b>Total</b>       | Lumens    | 2028.8   | 0.0    | 2028.8 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 21.8   | 1.1       |
| 10°-20°   | 72.3   | 3.6       |
| 20°-30°   | 123.9  | 6.1       |
| 30°-40°   | 173.3  | 8.5       |
| 40°-50°   | 241.7  | 11.9      |
| 50°-60°   | 361.2  | 17.8      |
| 60°-70°   | 520.8  | 25.7      |
| 70°-80°   | 443.3  | 21.8      |
| 80°-90°   | 70.6   | 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°    | 2028.8 | 100.0     |
| 0°-180°   | 2028.8 | 100.0     |

**Coefficient of Utilization**



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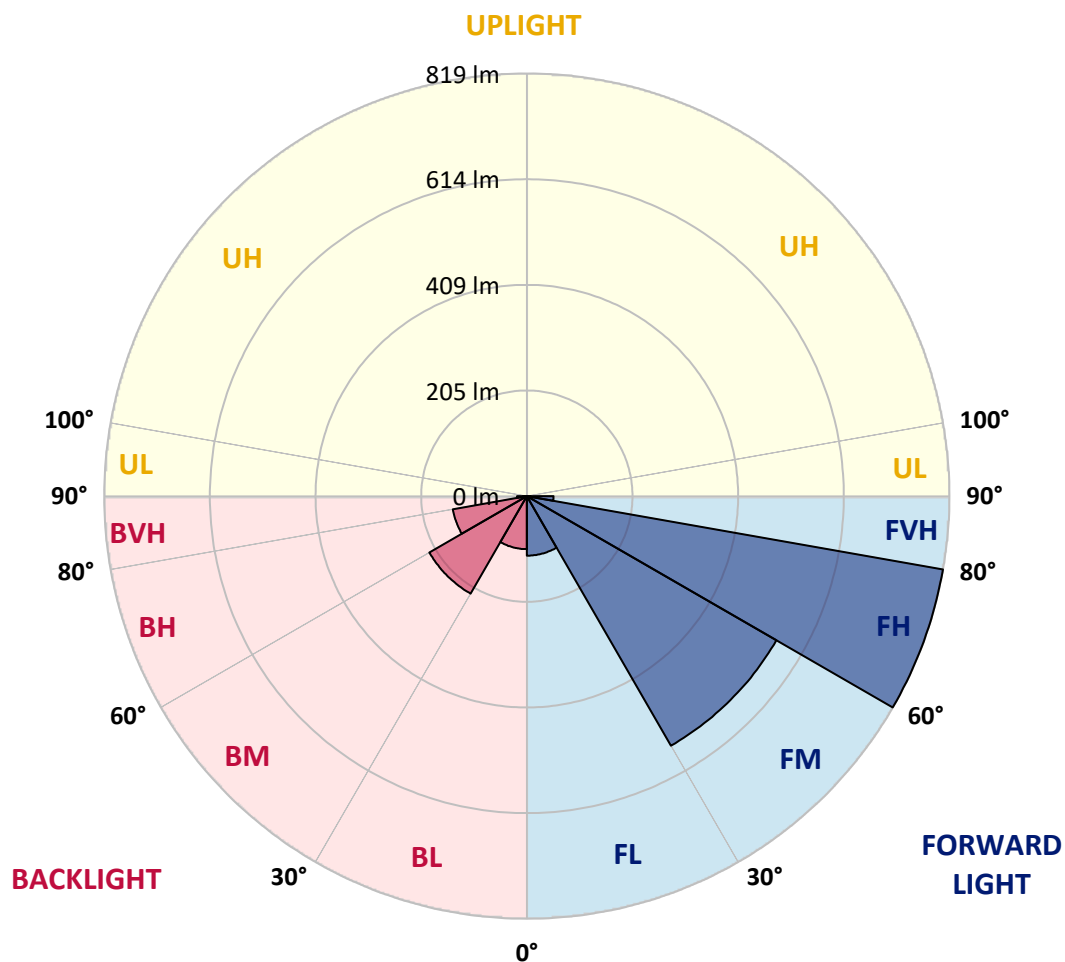
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 115.3  | 5.7       |                         |      |         |
| FM   | (30°-60°)   | 558.1  | 27.5      |                         |      |         |
| FH   | (60°-80°)   | 818.5  | 40.3      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 51.7   | 2.6       |                         |      | G1/100  |
| BL   | (0°-30°)    | 102.7  | 5.1       | B0/110                  |      |         |
| BM   | (30°-60°)   | 218.1  | 10.7      | B0/220                  |      |         |
| BH   | (60°-80°)   | 145.5  | 7.2       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 18.9   | 0.9       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G1**

Type IV Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 15°   | 25°   | 35°    | 45°    | 47°    | 55°    | 65°    | 75°   | 85°    |
|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|-------|--------|
| 0°    | 215.4 | 215.4 | 215.4 | 215.4 | 215.4  | 215.4  | 215.4  | 215.4  | 215.4  | 215.4 | 215.4  |
| 2.5°  | 231.0 | 231.7 | 231.7 | 230.2 | 228.7  | 225.8  | 225.8  | 222.8  | 221.3  | 217.6 | 216.2  |
| 5°    | 252.4 | 250.2 | 248.0 | 247.3 | 243.6  | 238.4  | 237.6  | 234.7  | 226.5  | 222.8 | 217.6  |
| 7.5°  | 268.0 | 267.2 | 266.5 | 263.5 | 256.9  | 248.7  | 246.5  | 242.1  | 233.9  | 226.5 | 220.6  |
| 10°   | 280.6 | 283.5 | 280.6 | 273.9 | 267.2  | 258.4  | 257.6  | 249.5  | 242.1  | 233.2 | 225.8  |
| 12.5° | 294.6 | 295.4 | 290.2 | 282.0 | 271.7  | 264.3  | 261.3  | 258.4  | 250.2  | 242.8 | 231.7  |
| 15°   | 304.3 | 302.8 | 299.1 | 288.0 | 276.1  | 268.7  | 269.5  | 265.8  | 256.9  | 251.7 | 239.8  |
| 17.5° | 304.3 | 304.3 | 298.3 | 290.2 | 279.8  | 273.2  | 273.2  | 270.9  | 265.0  | 257.6 | 249.5  |
| 20°   | 298.3 | 298.3 | 294.6 | 290.2 | 278.3  | 276.9  | 275.4  | 273.9  | 273.9  | 267.2 | 255.4  |
| 22.5° | 290.9 | 289.4 | 290.9 | 283.5 | 275.4  | 276.9  | 279.1  | 278.3  | 276.1  | 270.2 | 262.1  |
| 25°   | 283.5 | 284.3 | 285.7 | 280.6 | 273.2  | 279.8  | 279.1  | 282.8  | 281.3  | 276.9 | 270.2  |
| 27.5° | 282.8 | 284.3 | 285.0 | 279.8 | 276.9  | 282.8  | 285.7  | 289.4  | 290.2  | 285.7 | 277.6  |
| 30°   | 293.9 | 293.1 | 292.4 | 285.7 | 283.5  | 288.7  | 291.7  | 296.9  | 301.3  | 291.7 | 285.0  |
| 32.5° | 322.8 | 318.3 | 313.9 | 296.1 | 289.4  | 293.1  | 296.1  | 303.5  | 304.3  | 299.1 | 289.4  |
| 35°   | 368.7 | 365.7 | 350.9 | 319.8 | 301.3  | 297.6  | 300.6  | 305.7  | 307.2  | 303.5 | 296.1  |
| 37.5° | 421.2 | 419.7 | 399.0 | 361.3 | 325.7  | 308.0  | 305.0  | 312.4  | 318.3  | 310.2 | 299.8  |
| 40°   | 473.0 | 467.1 | 452.3 | 415.3 | 356.8  | 323.5  | 319.8  | 323.5  | 325.7  | 319.8 | 313.1  |
| 42.5° | 519.7 | 513.0 | 509.3 | 472.3 | 397.5  | 349.4  | 346.4  | 337.6  | 344.2  | 336.8 | 327.9  |
| 45°   | 558.9 | 557.4 | 555.9 | 524.1 | 444.2  | 391.6  | 389.4  | 366.4  | 373.8  | 367.9 | 355.3  |
| 47.5° | 587.0 | 593.7 | 591.5 | 573.7 | 497.5  | 436.8  | 430.1  | 400.5  | 411.6  | 405.7 | 393.1  |
| 50°   | 620.4 | 624.1 | 621.8 | 610.0 | 547.1  | 488.6  | 476.0  | 445.6  | 458.2  | 457.5 | 450.8  |
| 52.5° | 650.0 | 661.1 | 648.5 | 647.7 | 618.1  | 544.8  | 523.4  | 494.5  | 515.2  | 523.4 | 522.6  |
| 55°   | 684.8 | 693.6 | 689.9 | 688.5 | 681.8  | 599.6  | 580.4  | 545.6  | 580.4  | 592.2 | 602.6  |
| 57.5° | 714.4 | 713.6 | 727.7 | 744.7 | 752.9  | 662.5  | 639.6  | 598.9  | 651.4  | 664.8 | 693.6  |
| 60°   | 727.7 | 740.3 | 764.0 | 806.9 | 829.8  | 729.9  | 706.2  | 673.7  | 723.2  | 733.6 | 786.9  |
| 62.5° | 736.6 | 747.7 | 793.6 | 866.1 | 879.4  | 798.8  | 776.5  | 744.0  | 801.7  | 809.1 | 888.3  |
| 65°   | 712.1 | 722.5 | 813.6 | 888.3 | 935.7  | 872.8  | 867.6  | 833.6  | 880.2  | 884.6 | 994.9  |
| 67.5° | 684.0 | 695.1 | 796.5 | 916.5 | 1010.5 | 971.2  | 963.1  | 922.4  | 957.9  | 952.7 | 1076.4 |
| 70°   | 634.4 | 649.2 | 752.9 | 940.9 | 1093.4 | 1108.9 | 1092.6 | 1034.9 | 1038.6 | 989.7 | 1080.1 |
| 72.5° | 483.4 | 493.0 | 589.3 | 843.9 | 1131.9 | 1299.9 | 1271.8 | 1156.3 | 1114.1 | 997.2 | 953.5  |
| 75°   | 229.5 | 247.3 | 328.7 | 558.2 | 992.0  | 1308.8 | 1327.3 | 1216.3 | 1074.1 | 884.6 | 675.9  |
| 77.5° | 66.6  | 66.6  | 99.9  | 236.9 | 621.8  | 1054.9 | 1089.7 | 1032.7 | 886.1  | 655.1 | 355.3  |
| 80°   | 36.3  | 38.5  | 52.6  | 83.7  | 273.2  | 665.5  | 715.8  | 684.8  | 521.9  | 259.1 | 91.8   |
| 82.5° | 20.7  | 21.5  | 34.8  | 50.3  | 124.4  | 362.0  | 391.6  | 355.3  | 198.4  | 78.5  | 42.9   |
| 85°   | 11.8  | 12.6  | 20.0  | 33.3  | 74.0   | 133.2  | 145.1  | 125.8  | 79.9   | 52.6  | 21.5   |
| 87.5° | 5.9   | 5.9   | 9.6   | 15.5  | 37.8   | 37.8   | 37.0   | 45.2   | 48.1   | 31.8  | 9.6    |
| 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°    | 215.4  | 215.4 | 215.4 | 215.4 | 215.4 | 215.4 | 215.4 | 215.4 | 215.4 | 215.4 | 215.4 |
| 2.5°  | 215.4  | 214.7 | 214.7 | 211.7 | 211.0 | 208.8 | 208.8 | 207.3 | 206.5 | 208.8 | 208.8 |
| 5°    | 216.2  | 212.5 | 211.7 | 208.8 | 209.5 | 208.0 | 211.0 | 209.5 | 208.8 | 208.8 | 208.0 |
| 7.5°  | 217.6  | 213.9 | 211.0 | 208.8 | 208.0 | 210.2 | 213.9 | 213.9 | 218.4 | 216.2 | 216.2 |
| 10°   | 221.3  | 219.1 | 215.4 | 213.9 | 213.9 | 216.2 | 220.6 | 223.6 | 227.3 | 227.3 | 225.0 |
| 12.5° | 230.2  | 226.5 | 222.1 | 219.9 | 222.8 | 225.0 | 229.5 | 232.4 | 236.9 | 238.4 | 236.9 |
| 15°   | 236.9  | 233.2 | 231.7 | 230.2 | 232.4 | 235.4 | 239.1 | 242.1 | 247.3 | 248.7 | 248.0 |
| 17.5° | 245.8  | 241.3 | 240.6 | 241.3 | 242.8 | 245.0 | 247.3 | 249.5 | 253.2 | 253.2 | 253.2 |
| 20°   | 250.2  | 248.7 | 248.0 | 250.2 | 253.2 | 256.1 | 254.7 | 253.2 | 252.4 | 253.9 | 253.2 |
| 22.5° | 258.4  | 256.9 | 257.6 | 259.8 | 259.8 | 258.4 | 256.1 | 251.0 | 249.5 | 251.0 | 249.5 |
| 25°   | 265.8  | 264.3 | 264.3 | 262.8 | 262.1 | 256.9 | 252.4 | 248.0 | 242.8 | 245.0 | 244.3 |
| 27.5° | 273.2  | 272.4 | 272.4 | 266.5 | 259.1 | 250.2 | 244.3 | 239.1 | 236.1 | 239.8 | 237.6 |
| 30°   | 282.0  | 282.8 | 279.1 | 265.0 | 247.3 | 237.6 | 231.0 | 230.2 | 229.5 | 231.7 | 231.0 |
| 32.5° | 290.2  | 290.9 | 285.0 | 262.8 | 238.4 | 219.9 | 213.2 | 213.9 | 217.6 | 221.3 | 225.0 |
| 35°   | 294.6  | 298.3 | 290.9 | 255.4 | 220.6 | 199.9 | 192.5 | 199.1 | 205.8 | 211.0 | 214.7 |
| 37.5° | 302.8  | 312.4 | 299.8 | 247.3 | 205.1 | 182.1 | 176.9 | 179.1 | 187.3 | 195.4 | 199.1 |
| 40°   | 314.6  | 325.7 | 302.0 | 231.7 | 184.3 | 164.3 | 161.4 | 162.1 | 165.1 | 170.3 | 174.0 |
| 42.5° | 335.3  | 347.2 | 304.3 | 211.7 | 163.6 | 153.2 | 145.1 | 142.9 | 140.7 | 140.7 | 139.9 |
| 45°   | 365.7  | 376.8 | 301.3 | 186.5 | 142.9 | 135.5 | 129.5 | 124.4 | 118.4 | 108.8 | 110.3 |
| 47.5° | 410.1  | 419.0 | 303.5 | 164.3 | 123.6 | 117.7 | 113.3 | 107.3 | 98.5  | 88.1  | 87.4  |
| 50°   | 477.5  | 464.2 | 300.6 | 141.4 | 109.6 | 104.4 | 100.7 | 92.5  | 82.2  | 74.8  | 74.0  |
| 52.5° | 555.9  | 529.3 | 297.6 | 122.1 | 97.7  | 93.3  | 90.3  | 81.4  | 71.8  | 68.1  | 67.4  |
| 55°   | 650.7  | 612.2 | 302.0 | 105.1 | 88.8  | 85.1  | 82.2  | 74.0  | 66.6  | 63.7  | 62.9  |
| 57.5° | 762.5  | 701.8 | 326.5 | 91.8  | 79.2  | 77.7  | 77.0  | 70.3  | 63.7  | 61.4  | 60.7  |
| 60°   | 867.6  | 787.7 | 342.7 | 82.2  | 70.3  | 71.8  | 73.3  | 70.3  | 62.9  | 61.4  | 61.4  |
| 62.5° | 955.7  | 858.7 | 316.8 | 74.0  | 65.9  | 70.3  | 77.0  | 74.8  | 71.8  | 73.3  | 71.8  |
| 65°   | 1033.4 | 883.1 | 236.9 | 69.6  | 63.7  | 74.0  | 85.1  | 84.4  | 77.7  | 79.2  | 78.5  |
| 67.5° | 1046.7 | 853.5 | 154.7 | 65.9  | 62.2  | 81.4  | 95.5  | 86.6  | 73.3  | 73.3  | 71.1  |
| 70°   | 991.2  | 774.3 | 103.6 | 62.2  | 61.4  | 81.4  | 97.7  | 81.4  | 68.8  | 68.8  | 65.9  |
| 72.5° | 813.6  | 618.9 | 79.9  | 58.5  | 56.3  | 72.5  | 92.5  | 77.0  | 64.4  | 62.9  | 57.7  |
| 75°   | 534.5  | 399.0 | 65.1  | 55.5  | 48.9  | 63.7  | 83.7  | 71.1  | 61.4  | 57.0  | 54.8  |
| 77.5° | 262.1  | 179.1 | 54.8  | 48.9  | 42.2  | 55.5  | 76.2  | 67.4  | 57.7  | 53.3  | 51.8  |
| 80°   | 71.8   | 64.4  | 45.9  | 42.9  | 35.5  | 48.1  | 71.8  | 64.4  | 54.0  | 49.6  | 47.4  |
| 82.5° | 40.7   | 40.0  | 37.0  | 34.8  | 29.6  | 48.1  | 72.5  | 64.4  | 51.1  | 50.3  | 42.9  |
| 85°   | 22.2   | 23.7  | 26.6  | 25.9  | 22.9  | 42.9  | 68.8  | 56.3  | 41.5  | 34.8  | 34.8  |
| 87.5° | 8.9    | 11.1  | 13.3  | 14.8  | 15.5  | 31.8  | 51.8  | 42.9  | 31.8  | 26.6  | 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)