

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: io LED

Report Number: P251773

Luminaire Tested: **LD4B20D010 EU4B10209040 4LBLWW1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P251773  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1712-453-12)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LD4B20D010 EU4B10209040 4LBLWW1H  
Description: PORTFOLIO 4 INCH LENS WALLWASH RECESSED DOWNLIGHT, WITH HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1344.0 lumens  
Efficiency: N/A  
Efficacy: 64.6 lumens/watt  
Spacing Criteria (0/90/45): 1.12 / 1.03 / 1.12  
Luminous Opening: Circular (Dia: 0.38' x H: 0')  
CIE Type: Direct

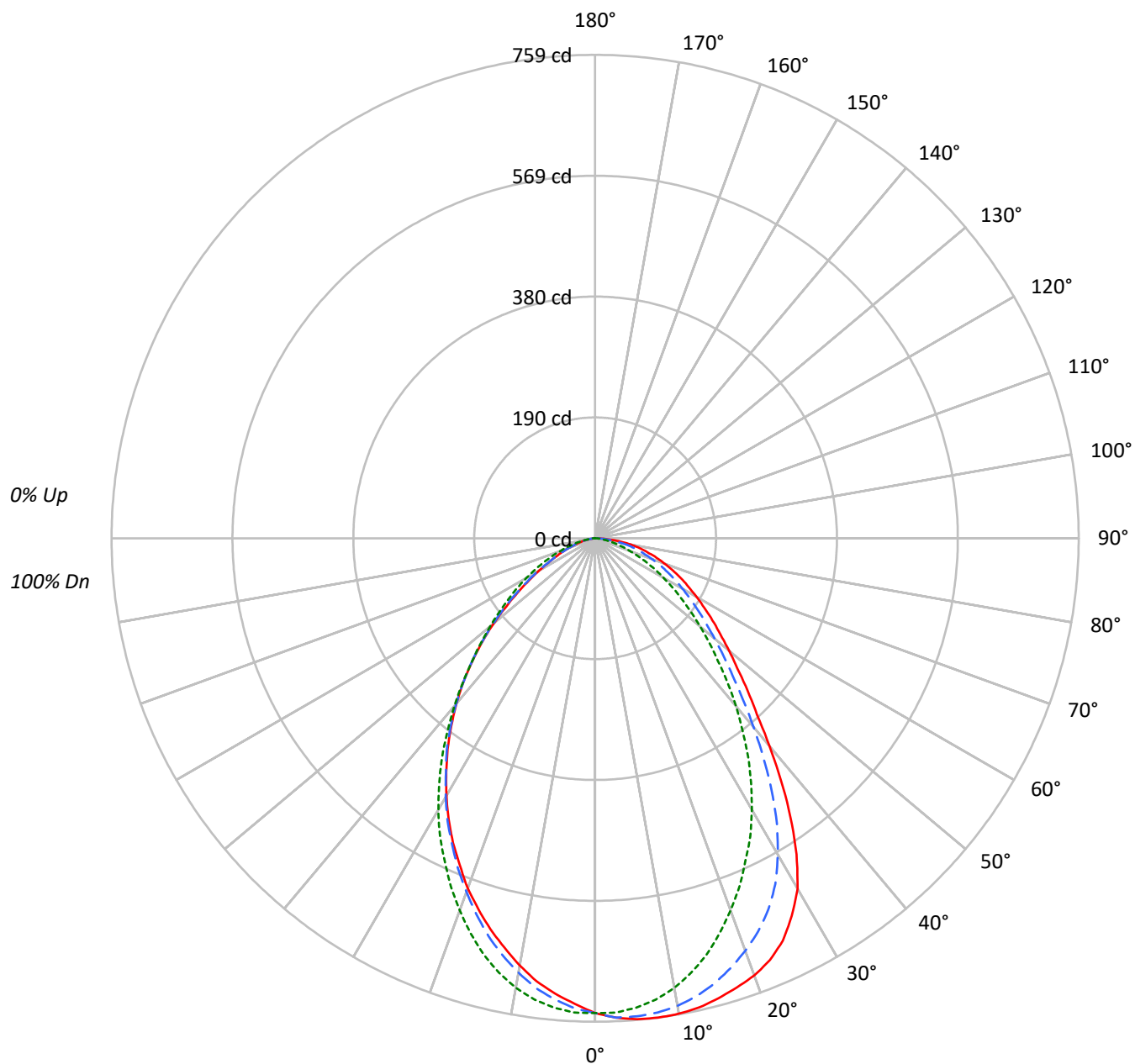
Input Watts (W): 20.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|
| RF  | 20  |     |     |     | 20  |     |     |     |     | 20  |     |     |     |     | 20  |     |     |     |    | 20 |
| RC  | 80  |     |     |     | 70  |     |     |     |     | 50  |     |     |     |     | 30  |     |     |     |    | 10 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 10 |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |
| 1   | 111 | 107 | 103 | 100 | 108 | 104 | 101 | 98  | 100 | 98  | 95  | 96  | 94  | 92  | 93  | 91  | 90  | 88  |    |    |
| 2   | 102 | 95  | 89  | 85  | 100 | 93  | 88  | 84  | 90  | 85  | 82  | 87  | 83  | 80  | 84  | 81  | 78  | 76  |    |    |
| 3   | 94  | 85  | 78  | 73  | 92  | 84  | 77  | 72  | 81  | 75  | 71  | 78  | 74  | 70  | 76  | 72  | 69  | 67  |    |    |
| 4   | 88  | 77  | 69  | 63  | 85  | 76  | 69  | 63  | 73  | 67  | 62  | 71  | 66  | 61  | 69  | 64  | 61  | 59  |    |    |
| 5   | 81  | 70  | 62  | 56  | 79  | 69  | 61  | 56  | 67  | 60  | 55  | 65  | 59  | 55  | 63  | 58  | 54  | 52  |    |    |
| 6   | 76  | 64  | 56  | 50  | 74  | 63  | 55  | 50  | 61  | 54  | 49  | 60  | 54  | 49  | 58  | 53  | 49  | 47  |    |    |
| 7   | 71  | 59  | 51  | 45  | 69  | 58  | 50  | 45  | 56  | 50  | 45  | 55  | 49  | 44  | 54  | 48  | 44  | 42  |    |    |
| 8   | 66  | 54  | 46  | 41  | 65  | 53  | 46  | 41  | 52  | 45  | 41  | 51  | 45  | 40  | 50  | 44  | 40  | 38  |    |    |
| 9   | 62  | 50  | 42  | 37  | 61  | 49  | 42  | 37  | 48  | 42  | 37  | 47  | 41  | 37  | 46  | 41  | 37  | 35  |    |    |
| 10  | 59  | 46  | 39  | 34  | 57  | 46  | 39  | 34  | 45  | 39  | 34  | 44  | 38  | 34  | 43  | 38  | 34  | 32  |    |    |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°    | 90°   | 180°  |
|-----|-------|-------|-------|
| 0°  | 72645 | 72645 | 72645 |
| 5°  | 74155 | 72355 | 70232 |
| 10° | 75013 | 70926 | 67413 |
| 15° | 75440 | 68266 | 64099 |
| 20° | 75762 | 64457 | 60651 |
| 25° | 74972 | 60057 | 56724 |
| 30° | 71493 | 55356 | 52520 |
| 35° | 63580 | 49803 | 48018 |
| 40° | 54120 | 43765 | 43039 |
| 45° | 46627 | 37613 | 37461 |
| 50° | 41558 | 32507 | 31476 |
| 55° | 38196 | 28053 | 25130 |
| 60° | 35767 | 24131 | 19667 |
| 65° | 34383 | 20362 | 15335 |
| 70° | 32997 | 16328 | 12424 |
| 75° | 31969 | 12953 | 9489  |
| 80° | 32159 | 9036  | 5781  |
| 85° | 26949 | 6374  | 2572  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 69.8   | 5.2       |
| 10°-20°   | 191.8  | 14.3      |
| 20°-30°   | 268.3  | 20.0      |
| 30°-40°   | 275.7  | 20.5      |
| 40°-50°   | 223.8  | 16.7      |
| 50°-60°   | 157.6  | 11.7      |
| 60°-70°   | 97.0   | 7.2       |
| 70°-80°   | 48.5   | 3.6       |
| 80°-90°   | 11.5   | 0.9       |
| 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°-30°    | 529.9  | 39.4      |
| 0°-40°    | 805.6  | 59.9      |
| 0°-60°    | 1187.0 | 88.3      |
| 0°-90°    | 1344.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1344.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 745 | 745 | 745 | 745  | 745  |      |
| 5°  | 758 | 753 | 740 | 727  | 718  | 72   |
| 15° | 748 | 724 | 677 | 647  | 635  | 211  |
| 25° | 697 | 643 | 558 | 531  | 528  | 319  |
| 35° | 534 | 483 | 419 | 406  | 404  | 332  |
| 45° | 338 | 305 | 273 | 273  | 272  | 263  |
| 55° | 225 | 197 | 165 | 151  | 148  | 202  |
| 65° | 149 | 125 | 88  | 68   | 66   | 147  |
| 75° | 85  | 66  | 34  | 25   | 25   | 91   |
| 85° | 24  | 16  | 6   | 3    | 2    | 28   |
| 90° | 0   | 0   | 0   | 0    | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 10°   | 15°   | 20°   | 22.5° | 25°   | 30°   | 35°   | 40°   | 45°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 745.4 | 745.4 | 745.4 | 745.4 | 745.4 | 745.4 | 745.4 | 745.4 | 745.4 | 745.4 | 745.4 |
| 2.5°  | 753.4 | 754.5 | 751.1 | 754.5 | 750.0 | 752.3 | 753.4 | 751.1 | 748.8 | 753.4 | 753.4 |
| 5°    | 758.0 | 758.0 | 754.5 | 759.1 | 753.4 | 754.5 | 756.8 | 753.4 | 750.0 | 754.5 | 753.4 |
| 7.5°  | 759.1 | 759.1 | 754.5 | 759.1 | 753.4 | 754.5 | 755.7 | 752.3 | 748.8 | 752.3 | 751.1 |
| 10°   | 758.0 | 756.8 | 753.4 | 758.0 | 752.3 | 752.3 | 753.4 | 750.0 | 744.2 | 747.7 | 745.4 |
| 12.5° | 754.5 | 754.5 | 750.0 | 754.5 | 746.5 | 746.5 | 747.7 | 743.1 | 738.5 | 738.5 | 736.2 |
| 15°   | 747.7 | 747.7 | 743.1 | 746.5 | 739.6 | 739.6 | 738.5 | 733.9 | 728.2 | 728.2 | 723.6 |
| 17.5° | 739.6 | 739.6 | 735.1 | 738.5 | 730.5 | 730.5 | 729.3 | 722.4 | 714.4 | 713.3 | 707.5 |
| 20°   | 730.5 | 730.5 | 724.7 | 727.0 | 717.9 | 717.9 | 716.7 | 708.7 | 699.5 | 697.2 | 689.2 |
| 22.5° | 716.7 | 716.7 | 711.0 | 712.1 | 702.9 | 701.8 | 700.7 | 691.5 | 682.3 | 678.9 | 668.5 |
| 25°   | 697.2 | 696.1 | 691.5 | 691.5 | 682.3 | 680.0 | 677.7 | 668.5 | 659.4 | 652.5 | 643.3 |
| 27.5° | 668.5 | 669.7 | 664.0 | 665.1 | 653.6 | 651.3 | 650.2 | 638.7 | 628.4 | 621.5 | 612.4 |
| 30°   | 635.3 | 631.8 | 626.1 | 626.1 | 616.9 | 615.8 | 613.5 | 603.2 | 591.7 | 583.7 | 573.4 |
| 32.5° | 588.3 | 587.1 | 581.4 | 581.4 | 571.1 | 571.1 | 566.5 | 556.2 | 545.8 | 541.3 | 530.9 |
| 35°   | 534.4 | 533.2 | 528.6 | 528.6 | 519.5 | 520.6 | 516.0 | 508.0 | 497.7 | 490.8 | 482.8 |
| 37.5° | 479.3 | 478.2 | 473.6 | 474.7 | 466.7 | 466.7 | 463.3 | 455.3 | 447.2 | 443.8 | 433.5 |
| 40°   | 425.4 | 424.3 | 418.6 | 422.0 | 415.1 | 412.8 | 411.7 | 405.9 | 396.8 | 392.2 | 386.4 |
| 42.5° | 376.1 | 377.3 | 371.5 | 373.8 | 368.1 | 365.8 | 364.7 | 360.1 | 353.2 | 348.6 | 342.9 |
| 45°   | 338.3 | 336.0 | 333.7 | 333.7 | 328.0 | 326.8 | 325.7 | 319.9 | 315.4 | 310.8 | 305.0 |
| 47.5° | 302.7 | 300.4 | 298.1 | 299.3 | 294.7 | 293.6 | 291.3 | 286.7 | 280.9 | 278.7 | 272.9 |
| 50°   | 274.1 | 272.9 | 269.5 | 269.5 | 264.9 | 263.7 | 261.5 | 258.0 | 252.3 | 248.8 | 244.3 |
| 52.5° | 247.7 | 247.7 | 244.3 | 243.1 | 239.7 | 238.5 | 237.4 | 232.8 | 228.2 | 223.6 | 219.0 |
| 55°   | 224.8 | 223.6 | 221.3 | 221.3 | 216.7 | 215.6 | 214.4 | 209.9 | 205.3 | 201.8 | 197.2 |
| 57.5° | 203.0 | 203.0 | 200.7 | 200.7 | 197.2 | 194.9 | 194.9 | 190.4 | 184.6 | 182.3 | 176.6 |
| 60°   | 183.5 | 183.5 | 181.2 | 181.2 | 177.7 | 177.7 | 175.4 | 170.9 | 167.4 | 162.8 | 158.2 |
| 62.5° | 165.1 | 166.3 | 164.0 | 162.8 | 159.4 | 158.2 | 158.2 | 154.8 | 149.1 | 145.6 | 141.0 |
| 65°   | 149.1 | 147.9 | 146.8 | 145.6 | 142.2 | 141.0 | 141.0 | 136.5 | 133.0 | 128.4 | 125.0 |
| 67.5° | 131.9 | 131.9 | 129.6 | 129.6 | 127.3 | 126.1 | 123.8 | 120.4 | 117.0 | 113.5 | 110.1 |
| 70°   | 115.8 | 115.8 | 114.7 | 114.7 | 111.2 | 110.1 | 108.9 | 105.5 | 102.1 | 98.6  | 94.0  |
| 72.5° | 100.9 | 99.8  | 98.6  | 98.6  | 96.3  | 95.2  | 94.0  | 90.6  | 87.2  | 83.7  | 80.3  |
| 75°   | 84.9  | 84.9  | 83.7  | 83.7  | 81.4  | 80.3  | 80.3  | 78.0  | 73.4  | 71.1  | 66.5  |
| 77.5° | 71.1  | 71.1  | 70.0  | 70.0  | 67.7  | 67.7  | 66.5  | 63.1  | 60.8  | 57.3  | 55.0  |
| 80°   | 57.3  | 56.2  | 56.2  | 55.0  | 52.7  | 52.7  | 51.6  | 50.5  | 47.0  | 44.7  | 41.3  |
| 82.5° | 40.1  | 40.1  | 40.1  | 39.0  | 37.8  | 37.8  | 36.7  | 34.4  | 32.1  | 31.0  | 27.5  |
| 85°   | 24.1  | 24.1  | 22.9  | 21.8  | 22.9  | 21.8  | 20.6  | 19.5  | 18.3  | 17.2  | 16.1  |
| 87.5° | 10.3  | 10.3  | 9.2   | 9.2   | 9.2   | 9.2   | 9.2   | 8.0   | 6.9   | 6.9   | 5.7   |
| 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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**CANDELA DISTRIBUTION (continued):**

|       | 50°   | 55°   | 60°   | 65°   | 67.5° | 70°   | 75°   | 80°   | 85°   | 90°   | 95°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 745.4 | 745.4 | 745.4 | 745.4 | 745.4 | 745.4 | 745.4 | 745.4 | 745.4 | 745.4 | 745.4 |
| 2.5°  | 746.5 | 750.0 | 748.8 | 747.7 | 745.4 | 745.4 | 745.4 | 744.2 | 745.4 | 745.4 | 743.1 |
| 5°    | 746.5 | 748.8 | 747.7 | 745.4 | 743.1 | 743.1 | 741.9 | 739.6 | 739.6 | 739.6 | 735.1 |
| 7.5°  | 743.1 | 745.4 | 741.9 | 739.6 | 737.3 | 735.1 | 735.1 | 731.6 | 731.6 | 730.5 | 725.9 |
| 10°   | 736.2 | 737.3 | 732.8 | 730.5 | 727.0 | 725.9 | 723.6 | 719.0 | 717.9 | 716.7 | 712.1 |
| 12.5° | 725.9 | 727.0 | 721.3 | 716.7 | 712.1 | 711.0 | 708.7 | 702.9 | 700.7 | 698.4 | 692.6 |
| 15°   | 711.0 | 711.0 | 704.1 | 698.4 | 693.8 | 692.6 | 686.9 | 681.2 | 678.9 | 676.6 | 668.5 |
| 17.5° | 693.8 | 692.6 | 683.4 | 677.7 | 672.0 | 669.7 | 664.0 | 657.1 | 652.5 | 650.2 | 643.3 |
| 20°   | 675.4 | 672.0 | 661.7 | 655.9 | 649.0 | 645.6 | 639.9 | 630.7 | 626.1 | 621.5 | 614.6 |
| 22.5° | 653.6 | 649.0 | 637.6 | 629.6 | 622.7 | 619.2 | 611.2 | 603.2 | 596.3 | 591.7 | 583.7 |
| 25°   | 627.3 | 621.5 | 608.9 | 598.6 | 592.9 | 589.4 | 581.4 | 572.2 | 565.3 | 558.5 | 551.6 |
| 27.5° | 596.3 | 589.4 | 576.8 | 566.5 | 560.7 | 555.0 | 549.3 | 539.0 | 533.2 | 527.5 | 519.5 |
| 30°   | 558.5 | 550.4 | 539.0 | 529.8 | 522.9 | 518.3 | 511.4 | 502.3 | 495.4 | 491.9 | 483.9 |
| 32.5° | 517.2 | 508.0 | 497.7 | 488.5 | 485.1 | 479.3 | 473.6 | 464.4 | 458.7 | 455.3 | 449.5 |
| 35°   | 471.3 | 464.4 | 453.0 | 446.1 | 440.3 | 438.1 | 433.5 | 424.3 | 422.0 | 418.6 | 411.7 |
| 37.5° | 423.1 | 417.4 | 409.4 | 403.6 | 399.1 | 396.8 | 392.2 | 386.4 | 383.0 | 379.6 | 376.1 |
| 40°   | 378.4 | 373.8 | 367.0 | 362.4 | 356.6 | 353.2 | 353.2 | 346.3 | 344.0 | 344.0 | 340.6 |
| 42.5° | 334.8 | 332.6 | 326.8 | 319.9 | 318.8 | 315.4 | 314.2 | 310.8 | 308.5 | 307.3 | 306.2 |
| 45°   | 298.1 | 294.7 | 289.0 | 285.5 | 282.1 | 282.1 | 278.7 | 275.2 | 274.1 | 272.9 | 271.8 |
| 47.5° | 266.0 | 261.5 | 256.9 | 253.4 | 251.1 | 250.0 | 246.5 | 244.3 | 243.1 | 243.1 | 242.0 |
| 50°   | 237.4 | 233.9 | 229.3 | 225.9 | 223.6 | 221.3 | 219.0 | 216.7 | 215.6 | 214.4 | 214.4 |
| 52.5° | 213.3 | 208.7 | 204.1 | 200.7 | 197.2 | 196.1 | 193.8 | 191.5 | 190.4 | 189.2 | 188.1 |
| 55°   | 191.5 | 188.1 | 182.3 | 178.9 | 175.4 | 175.4 | 172.0 | 168.6 | 166.3 | 165.1 | 164.0 |
| 57.5° | 170.9 | 167.4 | 161.7 | 158.2 | 156.0 | 153.7 | 151.4 | 149.1 | 146.8 | 144.5 | 142.2 |
| 60°   | 152.5 | 149.1 | 143.3 | 138.8 | 137.6 | 135.3 | 133.0 | 128.4 | 126.1 | 123.8 | 121.6 |
| 62.5° | 135.3 | 130.7 | 126.1 | 121.6 | 120.4 | 118.1 | 114.7 | 111.2 | 107.8 | 105.5 | 102.1 |
| 65°   | 119.3 | 115.8 | 110.1 | 106.6 | 103.2 | 102.1 | 98.6  | 94.0  | 90.6  | 88.3  | 84.9  |
| 67.5° | 104.4 | 99.8  | 94.0  | 90.6  | 88.3  | 86.0  | 82.6  | 79.1  | 75.7  | 72.2  | 68.8  |
| 70°   | 89.4  | 86.0  | 80.3  | 76.8  | 74.5  | 72.2  | 68.8  | 64.2  | 60.8  | 57.3  | 55.0  |
| 72.5° | 75.7  | 71.1  | 66.5  | 63.1  | 60.8  | 58.5  | 55.0  | 51.6  | 48.2  | 45.9  | 42.4  |
| 75°   | 63.1  | 58.5  | 55.0  | 50.5  | 49.3  | 47.0  | 43.6  | 40.1  | 36.7  | 34.4  | 32.1  |
| 77.5° | 50.5  | 47.0  | 42.4  | 40.1  | 37.8  | 35.5  | 33.3  | 29.8  | 27.5  | 24.1  | 21.8  |
| 80°   | 37.8  | 34.4  | 31.0  | 28.7  | 26.4  | 25.2  | 22.9  | 20.6  | 18.3  | 16.1  | 14.9  |
| 82.5° | 25.2  | 22.9  | 19.5  | 18.3  | 17.2  | 16.1  | 13.8  | 12.6  | 11.5  | 10.3  | 9.2   |
| 85°   | 13.8  | 12.6  | 11.5  | 9.2   | 9.2   | 8.0   | 6.9   | 6.9   | 5.7   | 5.7   | 4.6   |
| 87.5° | 5.7   | 4.6   | 4.6   | 3.4   | 3.4   | 3.4   | 2.3   | 2.3   | 2.3   | 1.1   | 1.1   |
| 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):**

|       | 100°  | 105°  | 110°  | 112.5° | 115°  | 120°  | 125°  | 130°  | 135°  | 140°  | 145°  |
|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 745.4 | 745.4 | 745.4 | 745.4  | 745.4 | 745.4 | 745.4 | 745.4 | 745.4 | 745.4 | 745.4 |
| 2.5°  | 744.2 | 739.6 | 739.6 | 739.6  | 736.2 | 737.3 | 738.5 | 739.6 | 738.5 | 735.1 | 738.5 |
| 5°    | 736.2 | 731.6 | 731.6 | 729.3  | 727.0 | 727.0 | 727.0 | 728.2 | 727.0 | 723.6 | 724.7 |
| 7.5°  | 725.9 | 720.1 | 719.0 | 716.7  | 714.4 | 713.3 | 713.3 | 713.3 | 712.1 | 707.5 | 709.8 |
| 10°   | 709.8 | 704.1 | 701.8 | 700.7  | 697.2 | 696.1 | 694.9 | 693.8 | 692.6 | 688.0 | 690.3 |
| 12.5° | 690.3 | 685.7 | 681.2 | 680.0  | 676.6 | 674.3 | 673.1 | 673.1 | 670.8 | 666.2 | 668.5 |
| 15°   | 667.4 | 660.5 | 657.1 | 654.8  | 651.3 | 649.0 | 646.8 | 647.9 | 646.8 | 642.2 | 643.3 |
| 17.5° | 639.9 | 633.0 | 629.6 | 628.4  | 623.8 | 621.5 | 620.4 | 620.4 | 619.2 | 614.6 | 615.8 |
| 20°   | 610.1 | 603.2 | 600.9 | 598.6  | 596.3 | 594.0 | 592.9 | 591.7 | 590.6 | 586.0 | 589.4 |
| 22.5° | 580.2 | 572.2 | 568.8 | 568.8  | 564.2 | 563.0 | 561.9 | 563.0 | 561.9 | 557.3 | 559.6 |
| 25°   | 549.3 | 541.3 | 539.0 | 535.5  | 533.2 | 532.1 | 532.1 | 532.1 | 530.9 | 528.6 | 530.9 |
| 27.5° | 514.9 | 509.1 | 505.7 | 504.6  | 502.3 | 501.1 | 500.0 | 501.1 | 501.1 | 497.7 | 500.0 |
| 30°   | 480.5 | 475.9 | 473.6 | 472.5  | 469.0 | 467.9 | 469.0 | 469.0 | 469.0 | 465.6 | 469.0 |
| 32.5° | 446.1 | 442.6 | 441.5 | 438.1  | 435.8 | 435.8 | 435.8 | 436.9 | 435.8 | 433.5 | 436.9 |
| 35°   | 411.7 | 407.1 | 405.9 | 404.8  | 404.8 | 402.5 | 404.8 | 403.6 | 405.9 | 402.5 | 404.8 |
| 37.5° | 375.0 | 372.7 | 371.5 | 371.5  | 369.2 | 370.4 | 370.4 | 370.4 | 372.7 | 369.2 | 371.5 |
| 40°   | 340.6 | 338.3 | 338.3 | 338.3  | 337.1 | 337.1 | 337.1 | 338.3 | 339.4 | 337.1 | 339.4 |
| 42.5° | 306.2 | 305.0 | 305.0 | 303.9  | 302.7 | 303.9 | 305.0 | 305.0 | 306.2 | 303.9 | 305.0 |
| 45°   | 272.9 | 271.8 | 272.9 | 271.8  | 271.8 | 270.6 | 271.8 | 272.9 | 272.9 | 271.8 | 271.8 |
| 47.5° | 242.0 | 242.0 | 240.8 | 240.8  | 240.8 | 240.8 | 240.8 | 240.8 | 240.8 | 238.5 | 240.8 |
| 50°   | 214.4 | 212.1 | 213.3 | 212.1  | 212.1 | 211.0 | 211.0 | 209.9 | 208.7 | 207.6 | 207.6 |
| 52.5° | 188.1 | 185.8 | 185.8 | 184.6  | 183.5 | 183.5 | 182.3 | 181.2 | 180.0 | 177.7 | 177.7 |
| 55°   | 162.8 | 160.5 | 159.4 | 158.2  | 157.1 | 156.0 | 154.8 | 153.7 | 151.4 | 150.2 | 150.2 |
| 57.5° | 139.9 | 137.6 | 135.3 | 135.3  | 133.0 | 131.9 | 129.6 | 127.3 | 126.1 | 123.8 | 123.8 |
| 60°   | 119.3 | 117.0 | 113.5 | 112.4  | 111.2 | 108.9 | 105.5 | 104.4 | 103.2 | 100.9 | 102.1 |
| 62.5° | 99.8  | 96.3  | 92.9  | 91.7   | 90.6  | 88.3  | 86.0  | 83.7  | 82.6  | 83.7  | 83.7  |
| 65°   | 81.4  | 78.0  | 75.7  | 73.4   | 72.2  | 70.0  | 68.8  | 67.7  | 67.7  | 67.7  | 68.8  |
| 67.5° | 65.4  | 61.9  | 59.6  | 58.5   | 56.2  | 55.0  | 55.0  | 55.0  | 55.0  | 55.0  | 55.0  |
| 70°   | 51.6  | 49.3  | 47.0  | 44.7   | 44.7  | 43.6  | 43.6  | 43.6  | 43.6  | 43.6  | 43.6  |
| 72.5° | 39.0  | 36.7  | 35.5  | 35.5   | 34.4  | 34.4  | 34.4  | 34.4  | 33.3  | 33.3  | 34.4  |
| 75°   | 28.7  | 27.5  | 26.4  | 26.4   | 26.4  | 25.2  | 25.2  | 25.2  | 25.2  | 25.2  | 25.2  |
| 77.5° | 20.6  | 19.5  | 19.5  | 18.3   | 18.3  | 18.3  | 18.3  | 18.3  | 18.3  | 17.2  | 17.2  |
| 80°   | 13.8  | 12.6  | 12.6  | 12.6   | 12.6  | 11.5  | 11.5  | 11.5  | 11.5  | 11.5  | 11.5  |
| 82.5° | 8.0   | 8.0   | 8.0   | 6.9    | 6.9   | 6.9   | 6.9   | 6.9   | 6.9   | 6.9   | 6.9   |
| 85°   | 4.6   | 3.4   | 3.4   | 3.4    | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   |
| 87.5° | 1.1   | 1.1   | 1.1   | 1.1    | 1.1   | 1.1   | 1.1   | 1.1   | 1.1   | 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   |





TEST NUMBER: P251773

CATALOG NUMBER: LD4B20D010 EU4B10209040 4LBLWW1H

**CANDELA DISTRIBUTION (continued):**

|       | 150°  | 155°  | 157.5° | 160°  | 165°  | 170°  | 175°  | 180°  |
|-------|-------|-------|--------|-------|-------|-------|-------|-------|
| 0°    | 745.4 | 745.4 | 745.4  | 745.4 | 745.4 | 745.4 | 745.4 | 745.4 |
| 2.5°  | 731.6 | 736.2 | 737.3  | 733.9 | 735.1 | 732.8 | 733.9 | 731.6 |
| 5°    | 719.0 | 722.4 | 723.6  | 721.3 | 721.3 | 719.0 | 720.1 | 717.9 |
| 7.5°  | 702.9 | 706.4 | 707.5  | 705.2 | 705.2 | 702.9 | 702.9 | 701.8 |
| 10°   | 684.6 | 685.7 | 688.0  | 684.6 | 685.7 | 683.4 | 683.4 | 681.2 |
| 12.5° | 661.7 | 664.0 | 666.2  | 662.8 | 662.8 | 661.7 | 661.7 | 658.2 |
| 15°   | 637.6 | 639.9 | 641.0  | 638.7 | 638.7 | 637.6 | 636.4 | 635.3 |
| 17.5° | 612.4 | 613.5 | 615.8  | 612.4 | 614.6 | 612.4 | 612.4 | 610.1 |
| 20°   | 583.7 | 587.1 | 588.3  | 584.8 | 586.0 | 584.8 | 584.8 | 584.8 |
| 22.5° | 556.2 | 558.5 | 559.6  | 557.3 | 558.5 | 556.2 | 557.3 | 555.0 |
| 25°   | 527.5 | 528.6 | 529.8  | 527.5 | 529.8 | 528.6 | 527.5 | 527.5 |
| 27.5° | 497.7 | 498.8 | 500.0  | 497.7 | 500.0 | 498.8 | 500.0 | 497.7 |
| 30°   | 465.6 | 467.9 | 470.2  | 467.9 | 469.0 | 467.9 | 467.9 | 466.7 |
| 32.5° | 433.5 | 435.8 | 438.1  | 435.8 | 438.1 | 435.8 | 436.9 | 434.6 |
| 35°   | 403.6 | 404.8 | 405.9  | 403.6 | 404.8 | 404.8 | 404.8 | 403.6 |
| 37.5° | 370.4 | 372.7 | 372.7  | 371.5 | 373.8 | 372.7 | 372.7 | 370.4 |
| 40°   | 338.3 | 339.4 | 340.6  | 338.3 | 339.4 | 338.3 | 339.4 | 338.3 |
| 42.5° | 305.0 | 307.3 | 308.5  | 306.2 | 306.2 | 306.2 | 305.0 | 306.2 |
| 45°   | 270.6 | 272.9 | 275.2  | 271.8 | 272.9 | 272.9 | 272.9 | 271.8 |
| 47.5° | 239.7 | 239.7 | 240.8  | 239.7 | 240.8 | 238.5 | 240.8 | 239.7 |
| 50°   | 207.6 | 207.6 | 209.9  | 207.6 | 207.6 | 207.6 | 207.6 | 207.6 |
| 52.5° | 176.6 | 177.7 | 177.7  | 175.4 | 176.6 | 175.4 | 176.6 | 175.4 |
| 55°   | 147.9 | 147.9 | 149.1  | 147.9 | 147.9 | 147.9 | 147.9 | 147.9 |
| 57.5° | 122.7 | 123.8 | 123.8  | 122.7 | 123.8 | 122.7 | 122.7 | 122.7 |
| 60°   | 102.1 | 102.1 | 102.1  | 100.9 | 102.1 | 100.9 | 102.1 | 100.9 |
| 62.5° | 82.6  | 83.7  | 83.7   | 82.6  | 83.7  | 82.6  | 82.6  | 82.6  |
| 65°   | 67.7  | 67.7  | 67.7   | 67.7  | 67.7  | 67.7  | 67.7  | 66.5  |
| 67.5° | 53.9  | 53.9  | 55.0   | 53.9  | 55.0  | 55.0  | 55.0  | 55.0  |
| 70°   | 43.6  | 43.6  | 43.6   | 43.6  | 43.6  | 43.6  | 43.6  | 43.6  |
| 72.5° | 33.3  | 33.3  | 34.4   | 33.3  | 33.3  | 33.3  | 33.3  | 33.3  |
| 75°   | 25.2  | 25.2  | 25.2   | 25.2  | 25.2  | 24.1  | 24.1  | 25.2  |
| 77.5° | 17.2  | 17.2  | 17.2   | 17.2  | 17.2  | 17.2  | 17.2  | 18.3  |
| 80°   | 11.5  | 11.5  | 11.5   | 11.5  | 10.3  | 10.3  | 11.5  | 10.3  |
| 82.5° | 5.7   | 5.7   | 5.7    | 5.7   | 5.7   | 5.7   | 5.7   | 5.7   |
| 85°   | 3.4   | 3.4   | 2.3    | 2.3   | 2.3   | 2.3   | 2.3   | 2.3   |
| 87.5° | 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   |



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— 0°-180°    - - 45°-225°    - - - 90°-270°















(END OF REPORT)