

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: P251617

Luminaire Tested: **LD4B20D010 EU4B10209040 4LBSW1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P251617  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1712-453-13)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LD4B20D010 EU4B10209040 4LBSW1H  
Description: PORTFOLIO 4 INCH SINGLE 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: 1559.0 lumens  
Efficiency: N/A  
Efficacy: 75.0 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.17 / 1.15  
Luminous Opening: Circular (Dia: 0.38' x H: 0')  
CIE Type: Direct

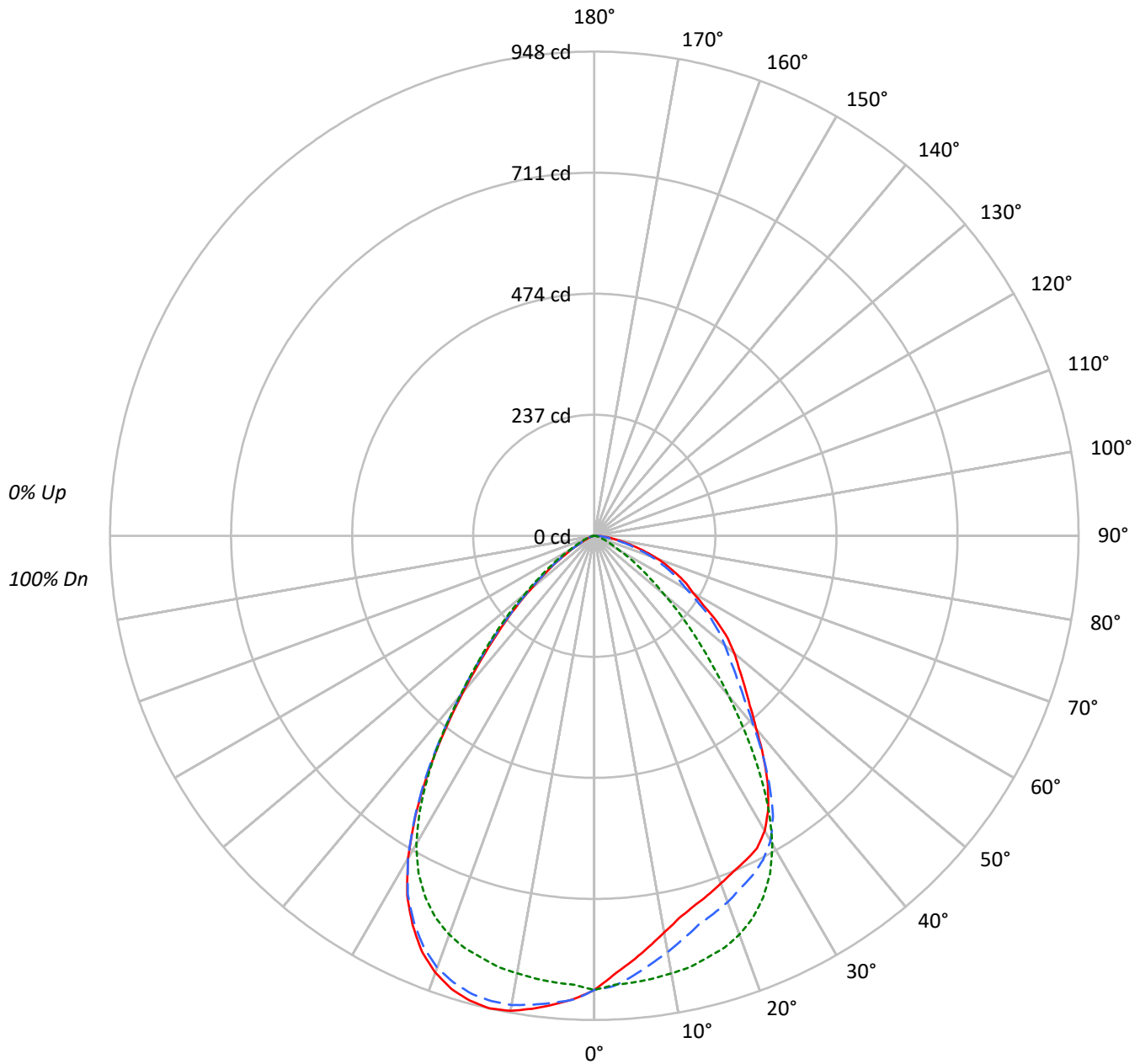
Input Watts (W): 20.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 108 | 104 | 101 | 109 | 106 | 103 | 100 | 101 | 99  | 97  | 98  | 96  | 94  | 94  | 93  | 91  | 89  |    |    |
| 2   | 104 | 97  | 92  | 87  | 101 | 95  | 90  | 86  | 92  | 88  | 84  | 89  | 85  | 82  | 86  | 83  | 81  | 79  |    |    |
| 3   | 96  | 88  | 81  | 76  | 94  | 86  | 80  | 75  | 83  | 78  | 74  | 81  | 76  | 73  | 78  | 75  | 72  | 70  |    |    |
| 4   | 90  | 80  | 72  | 67  | 88  | 78  | 72  | 66  | 76  | 70  | 66  | 74  | 69  | 65  | 72  | 68  | 64  | 62  |    |    |
| 5   | 83  | 73  | 65  | 60  | 82  | 72  | 65  | 59  | 70  | 63  | 59  | 68  | 62  | 58  | 66  | 61  | 58  | 56  |    |    |
| 6   | 78  | 67  | 59  | 53  | 76  | 66  | 59  | 53  | 64  | 58  | 53  | 62  | 57  | 52  | 61  | 56  | 52  | 50  |    |    |
| 7   | 73  | 61  | 54  | 48  | 71  | 61  | 53  | 48  | 59  | 53  | 48  | 58  | 52  | 48  | 56  | 51  | 47  | 46  |    |    |
| 8   | 68  | 57  | 49  | 44  | 67  | 56  | 49  | 44  | 55  | 48  | 44  | 54  | 48  | 43  | 52  | 47  | 43  | 42  |    |    |
| 9   | 64  | 52  | 45  | 40  | 63  | 52  | 45  | 40  | 51  | 44  | 40  | 50  | 44  | 40  | 49  | 44  | 40  | 38  |    |    |
| 10  | 61  | 49  | 42  | 37  | 59  | 48  | 42  | 37  | 47  | 41  | 37  | 47  | 41  | 37  | 46  | 40  | 37  | 35  |    |    |

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

|     | 0°    | 90°   | 180°  |
|-----|-------|-------|-------|
| 0°  | 86679 | 86679 | 86679 |
| 5°  | 81855 | 85885 | 90151 |
| 10° | 78031 | 86087 | 93459 |
| 15° | 75743 | 86266 | 95054 |
| 20° | 75119 | 86175 | 94379 |
| 25° | 75424 | 84059 | 90468 |
| 30° | 75061 | 78414 | 82027 |
| 35° | 70361 | 66947 | 67637 |
| 40° | 62695 | 51907 | 50736 |
| 45° | 57336 | 38702 | 36331 |
| 50° | 54219 | 27109 | 24501 |
| 55° | 49852 | 18300 | 15377 |
| 60° | 43564 | 10720 | 8498  |
| 65° | 41232 | 6872  | 4750  |
| 70° | 37556 | 4901  | 2935  |
| 75° | 31065 | 3464  | 2146  |
| 80° | 24470 | 1908  | 1291  |
| 85° | 21805 | 1230  | 0     |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 84.0   | 5.4       |
| 10°-20°   | 241.1  | 15.5      |
| 20°-30°   | 357.4  | 22.9      |
| 30°-40°   | 357.9  | 23.0      |
| 40°-50°   | 250.1  | 16.0      |
| 50°-60°   | 148.8  | 9.5       |
| 60°-70°   | 77.7   | 5.0       |
| 70°-80°   | 34.5   | 2.2       |
| 80°-90°   | 7.5    | 0.5       |
| 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°-30°    | 682.5  | 43.8      |
| 0°-40°    | 1040.3 | 66.7      |
| 0°-60°    | 1439.3 | 92.3      |
| 0°-90°    | 1559.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1559.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 889 | 889 | 889 | 889  | 889  |      |
| 5°  | 837 | 865 | 878 | 918  | 922  | 78   |
| 15° | 751 | 788 | 855 | 928  | 942  | 213  |
| 25° | 701 | 734 | 782 | 836  | 841  | 323  |
| 35° | 591 | 598 | 563 | 573  | 568  | 367  |
| 45° | 416 | 395 | 281 | 272  | 264  | 323  |
| 55° | 293 | 275 | 108 | 94   | 90   | 260  |
| 65° | 179 | 164 | 30  | 22   | 21   | 177  |
| 75° | 82  | 72  | 9   | 6    | 6    | 89   |
| 85° | 20  | 15  | 1   | 1    | 0    | 22   |
| 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°    | 889.4 | 889.4 | 889.4 | 889.4 | 889.4 | 889.4 | 889.4 | 889.4 | 889.4 | 889.4 | 889.4 |
| 2.5°  | 860.7 | 871.1 | 860.7 | 864.2 | 877.9 | 865.3 | 872.2 | 872.2 | 868.8 | 876.8 | 882.5 |
| 5°    | 836.7 | 847.0 | 836.7 | 841.3 | 856.2 | 843.5 | 851.6 | 849.3 | 850.4 | 857.3 | 865.3 |
| 7.5°  | 812.6 | 820.6 | 811.5 | 817.2 | 830.9 | 820.6 | 827.5 | 827.5 | 828.6 | 839.0 | 845.8 |
| 10°   | 788.5 | 795.4 | 788.5 | 793.1 | 808.0 | 798.8 | 803.4 | 804.6 | 808.0 | 817.2 | 827.5 |
| 12.5° | 766.8 | 772.5 | 765.6 | 772.5 | 785.1 | 775.9 | 781.7 | 782.8 | 786.2 | 796.6 | 808.0 |
| 15°   | 750.7 | 756.4 | 749.6 | 755.3 | 766.8 | 759.9 | 764.5 | 766.8 | 769.0 | 778.2 | 788.5 |
| 17.5° | 738.1 | 742.7 | 737.0 | 743.8 | 753.0 | 745.0 | 751.9 | 751.9 | 755.3 | 764.5 | 775.9 |
| 20°   | 724.3 | 728.9 | 724.3 | 730.1 | 740.4 | 733.5 | 739.2 | 739.2 | 742.7 | 753.0 | 763.3 |
| 22.5° | 711.7 | 714.0 | 711.7 | 716.3 | 726.6 | 720.9 | 724.3 | 725.5 | 728.9 | 738.1 | 747.3 |
| 25°   | 701.4 | 706.0 | 703.7 | 708.3 | 715.2 | 709.4 | 712.9 | 714.0 | 717.5 | 725.5 | 733.5 |
| 27.5° | 690.0 | 692.3 | 690.0 | 695.7 | 701.4 | 696.8 | 700.3 | 699.1 | 701.4 | 708.3 | 715.2 |
| 30°   | 667.0 | 669.3 | 669.3 | 672.8 | 677.4 | 675.1 | 678.5 | 675.1 | 677.4 | 683.1 | 690.0 |
| 32.5° | 633.8 | 635.0 | 636.1 | 639.5 | 643.0 | 639.5 | 641.8 | 641.8 | 641.8 | 646.4 | 651.0 |
| 35°   | 591.4 | 593.7 | 592.5 | 594.8 | 598.3 | 597.1 | 597.1 | 596.0 | 593.7 | 596.0 | 598.3 |
| 37.5° | 543.3 | 539.8 | 539.8 | 543.3 | 545.6 | 541.0 | 543.3 | 541.0 | 541.0 | 542.1 | 542.1 |
| 40°   | 492.8 | 489.4 | 492.8 | 494.0 | 495.1 | 492.8 | 491.7 | 489.4 | 486.0 | 487.1 | 484.8 |
| 42.5° | 450.4 | 448.1 | 449.3 | 449.3 | 450.4 | 448.1 | 449.3 | 444.7 | 441.3 | 439.0 | 435.5 |
| 45°   | 416.0 | 412.6 | 416.0 | 413.7 | 413.7 | 412.6 | 411.5 | 409.2 | 404.6 | 401.1 | 395.4 |
| 47.5° | 384.0 | 384.0 | 385.1 | 385.1 | 385.1 | 382.8 | 382.8 | 378.2 | 373.6 | 369.1 | 361.0 |
| 50°   | 357.6 | 355.3 | 359.9 | 359.9 | 356.4 | 355.3 | 356.4 | 350.7 | 347.3 | 341.5 | 333.5 |
| 52.5° | 328.9 | 328.9 | 330.1 | 330.1 | 328.9 | 326.6 | 327.8 | 323.2 | 319.8 | 314.0 | 306.0 |
| 55°   | 293.4 | 291.1 | 294.6 | 294.6 | 293.4 | 292.3 | 293.4 | 290.0 | 286.5 | 281.9 | 275.1 |
| 57.5° | 253.3 | 252.1 | 254.4 | 255.6 | 253.3 | 253.3 | 254.4 | 251.0 | 249.9 | 245.3 | 238.4 |
| 60°   | 223.5 | 222.3 | 224.6 | 225.8 | 223.5 | 223.5 | 223.5 | 218.9 | 216.6 | 212.0 | 207.4 |
| 62.5° | 202.9 | 201.7 | 204.0 | 202.9 | 201.7 | 200.6 | 201.7 | 197.1 | 194.8 | 190.3 | 185.7 |
| 65°   | 178.8 | 179.9 | 181.1 | 181.1 | 179.9 | 178.8 | 178.8 | 176.5 | 174.2 | 169.6 | 163.9 |
| 67.5° | 155.9 | 155.9 | 157.0 | 158.2 | 157.0 | 157.0 | 157.0 | 153.6 | 151.3 | 147.8 | 141.0 |
| 70°   | 131.8 | 130.7 | 134.1 | 134.1 | 131.8 | 132.9 | 131.8 | 130.7 | 128.4 | 123.8 | 118.1 |
| 72.5° | 106.6 | 106.6 | 107.7 | 107.7 | 106.6 | 106.6 | 106.6 | 105.4 | 102.0 | 99.7  | 94.0  |
| 75°   | 82.5  | 82.5  | 83.7  | 84.8  | 82.5  | 82.5  | 83.7  | 81.4  | 79.1  | 75.6  | 72.2  |
| 77.5° | 61.9  | 60.7  | 61.9  | 61.9  | 60.7  | 60.7  | 60.7  | 59.6  | 58.5  | 55.0  | 51.6  |
| 80°   | 43.6  | 42.4  | 43.6  | 43.6  | 43.6  | 42.4  | 42.4  | 41.3  | 41.3  | 39.0  | 35.5  |
| 82.5° | 29.8  | 28.7  | 29.8  | 29.8  | 29.8  | 28.7  | 28.7  | 28.7  | 27.5  | 26.4  | 24.1  |
| 85°   | 19.5  | 18.3  | 18.3  | 19.5  | 18.3  | 18.3  | 18.3  | 18.3  | 17.2  | 16.0  | 14.9  |
| 87.5° | 9.2   | 9.2   | 9.2   | 9.2   | 9.2   | 9.2   | 9.2   | 8.0   | 8.0   | 8.0   | 6.9   |
| 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°    | 889.4 | 889.4 | 889.4 | 889.4 | 889.4 | 889.4 | 889.4 | 889.4 | 889.4 | 889.4 | 889.4 |
| 2.5°  | 877.9 | 875.6 | 882.5 | 880.2 | 881.4 | 875.6 | 884.8 | 880.2 | 886.0 | 880.2 | 891.7 |
| 5°    | 863.0 | 860.7 | 871.1 | 869.9 | 871.1 | 866.5 | 876.8 | 875.6 | 882.5 | 877.9 | 890.5 |
| 7.5°  | 847.0 | 844.7 | 856.2 | 857.3 | 859.6 | 855.0 | 868.8 | 868.8 | 875.6 | 874.5 | 888.2 |
| 10°   | 828.6 | 829.8 | 841.3 | 843.5 | 848.1 | 845.8 | 858.4 | 861.9 | 871.1 | 869.9 | 887.1 |
| 12.5° | 811.5 | 811.5 | 826.4 | 830.9 | 834.4 | 833.2 | 848.1 | 852.7 | 863.0 | 865.3 | 881.4 |
| 15°   | 794.3 | 795.4 | 809.2 | 816.0 | 820.6 | 819.5 | 835.5 | 841.3 | 853.9 | 855.0 | 874.5 |
| 17.5° | 780.5 | 779.4 | 794.3 | 800.0 | 806.9 | 805.7 | 822.9 | 829.8 | 842.4 | 845.8 | 864.2 |
| 20°   | 769.0 | 767.9 | 781.7 | 788.5 | 793.1 | 792.0 | 809.2 | 817.2 | 828.6 | 830.9 | 849.3 |
| 22.5° | 755.3 | 753.0 | 766.8 | 772.5 | 777.1 | 775.9 | 790.8 | 796.6 | 808.0 | 810.3 | 827.5 |
| 25°   | 739.2 | 737.0 | 749.6 | 753.0 | 756.4 | 754.1 | 766.8 | 770.2 | 779.4 | 781.7 | 798.8 |
| 27.5° | 720.9 | 715.2 | 725.5 | 725.5 | 727.8 | 724.3 | 733.5 | 737.0 | 745.0 | 745.0 | 761.0 |
| 30°   | 692.3 | 684.2 | 690.0 | 688.8 | 690.0 | 685.4 | 691.1 | 692.3 | 698.0 | 696.8 | 708.3 |
| 32.5° | 652.1 | 640.7 | 644.1 | 640.7 | 637.2 | 630.4 | 637.2 | 635.0 | 639.5 | 635.0 | 645.3 |
| 35°   | 597.1 | 585.7 | 584.5 | 579.9 | 576.5 | 570.8 | 570.8 | 565.0 | 566.2 | 562.7 | 569.6 |
| 37.5° | 537.5 | 522.6 | 520.3 | 511.2 | 505.4 | 498.6 | 498.6 | 494.0 | 488.2 | 486.0 | 491.7 |
| 40°   | 479.1 | 463.0 | 457.3 | 442.4 | 436.7 | 429.8 | 425.2 | 419.5 | 417.2 | 408.0 | 412.6 |
| 42.5° | 428.6 | 411.5 | 398.8 | 382.8 | 377.1 | 366.8 | 359.9 | 353.0 | 349.6 | 339.3 | 343.8 |
| 45°   | 386.2 | 365.6 | 351.9 | 331.2 | 323.2 | 311.7 | 301.4 | 293.4 | 285.4 | 280.8 | 278.5 |
| 47.5° | 350.7 | 328.9 | 310.6 | 287.7 | 275.1 | 264.8 | 251.0 | 243.0 | 232.7 | 226.9 | 223.5 |
| 50°   | 320.9 | 296.8 | 276.2 | 249.9 | 237.2 | 225.8 | 209.7 | 197.1 | 188.0 | 178.8 | 176.5 |
| 52.5° | 294.6 | 269.3 | 246.4 | 216.6 | 201.7 | 188.0 | 170.8 | 157.0 | 149.0 | 138.7 | 137.5 |
| 55°   | 263.6 | 241.8 | 216.6 | 185.7 | 170.8 | 157.0 | 138.7 | 124.9 | 114.6 | 107.7 | 105.4 |
| 57.5° | 230.4 | 209.7 | 185.7 | 154.7 | 139.8 | 124.9 | 107.7 | 95.1  | 86.0  | 80.2  | 79.1  |
| 60°   | 199.4 | 179.9 | 157.0 | 126.1 | 111.2 | 98.6  | 80.2  | 67.6  | 59.6  | 55.0  | 52.7  |
| 62.5° | 176.5 | 158.2 | 136.4 | 107.7 | 94.0  | 81.4  | 64.2  | 52.7  | 45.8  | 41.3  | 39.0  |
| 65°   | 154.7 | 136.4 | 116.9 | 90.5  | 79.1  | 67.6  | 51.6  | 41.3  | 34.4  | 29.8  | 27.5  |
| 67.5° | 131.8 | 115.8 | 97.4  | 75.6  | 64.2  | 55.0  | 41.3  | 32.1  | 26.4  | 22.9  | 20.6  |
| 70°   | 108.9 | 94.0  | 79.1  | 60.7  | 52.7  | 43.6  | 32.1  | 25.2  | 19.5  | 17.2  | 14.9  |
| 72.5° | 86.0  | 74.5  | 61.9  | 47.0  | 40.1  | 34.4  | 25.2  | 18.3  | 14.9  | 12.6  | 10.3  |
| 75°   | 64.2  | 56.2  | 45.8  | 35.5  | 29.8  | 25.2  | 18.3  | 13.8  | 11.5  | 9.2   | 8.0   |
| 77.5° | 45.8  | 39.0  | 32.1  | 24.1  | 21.8  | 18.3  | 12.6  | 10.3  | 8.0   | 5.7   | 4.6   |
| 80°   | 30.9  | 27.5  | 21.8  | 17.2  | 13.8  | 12.6  | 9.2   | 6.9   | 4.6   | 3.4   | 3.4   |
| 82.5° | 20.6  | 17.2  | 13.8  | 10.3  | 9.2   | 8.0   | 5.7   | 4.6   | 3.4   | 2.3   | 2.3   |
| 85°   | 12.6  | 10.3  | 8.0   | 5.7   | 5.7   | 4.6   | 3.4   | 2.3   | 1.1   | 1.1   | 1.1   |
| 87.5° | 5.7   | 4.6   | 3.4   | 2.3   | 2.3   | 1.1   | 1.1   | 1.1   | 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   |



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**CANDELA DISTRIBUTION (continued):**

|       | 100°  | 105°  | 110°  | 112.5° | 115°  | 120°  | 125°  | 130°  | 135°  | 140°  | 145°  |
|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 889.4 | 889.4 | 889.4 | 889.4  | 889.4 | 889.4 | 889.4 | 889.4 | 889.4 | 889.4 | 889.4 |
| 2.5°  | 900.9 | 894.0 | 889.4 | 895.1  | 897.4 | 894.0 | 897.4 | 903.1 | 908.9 | 910.0 | 894.0 |
| 5°    | 902.0 | 895.1 | 892.8 | 899.7  | 900.9 | 899.7 | 903.1 | 911.2 | 918.0 | 920.3 | 904.3 |
| 7.5°  | 902.0 | 897.4 | 896.3 | 904.3  | 905.4 | 904.3 | 910.0 | 919.2 | 926.1 | 930.6 | 914.6 |
| 10°   | 899.7 | 897.4 | 898.6 | 905.4  | 907.7 | 907.7 | 915.8 | 926.1 | 932.9 | 937.5 | 921.5 |
| 12.5° | 896.3 | 896.3 | 896.3 | 904.3  | 906.6 | 907.7 | 914.6 | 928.4 | 932.9 | 939.8 | 923.8 |
| 15°   | 890.5 | 890.5 | 890.5 | 898.6  | 902.0 | 902.0 | 910.0 | 922.6 | 928.4 | 935.2 | 919.2 |
| 17.5° | 880.2 | 880.2 | 881.4 | 888.2  | 891.7 | 891.7 | 899.7 | 913.5 | 916.9 | 924.9 | 908.9 |
| 20°   | 865.3 | 865.3 | 866.5 | 873.3  | 876.8 | 874.5 | 884.8 | 896.3 | 899.7 | 906.6 | 890.5 |
| 22.5° | 843.5 | 843.5 | 843.5 | 850.4  | 852.7 | 851.6 | 861.9 | 872.2 | 872.2 | 881.4 | 864.2 |
| 25°   | 811.5 | 813.7 | 811.5 | 818.3  | 820.6 | 819.5 | 828.6 | 837.8 | 835.5 | 845.8 | 828.6 |
| 27.5° | 772.5 | 771.3 | 771.3 | 777.1  | 777.1 | 775.9 | 782.8 | 793.1 | 790.8 | 797.7 | 781.7 |
| 30°   | 718.6 | 722.1 | 716.3 | 724.3  | 720.9 | 718.6 | 723.2 | 732.4 | 728.9 | 734.7 | 722.1 |
| 32.5° | 656.7 | 652.1 | 652.1 | 652.1  | 654.4 | 648.7 | 653.3 | 657.9 | 654.4 | 660.2 | 646.4 |
| 35°   | 575.4 | 576.5 | 573.1 | 574.2  | 575.4 | 568.5 | 573.1 | 577.6 | 573.1 | 576.5 | 563.9 |
| 37.5° | 494.0 | 495.1 | 487.1 | 491.7  | 487.1 | 484.8 | 489.4 | 491.7 | 487.1 | 490.5 | 476.8 |
| 40°   | 412.6 | 410.3 | 409.2 | 409.2  | 410.3 | 404.6 | 408.0 | 411.5 | 408.0 | 410.3 | 397.7 |
| 42.5° | 341.5 | 340.4 | 338.1 | 339.3  | 335.8 | 334.7 | 335.8 | 339.3 | 335.8 | 338.1 | 328.9 |
| 45°   | 279.7 | 277.4 | 273.9 | 275.1  | 275.1 | 269.3 | 272.8 | 275.1 | 271.6 | 272.8 | 264.8 |
| 47.5° | 222.3 | 218.9 | 218.9 | 217.8  | 217.8 | 215.5 | 218.9 | 217.8 | 214.3 | 216.6 | 208.6 |
| 50°   | 173.1 | 170.8 | 170.8 | 170.8  | 170.8 | 167.3 | 168.5 | 170.8 | 167.3 | 167.3 | 162.7 |
| 52.5° | 135.2 | 131.8 | 129.5 | 129.5  | 129.5 | 128.4 | 128.4 | 129.5 | 126.1 | 126.1 | 124.9 |
| 55°   | 102.0 | 100.9 | 97.4  | 97.4   | 97.4  | 94.0  | 95.1  | 95.1  | 94.0  | 94.0  | 90.5  |
| 57.5° | 75.6  | 72.2  | 69.9  | 69.9   | 67.6  | 67.6  | 66.5  | 67.6  | 65.3  | 65.3  | 63.0  |
| 60°   | 50.4  | 48.1  | 47.0  | 45.8   | 45.8  | 44.7  | 45.8  | 44.7  | 44.7  | 43.6  | 42.4  |
| 62.5° | 36.7  | 34.4  | 32.1  | 32.1   | 32.1  | 30.9  | 30.9  | 30.9  | 30.9  | 30.9  | 29.8  |
| 65°   | 26.4  | 24.1  | 24.1  | 22.9   | 22.9  | 21.8  | 21.8  | 21.8  | 21.8  | 21.8  | 20.6  |
| 67.5° | 18.3  | 17.2  | 16.0  | 16.0   | 16.0  | 16.0  | 16.0  | 16.0  | 14.9  | 14.9  | 14.9  |
| 70°   | 13.8  | 12.6  | 11.5  | 11.5   | 11.5  | 11.5  | 11.5  | 10.3  | 11.5  | 11.5  | 10.3  |
| 72.5° | 9.2   | 9.2   | 8.0   | 8.0    | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| 75°   | 6.9   | 6.9   | 5.7   | 5.7    | 5.7   | 5.7   | 5.7   | 5.7   | 5.7   | 5.7   | 5.7   |
| 77.5° | 4.6   | 4.6   | 3.4   | 3.4    | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   |
| 80°   | 3.4   | 2.3   | 2.3   | 2.3    | 2.3   | 2.3   | 2.3   | 2.3   | 2.3   | 2.3   | 2.3   |
| 82.5° | 2.3   | 1.1   | 1.1   | 1.1    | 1.1   | 1.1   | 1.1   | 1.1   | 1.1   | 1.1   | 1.1   |
| 85°   | 1.1   | 1.1   | 1.1   | 1.1    | 1.1   | 1.1   | 1.1   | 1.1   | 1.1   | 1.1   | 0.0   |
| 87.5° | 0.0   | 0.0   | 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   |



TEST NUMBER: P251617

CATALOG NUMBER: LD4B20D010 EU4B10209040 4LBSW1H

**CANDELA DISTRIBUTION (continued):**

|       | 150°  | 155°  | 157.5° | 160°  | 165°  | 170°  | 175°  | 180°  |
|-------|-------|-------|--------|-------|-------|-------|-------|-------|
| 0°    | 889.4 | 889.4 | 889.4  | 889.4 | 889.4 | 889.4 | 889.4 | 889.4 |
| 2.5°  | 911.2 | 910.0 | 907.7  | 911.2 | 902.0 | 898.6 | 897.4 | 907.7 |
| 5°    | 923.8 | 921.5 | 921.5  | 924.9 | 914.6 | 912.3 | 910.0 | 921.5 |
| 7.5°  | 935.2 | 932.9 | 932.9  | 936.4 | 927.2 | 924.9 | 922.6 | 934.1 |
| 10°   | 942.1 | 942.1 | 942.1  | 944.4 | 936.4 | 934.1 | 932.9 | 944.4 |
| 12.5° | 945.5 | 945.5 | 944.4  | 949.0 | 938.7 | 938.7 | 936.4 | 947.8 |
| 15°   | 941.0 | 941.0 | 941.0  | 944.4 | 935.2 | 932.9 | 932.9 | 942.1 |
| 17.5° | 929.5 | 929.5 | 928.4  | 931.8 | 921.5 | 921.5 | 920.3 | 930.6 |
| 20°   | 912.3 | 912.3 | 910.0  | 914.6 | 904.3 | 900.9 | 899.7 | 910.0 |
| 22.5° | 884.8 | 883.7 | 882.5  | 884.8 | 875.6 | 873.3 | 872.2 | 881.4 |
| 25°   | 849.3 | 848.1 | 845.8  | 848.1 | 837.8 | 834.4 | 834.4 | 841.3 |
| 27.5° | 798.8 | 798.8 | 795.4  | 798.8 | 787.4 | 786.2 | 785.1 | 793.1 |
| 30°   | 737.0 | 732.4 | 730.1  | 734.7 | 723.2 | 723.2 | 720.9 | 728.9 |
| 32.5° | 660.2 | 655.6 | 654.4  | 656.7 | 646.4 | 643.0 | 647.6 | 652.1 |
| 35°   | 571.9 | 573.1 | 568.5  | 568.5 | 559.3 | 560.5 | 561.6 | 568.5 |
| 37.5° | 487.1 | 484.8 | 483.7  | 484.8 | 477.9 | 475.6 | 473.3 | 480.2 |
| 40°   | 408.0 | 402.3 | 401.1  | 401.1 | 395.4 | 394.3 | 395.4 | 398.8 |
| 42.5° | 333.5 | 332.4 | 327.8  | 330.1 | 324.4 | 326.6 | 325.5 | 325.5 |
| 45°   | 269.3 | 270.5 | 265.9  | 269.3 | 264.8 | 261.3 | 261.3 | 263.6 |
| 47.5° | 213.2 | 213.2 | 212.0  | 212.0 | 208.6 | 209.7 | 207.4 | 210.9 |
| 50°   | 165.0 | 165.0 | 162.7  | 163.9 | 161.6 | 161.6 | 160.5 | 161.6 |
| 52.5° | 126.1 | 124.9 | 124.9  | 123.8 | 121.5 | 122.6 | 123.8 | 121.5 |
| 55°   | 91.7  | 92.8  | 90.5   | 91.7  | 89.4  | 90.5  | 89.4  | 90.5  |
| 57.5° | 63.0  | 64.2  | 61.9   | 64.2  | 61.9  | 63.0  | 61.9  | 61.9  |
| 60°   | 43.6  | 43.6  | 42.4   | 43.6  | 42.4  | 42.4  | 41.3  | 43.6  |
| 62.5° | 29.8  | 29.8  | 29.8   | 29.8  | 29.8  | 28.7  | 29.8  | 29.8  |
| 65°   | 21.8  | 20.6  | 20.6   | 20.6  | 20.6  | 20.6  | 20.6  | 20.6  |
| 67.5° | 14.9  | 14.9  | 14.9   | 14.9  | 14.9  | 14.9  | 14.9  | 14.9  |
| 70°   | 10.3  | 10.3  | 10.3   | 10.3  | 10.3  | 10.3  | 10.3  | 10.3  |
| 72.5° | 8.0   | 8.0   | 8.0    | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| 75°   | 5.7   | 5.7   | 5.7    | 5.7   | 5.7   | 5.7   | 5.7   | 5.7   |
| 77.5° | 3.4   | 3.4   | 3.4    | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   |
| 80°   | 2.3   | 2.3   | 2.3    | 2.3   | 2.3   | 2.3   | 2.3   | 2.3   |
| 82.5° | 1.1   | 1.1   | 1.1    | 1.1   | 1.1   | 1.1   | 1.1   | 1.1   |
| 85°   | 1.1   | 1.1   | 1.1    | 0.0   | 1.1   | 0.0   | 0.0   | 0.0   |
| 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)