

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: P274351

Luminaire Tested: **LD4B20DE010W2N2765 EU4B1020W2N902765 4LBLWW0H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P274351  
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: LD4B20DE010W2N2765 EU4B1020W2N902765 4LBLWW0H  
Description: PORTFOLIO 4" W2N RN DOWNLIGHT, LENSED WALLWASH WITH HAZE FINISH  
Light Source: W2N 2700K-6500K CCT TUNING RANGE  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1256.6 lumens  
Efficiency: N/A  
Efficacy: 44.9 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

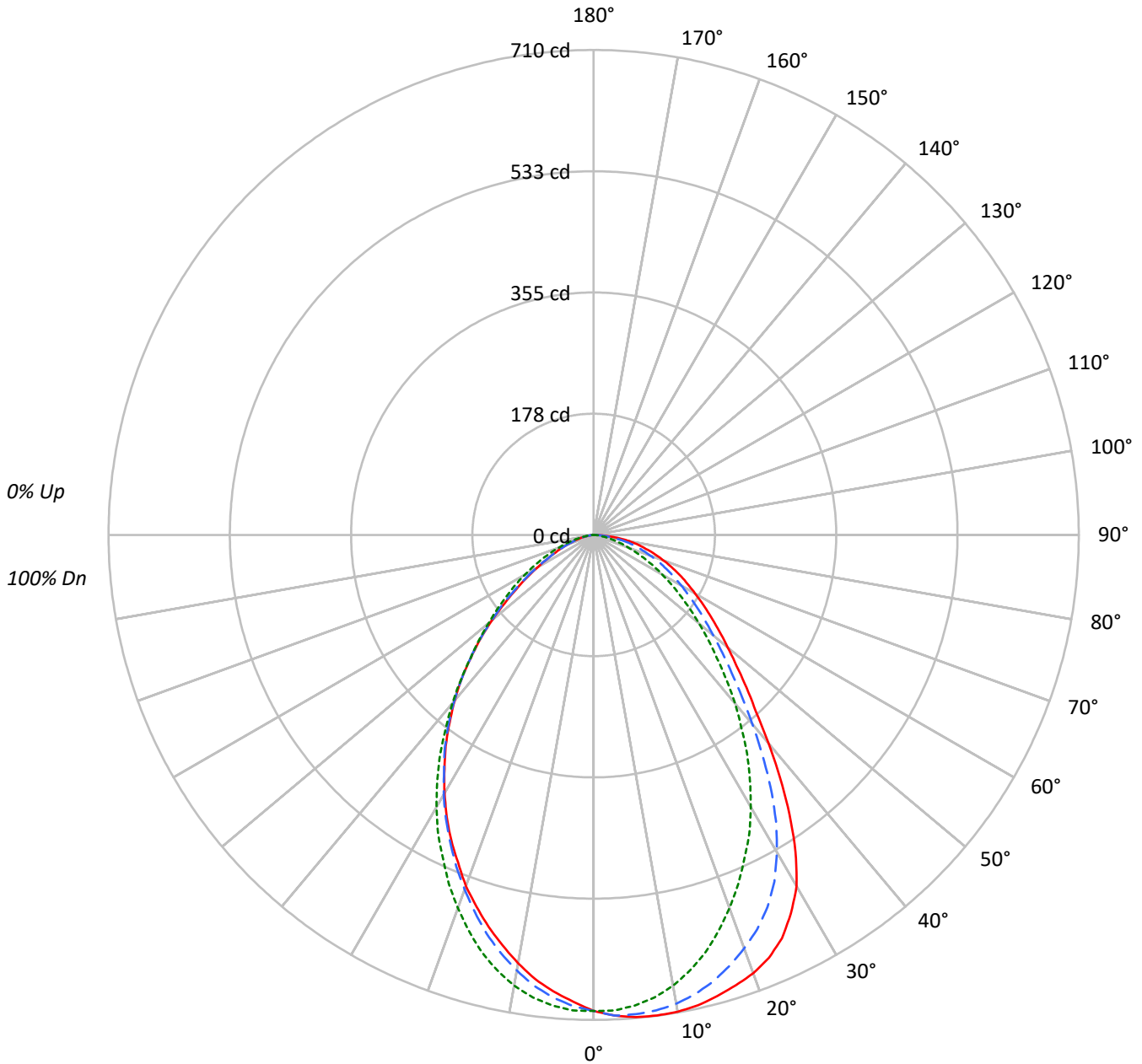
Input Watts (W): 28  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P274351

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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF  | 20  |     |     |     |     |     |     |     |     | 20  |     |     |     |     |     |     |     |     | 20 |    |   |  |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |   |
| RC  | 80  |     |     |     |     |     |     |     |     | 50  |     |     |     |     |     |     |     |     | 30 |    |   |  |  |  |  |  |  | 10 |  |  |  |  |  |  |  |  | 0 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 10 | 0 |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 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°  | 67919 | 67919 | 67919 |
| 5°  | 69332 | 67650 | 65654 |
| 10° | 70134 | 66314 | 63019 |
| 15° | 70526 | 63817 | 59932 |
| 20° | 70825 | 60267 | 56710 |
| 25° | 70090 | 56143 | 53035 |
| 30° | 66846 | 51755 | 49110 |
| 35° | 59440 | 46555 | 44901 |
| 40° | 50609 | 40915 | 40240 |
| 45° | 43595 | 35173 | 35022 |
| 50° | 38844 | 30399 | 29429 |
| 55° | 35699 | 26235 | 23499 |
| 60° | 33428 | 22571 | 18381 |
| 65° | 32146 | 19048 | 14344 |
| 70° | 30860 | 15273 | 11597 |
| 75° | 29860 | 12125 | 8887  |
| 80° | 30082 | 8419  | 5388  |
| 85° | 25160 | 6038  | 2348  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 65.2   | 5.2       |
| 10°-20°   | 179.3  | 14.3      |
| 20°-30°   | 250.8  | 20.0      |
| 30°-40°   | 257.8  | 20.5      |
| 40°-50°   | 209.3  | 16.7      |
| 50°-60°   | 147.3  | 11.7      |
| 60°-70°   | 90.7   | 7.2       |
| 70°-80°   | 45.3   | 3.6       |
| 80°-90°   | 10.8   | 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°    | 495.4  | 39.4      |
| 0°-40°    | 753.2  | 59.9      |
| 0°-60°    | 1109.8 | 88.3      |
| 0°-90°    | 1256.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1256.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 697 | 697 | 697 | 697  | 697  |      |
| 5°  | 709 | 704 | 692 | 680  | 671  | 68   |
| 15° | 699 | 676 | 632 | 605  | 594  | 197  |
| 25° | 652 | 602 | 522 | 496  | 493  | 298  |
| 35° | 500 | 451 | 391 | 380  | 377  | 311  |
| 45° | 316 | 285 | 255 | 255  | 254  | 246  |
| 55° | 210 | 184 | 154 | 142  | 138  | 189  |
| 65° | 139 | 117 | 83  | 63   | 62   | 138  |
| 75° | 79  | 62  | 32  | 24   | 24   | 85   |
| 85° | 22  | 15  | 5   | 3    | 2    | 26   |
| 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°    | 696.9 | 696.9 | 696.9 | 696.9 | 696.9 | 696.9 | 696.9 | 696.9 | 696.9 | 696.9 | 696.9 |
| 2.5°  | 704.4 | 705.5 | 702.2 | 705.5 | 701.2 | 703.3 | 704.4 | 702.2 | 700.1 | 704.4 | 704.4 |
| 5°    | 708.7 | 708.7 | 705.5 | 709.7 | 704.4 | 705.5 | 707.6 | 704.4 | 701.2 | 705.5 | 704.4 |
| 7.5°  | 709.7 | 709.7 | 705.5 | 709.7 | 704.4 | 705.5 | 706.5 | 703.3 | 700.1 | 703.3 | 702.2 |
| 10°   | 708.7 | 707.6 | 704.4 | 708.7 | 703.3 | 703.3 | 704.4 | 701.2 | 695.8 | 699.0 | 696.9 |
| 12.5° | 705.5 | 705.5 | 701.2 | 705.5 | 697.9 | 697.9 | 699.0 | 694.7 | 690.4 | 690.4 | 688.3 |
| 15°   | 699.0 | 699.0 | 694.7 | 697.9 | 691.5 | 691.5 | 690.4 | 686.2 | 680.8 | 680.8 | 676.5 |
| 17.5° | 691.5 | 691.5 | 687.2 | 690.4 | 682.9 | 682.9 | 681.9 | 675.4 | 667.9 | 666.9 | 661.5 |
| 20°   | 682.9 | 682.9 | 677.6 | 679.7 | 671.1 | 671.1 | 670.1 | 662.6 | 654.0 | 651.8 | 644.3 |
| 22.5° | 670.1 | 670.1 | 664.7 | 665.8 | 657.2 | 656.1 | 655.1 | 646.5 | 637.9 | 634.7 | 625.0 |
| 25°   | 651.8 | 650.8 | 646.5 | 646.5 | 637.9 | 635.8 | 633.6 | 625.0 | 616.5 | 610.0 | 601.5 |
| 27.5° | 625.0 | 626.1 | 620.8 | 621.8 | 611.1 | 609.0 | 607.9 | 597.2 | 587.5 | 581.1 | 572.5 |
| 30°   | 594.0 | 590.7 | 585.4 | 585.4 | 576.8 | 575.7 | 573.6 | 563.9 | 553.2 | 545.7 | 536.1 |
| 32.5° | 550.0 | 548.9 | 543.6 | 543.6 | 533.9 | 533.9 | 529.6 | 520.0 | 510.3 | 506.0 | 496.4 |
| 35°   | 499.6 | 498.5 | 494.2 | 494.2 | 485.7 | 486.7 | 482.5 | 474.9 | 465.3 | 458.9 | 451.4 |
| 37.5° | 448.1 | 447.1 | 442.8 | 443.9 | 436.4 | 436.4 | 433.1 | 425.6 | 418.1 | 414.9 | 405.3 |
| 40°   | 397.8 | 396.7 | 391.3 | 394.5 | 388.1 | 386.0 | 384.9 | 379.5 | 371.0 | 366.7 | 361.3 |
| 42.5° | 351.7 | 352.7 | 347.4 | 349.5 | 344.1 | 342.0 | 340.9 | 336.6 | 330.2 | 325.9 | 320.6 |
| 45°   | 316.3 | 314.1 | 312.0 | 312.0 | 306.6 | 305.6 | 304.5 | 299.1 | 294.8 | 290.5 | 285.2 |
| 47.5° | 283.0 | 280.9 | 278.7 | 279.8 | 275.5 | 274.5 | 272.3 | 268.0 | 262.7 | 260.5 | 255.2 |
| 50°   | 256.2 | 255.2 | 251.9 | 251.9 | 247.7 | 246.6 | 244.4 | 241.2 | 235.9 | 232.6 | 228.4 |
| 52.5° | 231.6 | 231.6 | 228.4 | 227.3 | 224.1 | 223.0 | 221.9 | 217.6 | 213.4 | 209.1 | 204.8 |
| 55°   | 210.1 | 209.1 | 206.9 | 206.9 | 202.6 | 201.6 | 200.5 | 196.2 | 191.9 | 188.7 | 184.4 |
| 57.5° | 189.8 | 189.8 | 187.6 | 187.6 | 184.4 | 182.3 | 182.3 | 178.0 | 172.6 | 170.5 | 165.1 |
| 60°   | 171.5 | 171.5 | 169.4 | 169.4 | 166.2 | 166.2 | 164.0 | 159.7 | 156.5 | 152.2 | 148.0 |
| 62.5° | 154.4 | 155.5 | 153.3 | 152.2 | 149.0 | 148.0 | 148.0 | 144.7 | 139.4 | 136.2 | 131.9 |
| 65°   | 139.4 | 138.3 | 137.2 | 136.2 | 132.9 | 131.9 | 131.9 | 127.6 | 124.4 | 120.1 | 116.9 |
| 67.5° | 123.3 | 123.3 | 121.1 | 121.1 | 119.0 | 117.9 | 115.8 | 112.6 | 109.4 | 106.1 | 102.9 |
| 70°   | 108.3 | 108.3 | 107.2 | 107.2 | 104.0 | 102.9 | 101.9 | 98.6  | 95.4  | 92.2  | 87.9  |
| 72.5° | 94.3  | 93.3  | 92.2  | 92.2  | 90.1  | 89.0  | 87.9  | 84.7  | 81.5  | 78.3  | 75.0  |
| 75°   | 79.3  | 79.3  | 78.3  | 78.3  | 76.1  | 75.0  | 75.0  | 72.9  | 68.6  | 66.5  | 62.2  |
| 77.5° | 66.5  | 66.5  | 65.4  | 65.4  | 63.3  | 63.3  | 62.2  | 59.0  | 56.8  | 53.6  | 51.5  |
| 80°   | 53.6  | 52.5  | 52.5  | 51.5  | 49.3  | 49.3  | 48.2  | 47.2  | 44.0  | 41.8  | 38.6  |
| 82.5° | 37.5  | 37.5  | 37.5  | 36.5  | 35.4  | 35.4  | 34.3  | 32.2  | 30.0  | 28.9  | 25.7  |
| 85°   | 22.5  | 22.5  | 21.4  | 20.4  | 21.4  | 20.4  | 19.3  | 18.2  | 17.2  | 16.1  | 15.0  |
| 87.5° | 9.6   | 9.6   | 8.6   | 8.6   | 8.6   | 8.6   | 8.6   | 7.5   | 6.4   | 6.4   | 5.4   |
| 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):**

|       | 50°   | 55°   | 60°   | 65°   | 67.5° | 70°   | 75°   | 80°   | 85°   | 90°   | 95°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 696.9 | 696.9 | 696.9 | 696.9 | 696.9 | 696.9 | 696.9 | 696.9 | 696.9 | 696.9 | 696.9 |
| 2.5°  | 697.9 | 701.2 | 700.1 | 699.0 | 696.9 | 696.9 | 696.9 | 695.8 | 696.9 | 696.9 | 694.7 |
| 5°    | 697.9 | 700.1 | 699.0 | 696.9 | 694.7 | 694.7 | 693.7 | 691.5 | 691.5 | 691.5 | 687.2 |
| 7.5°  | 694.7 | 696.9 | 693.7 | 691.5 | 689.4 | 687.2 | 687.2 | 684.0 | 684.0 | 682.9 | 678.6 |
| 10°   | 688.3 | 689.4 | 685.1 | 682.9 | 679.7 | 678.6 | 676.5 | 672.2 | 671.1 | 670.1 | 665.8 |
| 12.5° | 678.6 | 679.7 | 674.4 | 670.1 | 665.8 | 664.7 | 662.6 | 657.2 | 655.1 | 652.9 | 647.6 |
| 15°   | 664.7 | 664.7 | 658.3 | 652.9 | 648.6 | 647.6 | 642.2 | 636.8 | 634.7 | 632.5 | 625.0 |
| 17.5° | 648.6 | 647.6 | 639.0 | 633.6 | 628.3 | 626.1 | 620.8 | 614.3 | 610.0 | 607.9 | 601.5 |
| 20°   | 631.5 | 628.3 | 618.6 | 613.2 | 606.8 | 603.6 | 598.2 | 589.7 | 585.4 | 581.1 | 574.7 |
| 22.5° | 611.1 | 606.8 | 596.1 | 588.6 | 582.2 | 578.9 | 571.4 | 563.9 | 557.5 | 553.2 | 545.7 |
| 25°   | 586.4 | 581.1 | 569.3 | 559.6 | 554.3 | 551.1 | 543.6 | 535.0 | 528.6 | 522.1 | 515.7 |
| 27.5° | 557.5 | 551.1 | 539.3 | 529.6 | 524.3 | 518.9 | 513.5 | 503.9 | 498.5 | 493.2 | 485.7 |
| 30°   | 522.1 | 514.6 | 503.9 | 495.3 | 488.9 | 484.6 | 478.2 | 469.6 | 463.2 | 459.9 | 452.4 |
| 32.5° | 483.5 | 474.9 | 465.3 | 456.7 | 453.5 | 448.1 | 442.8 | 434.2 | 428.8 | 425.6 | 420.3 |
| 35°   | 440.6 | 434.2 | 423.5 | 417.1 | 411.7 | 409.5 | 405.3 | 396.7 | 394.5 | 391.3 | 384.9 |
| 37.5° | 395.6 | 390.2 | 382.7 | 377.4 | 373.1 | 371.0 | 366.7 | 361.3 | 358.1 | 354.9 | 351.7 |
| 40°   | 353.8 | 349.5 | 343.1 | 338.8 | 333.4 | 330.2 | 330.2 | 323.8 | 321.6 | 321.6 | 318.4 |
| 42.5° | 313.1 | 310.9 | 305.6 | 299.1 | 298.0 | 294.8 | 293.8 | 290.5 | 288.4 | 287.3 | 286.3 |
| 45°   | 278.7 | 275.5 | 270.2 | 267.0 | 263.7 | 263.7 | 260.5 | 257.3 | 256.2 | 255.2 | 254.1 |
| 47.5° | 248.7 | 244.4 | 240.2 | 236.9 | 234.8 | 233.7 | 230.5 | 228.4 | 227.3 | 227.3 | 226.2 |
| 50°   | 221.9 | 218.7 | 214.4 | 211.2 | 209.1 | 206.9 | 204.8 | 202.6 | 201.6 | 200.5 | 200.5 |
| 52.5° | 199.4 | 195.1 | 190.8 | 187.6 | 184.4 | 183.3 | 181.2 | 179.0 | 178.0 | 176.9 | 175.8 |
| 55°   | 179.0 | 175.8 | 170.5 | 167.2 | 164.0 | 164.0 | 160.8 | 157.6 | 155.5 | 154.4 | 153.3 |
| 57.5° | 159.7 | 156.5 | 151.2 | 148.0 | 145.8 | 143.7 | 141.5 | 139.4 | 137.2 | 135.1 | 132.9 |
| 60°   | 142.6 | 139.4 | 134.0 | 129.7 | 128.7 | 126.5 | 124.4 | 120.1 | 117.9 | 115.8 | 113.6 |
| 62.5° | 126.5 | 122.2 | 117.9 | 113.6 | 112.6 | 110.4 | 107.2 | 104.0 | 100.8 | 98.6  | 95.4  |
| 65°   | 111.5 | 108.3 | 102.9 | 99.7  | 96.5  | 95.4  | 92.2  | 87.9  | 84.7  | 82.6  | 79.3  |
| 67.5° | 97.6  | 93.3  | 87.9  | 84.7  | 82.6  | 80.4  | 77.2  | 74.0  | 70.8  | 67.5  | 64.3  |
| 70°   | 83.6  | 80.4  | 75.0  | 71.8  | 69.7  | 67.5  | 64.3  | 60.0  | 56.8  | 53.6  | 51.5  |
| 72.5° | 70.8  | 66.5  | 62.2  | 59.0  | 56.8  | 54.7  | 51.5  | 48.2  | 45.0  | 42.9  | 39.7  |
| 75°   | 59.0  | 54.7  | 51.5  | 47.2  | 46.1  | 44.0  | 40.7  | 37.5  | 34.3  | 32.2  | 30.0  |
| 77.5° | 47.2  | 44.0  | 39.7  | 37.5  | 35.4  | 33.2  | 31.1  | 27.9  | 25.7  | 22.5  | 20.4  |
| 80°   | 35.4  | 32.2  | 28.9  | 26.8  | 24.7  | 23.6  | 21.4  | 19.3  | 17.2  | 15.0  | 13.9  |
| 82.5° | 23.6  | 21.4  | 18.2  | 17.2  | 16.1  | 15.0  | 12.9  | 11.8  | 10.7  | 9.6   | 8.6   |
| 85°   | 12.9  | 11.8  | 10.7  | 8.6   | 8.6   | 7.5   | 6.4   | 6.4   | 5.4   | 5.4   | 4.3   |
| 87.5° | 5.4   | 4.3   | 4.3   | 3.2   | 3.2   | 3.2   | 2.1   | 2.1   | 2.1   | 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°    | 696.9 | 696.9 | 696.9 | 696.9  | 696.9 | 696.9 | 696.9 | 696.9 | 696.9 | 696.9 | 696.9 |
| 2.5°  | 695.8 | 691.5 | 691.5 | 691.5  | 688.3 | 689.4 | 690.4 | 691.5 | 690.4 | 687.2 | 690.4 |
| 5°    | 688.3 | 684.0 | 684.0 | 681.9  | 679.7 | 679.7 | 679.7 | 680.8 | 679.7 | 676.5 | 677.6 |
| 7.5°  | 678.6 | 673.3 | 672.2 | 670.1  | 667.9 | 666.9 | 666.9 | 666.9 | 665.8 | 661.5 | 663.6 |
| 10°   | 663.6 | 658.3 | 656.1 | 655.1  | 651.8 | 650.8 | 649.7 | 648.6 | 647.6 | 643.3 | 645.4 |
| 12.5° | 645.4 | 641.1 | 636.8 | 635.8  | 632.5 | 630.4 | 629.3 | 629.3 | 627.2 | 622.9 | 625.0 |
| 15°   | 624.0 | 617.5 | 614.3 | 612.2  | 609.0 | 606.8 | 604.7 | 605.7 | 604.7 | 600.4 | 601.5 |
| 17.5° | 598.2 | 591.8 | 588.6 | 587.5  | 583.2 | 581.1 | 580.0 | 580.0 | 578.9 | 574.7 | 575.7 |
| 20°   | 570.4 | 563.9 | 561.8 | 559.6  | 557.5 | 555.4 | 554.3 | 553.2 | 552.1 | 547.9 | 551.1 |
| 22.5° | 542.5 | 535.0 | 531.8 | 531.8  | 527.5 | 526.4 | 525.3 | 526.4 | 525.3 | 521.0 | 523.2 |
| 25°   | 513.5 | 506.0 | 503.9 | 500.7  | 498.5 | 497.5 | 497.5 | 497.5 | 496.4 | 494.2 | 496.4 |
| 27.5° | 481.4 | 476.0 | 472.8 | 471.7  | 469.6 | 468.5 | 467.4 | 468.5 | 468.5 | 465.3 | 467.4 |
| 30°   | 449.2 | 444.9 | 442.8 | 441.7  | 438.5 | 437.4 | 438.5 | 438.5 | 438.5 | 435.3 | 438.5 |
| 32.5° | 417.1 | 413.8 | 412.8 | 409.5  | 407.4 | 407.4 | 407.4 | 408.5 | 407.4 | 405.3 | 408.5 |
| 35°   | 384.9 | 380.6 | 379.5 | 378.5  | 378.5 | 376.3 | 378.5 | 377.4 | 379.5 | 376.3 | 378.5 |
| 37.5° | 350.6 | 348.4 | 347.4 | 347.4  | 345.2 | 346.3 | 346.3 | 346.3 | 348.4 | 345.2 | 347.4 |
| 40°   | 318.4 | 316.3 | 316.3 | 316.3  | 315.2 | 315.2 | 315.2 | 316.3 | 317.3 | 315.2 | 317.3 |
| 42.5° | 286.3 | 285.2 | 285.2 | 284.1  | 283.0 | 284.1 | 285.2 | 285.2 | 286.3 | 284.1 | 285.2 |
| 45°   | 255.2 | 254.1 | 255.2 | 254.1  | 254.1 | 253.0 | 254.1 | 255.2 | 255.2 | 254.1 | 254.1 |
| 47.5° | 226.2 | 226.2 | 225.1 | 225.1  | 225.1 | 225.1 | 225.1 | 225.1 | 225.1 | 223.0 | 225.1 |
| 50°   | 200.5 | 198.3 | 199.4 | 198.3  | 198.3 | 197.3 | 197.3 | 196.2 | 195.1 | 194.1 | 194.1 |
| 52.5° | 175.8 | 173.7 | 173.7 | 172.6  | 171.5 | 171.5 | 170.5 | 169.4 | 168.3 | 166.2 | 166.2 |
| 55°   | 152.2 | 150.1 | 149.0 | 148.0  | 146.9 | 145.8 | 144.7 | 143.7 | 141.5 | 140.4 | 140.4 |
| 57.5° | 130.8 | 128.7 | 126.5 | 126.5  | 124.4 | 123.3 | 121.1 | 119.0 | 117.9 | 115.8 | 115.8 |
| 60°   | 111.5 | 109.4 | 106.1 | 105.1  | 104.0 | 101.9 | 98.6  | 97.6  | 96.5  | 94.3  | 95.4  |
| 62.5° | 93.3  | 90.1  | 86.8  | 85.8   | 84.7  | 82.6  | 80.4  | 78.3  | 77.2  | 78.3  | 78.3  |
| 65°   | 76.1  | 72.9  | 70.8  | 68.6   | 67.5  | 65.4  | 64.3  | 63.3  | 63.3  | 63.3  | 64.3  |
| 67.5° | 61.1  | 57.9  | 55.7  | 54.7   | 52.5  | 51.5  | 51.5  | 51.5  | 51.5  | 51.5  | 51.5  |
| 70°   | 48.2  | 46.1  | 44.0  | 41.8   | 41.8  | 40.7  | 40.7  | 40.7  | 40.7  | 40.7  | 40.7  |
| 72.5° | 36.5  | 34.3  | 33.2  | 33.2   | 32.2  | 32.2  | 32.2  | 32.2  | 31.1  | 31.1  | 32.2  |
| 75°   | 26.8  | 25.7  | 24.7  | 24.7   | 24.7  | 23.6  | 23.6  | 23.6  | 23.6  | 23.6  | 23.6  |
| 77.5° | 19.3  | 18.2  | 18.2  | 17.2   | 17.2  | 17.2  | 17.2  | 17.2  | 17.2  | 16.1  | 16.1  |
| 80°   | 12.9  | 11.8  | 11.8  | 11.8   | 11.8  | 10.7  | 10.7  | 10.7  | 10.7  | 10.7  | 10.7  |
| 82.5° | 7.5   | 7.5   | 7.5   | 6.4    | 6.4   | 6.4   | 6.4   | 6.4   | 6.4   | 6.4   | 6.4   |
| 85°   | 4.3   | 3.2   | 3.2   | 3.2    | 3.2   | 3.2   | 3.2   | 3.2   | 3.2   | 3.2   | 3.2   |
| 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: P274351

CATALOG NUMBER: LD4B20DE010W2N2765 EU4B1020W2N902765 4LBLWW0H

**CANDELA DISTRIBUTION (continued):**

|       | 150°  | 155°  | 157.5° | 160°  | 165°  | 170°  | 175°  | 180°  |
|-------|-------|-------|--------|-------|-------|-------|-------|-------|
| 0°    | 696.9 | 696.9 | 696.9  | 696.9 | 696.9 | 696.9 | 696.9 | 696.9 |
| 2.5°  | 684.0 | 688.3 | 689.4  | 686.2 | 687.2 | 685.1 | 686.2 | 684.0 |
| 5°    | 672.2 | 675.4 | 676.5  | 674.4 | 674.4 | 672.2 | 673.3 | 671.1 |
| 7.5°  | 657.2 | 660.4 | 661.5  | 659.4 | 659.4 | 657.2 | 657.2 | 656.1 |
| 10°   | 640.1 | 641.1 | 643.3  | 640.1 | 641.1 | 639.0 | 639.0 | 636.8 |
| 12.5° | 618.6 | 620.8 | 622.9  | 619.7 | 619.7 | 618.6 | 618.6 | 615.4 |
| 15°   | 596.1 | 598.2 | 599.3  | 597.2 | 597.2 | 596.1 | 595.0 | 594.0 |
| 17.5° | 572.5 | 573.6 | 575.7  | 572.5 | 574.7 | 572.5 | 572.5 | 570.4 |
| 20°   | 545.7 | 548.9 | 550.0  | 546.8 | 547.9 | 546.8 | 546.8 | 546.8 |
| 22.5° | 520.0 | 522.1 | 523.2  | 521.0 | 522.1 | 520.0 | 521.0 | 518.9 |
| 25°   | 493.2 | 494.2 | 495.3  | 493.2 | 495.3 | 494.2 | 493.2 | 493.2 |
| 27.5° | 465.3 | 466.4 | 467.4  | 465.3 | 467.4 | 466.4 | 467.4 | 465.3 |
| 30°   | 435.3 | 437.4 | 439.6  | 437.4 | 438.5 | 437.4 | 437.4 | 436.4 |
| 32.5° | 405.3 | 407.4 | 409.5  | 407.4 | 409.5 | 407.4 | 408.5 | 406.3 |
| 35°   | 377.4 | 378.5 | 379.5  | 377.4 | 378.5 | 378.5 | 378.5 | 377.4 |
| 37.5° | 346.3 | 348.4 | 348.4  | 347.4 | 349.5 | 348.4 | 348.4 | 346.3 |
| 40°   | 316.3 | 317.3 | 318.4  | 316.3 | 317.3 | 316.3 | 317.3 | 316.3 |
| 42.5° | 285.2 | 287.3 | 288.4  | 286.3 | 286.3 | 286.3 | 285.2 | 286.3 |
| 45°   | 253.0 | 255.2 | 257.3  | 254.1 | 255.2 | 255.2 | 255.2 | 254.1 |
| 47.5° | 224.1 | 224.1 | 225.1  | 224.1 | 225.1 | 223.0 | 225.1 | 224.1 |
| 50°   | 194.1 | 194.1 | 196.2  | 194.1 | 194.1 | 194.1 | 194.1 | 194.1 |
| 52.5° | 165.1 | 166.2 | 166.2  | 164.0 | 165.1 | 164.0 | 165.1 | 164.0 |
| 55°   | 138.3 | 138.3 | 139.4  | 138.3 | 138.3 | 138.3 | 138.3 | 138.3 |
| 57.5° | 114.7 | 115.8 | 115.8  | 114.7 | 115.8 | 114.7 | 114.7 | 114.7 |
| 60°   | 95.4  | 95.4  | 95.4   | 94.3  | 95.4  | 94.3  | 95.4  | 94.3  |
| 62.5° | 77.2  | 78.3  | 78.3   | 77.2  | 78.3  | 77.2  | 77.2  | 77.2  |
| 65°   | 63.3  | 63.3  | 63.3   | 63.3  | 63.3  | 63.3  | 63.3  | 62.2  |
| 67.5° | 50.4  | 50.4  | 51.5   | 50.4  | 51.5  | 51.5  | 51.5  | 51.5  |
| 70°   | 40.7  | 40.7  | 40.7   | 40.7  | 40.7  | 40.7  | 40.7  | 40.7  |
| 72.5° | 31.1  | 31.1  | 32.2   | 31.1  | 31.1  | 31.1  | 31.1  | 31.1  |
| 75°   | 23.6  | 23.6  | 23.6   | 23.6  | 23.6  | 22.5  | 22.5  | 23.6  |
| 77.5° | 16.1  | 16.1  | 16.1   | 16.1  | 16.1  | 16.1  | 16.1  | 17.2  |
| 80°   | 10.7  | 10.7  | 10.7   | 10.7  | 9.6   | 9.6   | 10.7  | 9.6   |
| 82.5° | 5.4   | 5.4   | 5.4    | 5.4   | 5.4   | 5.4   | 5.4   | 5.4   |
| 85°   | 3.2   | 3.2   | 2.1    | 2.1   | 2.1   | 2.1   | 2.1   | 2.1   |
| 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)