

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: P251787

Luminaire Tested: **LD4B30D010 EU4B30509050 4LBLWW1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P251787  
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: LD4B30D010 EU4B30509050 4LBLWW1H  
Description: PORTFOLIO 4 INCH LENS WALLWASH RECESSED DOWNLIGHT, WITH HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1945.0 lumens  
Efficiency: N/A  
Efficacy: 69.5 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

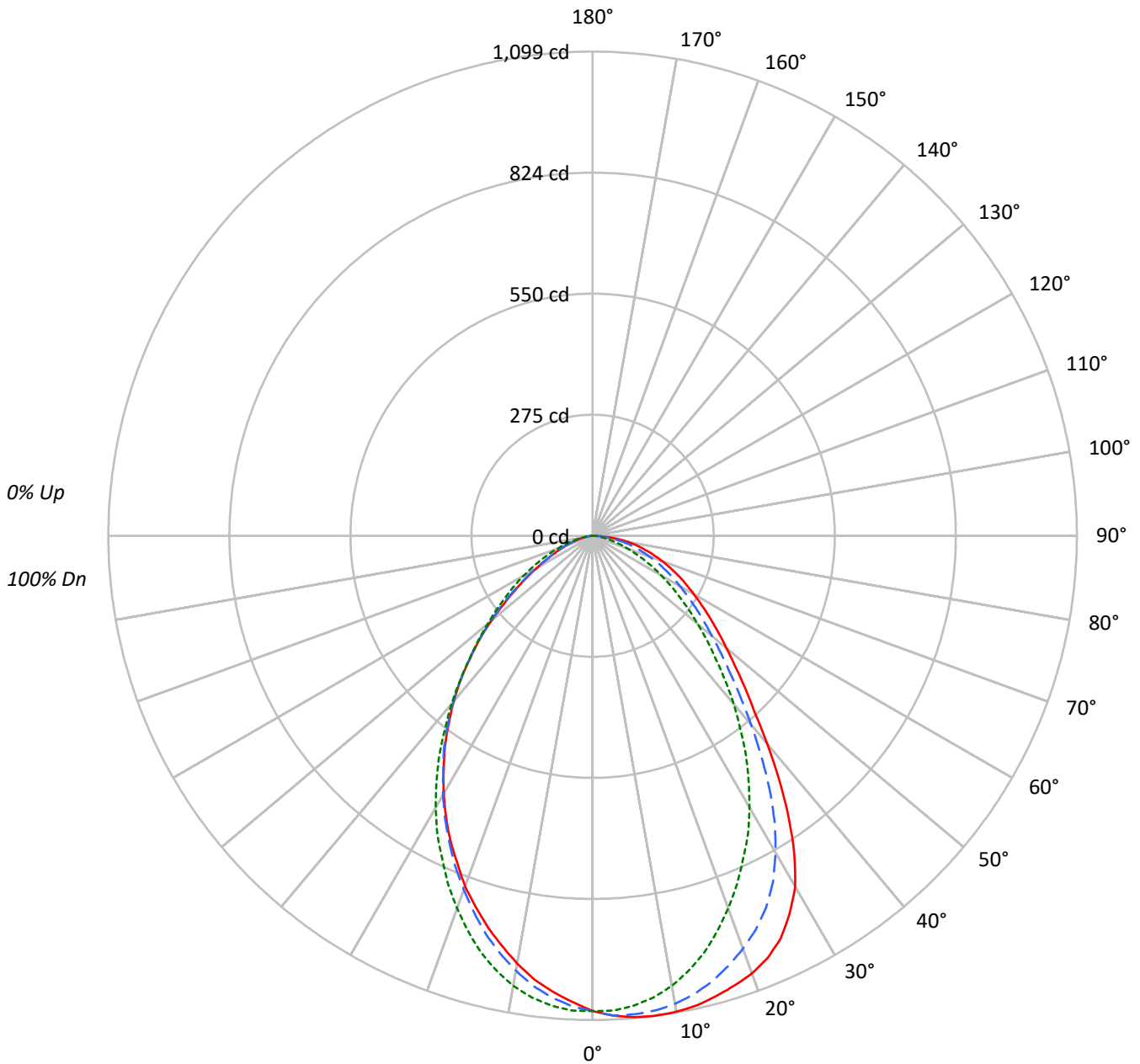
Input Watts (W): 28  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

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

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

|     | 0°     | 90°    | 180°   |
|-----|--------|--------|--------|
| 0°  | 105128 | 105128 | 105128 |
| 5°  | 107310 | 104718 | 101636 |
| 10° | 108551 | 102643 | 97556  |
| 15° | 109170 | 98787  | 92764  |
| 20° | 109635 | 93290  | 87782  |
| 25° | 108501 | 86908  | 82091  |
| 30° | 103465 | 80114  | 76006  |
| 35° | 92003  | 72063  | 69493  |
| 40° | 78331  | 63344  | 62288  |
| 45° | 67480  | 54441  | 54207  |
| 50° | 60132  | 47047  | 45546  |
| 55° | 55273  | 40609  | 36378  |
| 60° | 51750  | 34929  | 28458  |
| 65° | 49742  | 29471  | 22207  |
| 70° | 47757  | 23651  | 17980  |
| 75° | 46240  | 18752  | 13744  |
| 80° | 46583  | 13021  | 8362   |
| 85° | 38914  | 9281   | 3690   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 101.0  | 5.2       |
| 10°-20°   | 277.6  | 14.3      |
| 20°-30°   | 388.2  | 20.0      |
| 30°-40°   | 399.0  | 20.5      |
| 40°-50°   | 323.9  | 16.7      |
| 50°-60°   | 228.1  | 11.7      |
| 60°-70°   | 140.4  | 7.2       |
| 70°-80°   | 70.1   | 3.6       |
| 80°-90°   | 16.7   | 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°    | 766.8  | 39.4      |
| 0°-40°    | 1165.9 | 59.9      |
| 0°-60°    | 1717.8 | 88.3      |
| 0°-90°    | 1945.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1945.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45°  | 90°  | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0°  | 1079 | 1079 | 1079 | 1079 | 1079 |      |
| 5°  | 1097 | 1090 | 1070 | 1052 | 1039 | 105  |
| 15° | 1082 | 1047 | 979  | 936  | 919  | 306  |
| 25° | 1009 | 931  | 808  | 768  | 763  | 461  |
| 35° | 773  | 699  | 606  | 588  | 584  | 481  |
| 45° | 490  | 441  | 395  | 395  | 393  | 381  |
| 55° | 325  | 285  | 239  | 219  | 214  | 292  |
| 65° | 216  | 181  | 128  | 98   | 96   | 213  |
| 75° | 123  | 96   | 50   | 36   | 36   | 131  |
| 85° | 35   | 23   | 8    | 5    | 3    | 41   |
| 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°    | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 |
| 2.5°  | 1090.3 | 1092.0 | 1087.0 | 1092.0 | 1085.3 | 1088.6 | 1090.3 | 1087.0 | 1083.7 | 1090.3 | 1090.3 |
| 5°    | 1096.9 | 1096.9 | 1092.0 | 1098.6 | 1090.3 | 1092.0 | 1095.3 | 1090.3 | 1085.3 | 1092.0 | 1090.3 |
| 7.5°  | 1098.6 | 1098.6 | 1092.0 | 1098.6 | 1090.3 | 1092.0 | 1093.6 | 1088.6 | 1083.7 | 1088.6 | 1087.0 |
| 10°   | 1096.9 | 1095.3 | 1090.3 | 1096.9 | 1088.6 | 1088.6 | 1090.3 | 1085.3 | 1077.0 | 1082.0 | 1078.7 |
| 12.5° | 1092.0 | 1092.0 | 1085.3 | 1092.0 | 1080.3 | 1080.3 | 1082.0 | 1075.4 | 1068.7 | 1068.7 | 1065.4 |
| 15°   | 1082.0 | 1082.0 | 1075.4 | 1080.3 | 1070.4 | 1070.4 | 1068.7 | 1062.1 | 1053.8 | 1053.8 | 1047.2 |
| 17.5° | 1070.4 | 1070.4 | 1063.7 | 1068.7 | 1057.1 | 1057.1 | 1055.5 | 1045.5 | 1033.9 | 1032.2 | 1023.9 |
| 20°   | 1057.1 | 1057.1 | 1048.8 | 1052.1 | 1038.9 | 1038.9 | 1037.2 | 1025.6 | 1012.3 | 1009.0 | 997.4  |
| 22.5° | 1037.2 | 1037.2 | 1028.9 | 1030.6 | 1017.3 | 1015.6 | 1014.0 | 1000.7 | 987.4  | 982.4  | 967.5  |
| 25°   | 1009.0 | 1007.3 | 1000.7 | 1000.7 | 987.4  | 984.1  | 980.8  | 967.5  | 954.2  | 944.3  | 931.0  |
| 27.5° | 967.5  | 969.2  | 960.9  | 962.5  | 945.9  | 942.6  | 940.9  | 924.3  | 909.4  | 899.5  | 886.2  |
| 30°   | 919.4  | 914.4  | 906.1  | 906.1  | 892.8  | 891.2  | 887.8  | 872.9  | 856.3  | 844.7  | 829.8  |
| 32.5° | 851.3  | 849.7  | 841.4  | 841.4  | 826.4  | 826.4  | 819.8  | 804.9  | 789.9  | 783.3  | 768.4  |
| 35°   | 773.3  | 771.7  | 765.0  | 765.0  | 751.8  | 753.4  | 746.8  | 735.2  | 720.2  | 710.3  | 698.7  |
| 37.5° | 693.7  | 692.0  | 685.4  | 687.0  | 675.4  | 675.4  | 670.4  | 658.8  | 647.2  | 642.2  | 627.3  |
| 40°   | 615.7  | 614.0  | 605.7  | 610.7  | 600.7  | 597.4  | 595.8  | 587.5  | 574.2  | 567.6  | 559.3  |
| 42.5° | 544.3  | 546.0  | 537.7  | 541.0  | 532.7  | 529.4  | 527.7  | 521.1  | 511.1  | 504.5  | 496.2  |
| 45°   | 489.6  | 486.2  | 482.9  | 482.9  | 474.6  | 473.0  | 471.3  | 463.0  | 456.4  | 449.7  | 441.4  |
| 47.5° | 438.1  | 434.8  | 431.5  | 433.1  | 426.5  | 424.8  | 421.5  | 414.9  | 406.6  | 403.3  | 395.0  |
| 50°   | 396.6  | 395.0  | 390.0  | 390.0  | 383.3  | 381.7  | 378.4  | 373.4  | 365.1  | 360.1  | 353.5  |
| 52.5° | 358.5  | 358.5  | 353.5  | 351.8  | 346.8  | 345.2  | 343.5  | 336.9  | 330.2  | 323.6  | 317.0  |
| 55°   | 325.3  | 323.6  | 320.3  | 320.3  | 313.6  | 312.0  | 310.3  | 303.7  | 297.1  | 292.1  | 285.4  |
| 57.5° | 293.7  | 293.7  | 290.4  | 290.4  | 285.4  | 282.1  | 282.1  | 275.5  | 267.2  | 263.9  | 255.6  |
| 60°   | 265.5  | 265.5  | 262.2  | 262.2  | 257.2  | 257.2  | 253.9  | 247.3  | 242.3  | 235.7  | 229.0  |
| 62.5° | 239.0  | 240.6  | 237.3  | 235.7  | 230.7  | 229.0  | 229.0  | 224.0  | 215.7  | 210.8  | 204.1  |
| 65°   | 215.7  | 214.1  | 212.4  | 210.8  | 205.8  | 204.1  | 204.1  | 197.5  | 192.5  | 185.9  | 180.9  |
| 67.5° | 190.8  | 190.8  | 187.5  | 187.5  | 184.2  | 182.5  | 179.2  | 174.2  | 169.3  | 164.3  | 159.3  |
| 70°   | 167.6  | 167.6  | 166.0  | 166.0  | 161.0  | 159.3  | 157.7  | 152.7  | 147.7  | 142.7  | 136.1  |
| 72.5° | 146.0  | 144.4  | 142.7  | 142.7  | 139.4  | 137.7  | 136.1  | 131.1  | 126.1  | 121.1  | 116.2  |
| 75°   | 122.8  | 122.8  | 121.1  | 121.1  | 117.8  | 116.2  | 116.2  | 112.8  | 106.2  | 102.9  | 96.3   |
| 77.5° | 102.9  | 102.9  | 101.2  | 101.2  | 97.9   | 97.9   | 96.3   | 91.3   | 88.0   | 83.0   | 79.7   |
| 80°   | 83.0   | 81.3   | 81.3   | 79.7   | 76.3   | 76.3   | 74.7   | 73.0   | 68.0   | 64.7   | 59.7   |
| 82.5° | 58.1   | 58.1   | 58.1   | 56.4   | 54.8   | 54.8   | 53.1   | 49.8   | 46.5   | 44.8   | 39.8   |
| 85°   | 34.8   | 34.8   | 33.2   | 31.5   | 33.2   | 31.5   | 29.9   | 28.2   | 26.6   | 24.9   | 23.2   |
| 87.5° | 14.9   | 14.9   | 13.3   | 13.3   | 13.3   | 13.3   | 13.3   | 11.6   | 10.0   | 10.0   | 8.3    |
| 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°    | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 |
| 2.5°  | 1080.3 | 1085.3 | 1083.7 | 1082.0 | 1078.7 | 1078.7 | 1078.7 | 1077.0 | 1078.7 | 1078.7 | 1075.4 |
| 5°    | 1080.3 | 1083.7 | 1082.0 | 1078.7 | 1075.4 | 1075.4 | 1073.7 | 1070.4 | 1070.4 | 1070.4 | 1063.7 |
| 7.5°  | 1075.4 | 1078.7 | 1073.7 | 1070.4 | 1067.1 | 1063.7 | 1063.7 | 1058.8 | 1058.8 | 1057.1 | 1050.5 |
| 10°   | 1065.4 | 1067.1 | 1060.4 | 1057.1 | 1052.1 | 1050.5 | 1047.2 | 1040.5 | 1038.9 | 1037.2 | 1030.6 |
| 12.5° | 1050.5 | 1052.1 | 1043.8 | 1037.2 | 1030.6 | 1028.9 | 1025.6 | 1017.3 | 1014.0 | 1010.6 | 1002.3 |
| 15°   | 1028.9 | 1028.9 | 1018.9 | 1010.6 | 1004.0 | 1002.3 | 994.0  | 985.8  | 982.4  | 979.1  | 967.5  |
| 17.5° | 1004.0 | 1002.3 | 989.1  | 980.8  | 972.5  | 969.2  | 960.9  | 950.9  | 944.3  | 940.9  | 931.0  |
| 20°   | 977.5  | 972.5  | 957.5  | 949.2  | 939.3  | 934.3  | 926.0  | 912.7  | 906.1  | 899.5  | 889.5  |
| 22.5° | 945.9  | 939.3  | 922.7  | 911.1  | 901.1  | 896.1  | 884.5  | 872.9  | 862.9  | 856.3  | 844.7  |
| 25°   | 907.8  | 899.5  | 881.2  | 866.3  | 858.0  | 853.0  | 841.4  | 828.1  | 818.1  | 808.2  | 798.2  |
| 27.5° | 862.9  | 853.0  | 834.7  | 819.8  | 811.5  | 803.2  | 794.9  | 780.0  | 771.7  | 763.4  | 751.8  |
| 30°   | 808.2  | 796.6  | 780.0  | 766.7  | 756.7  | 750.1  | 740.1  | 726.9  | 716.9  | 711.9  | 700.3  |
| 32.5° | 748.4  | 735.2  | 720.2  | 707.0  | 702.0  | 693.7  | 685.4  | 672.1  | 663.8  | 658.8  | 650.5  |
| 35°   | 682.1  | 672.1  | 655.5  | 645.6  | 637.3  | 633.9  | 627.3  | 614.0  | 610.7  | 605.7  | 595.8  |
| 37.5° | 612.4  | 604.1  | 592.4  | 584.1  | 577.5  | 574.2  | 567.6  | 559.3  | 554.3  | 549.3  | 544.3  |
| 40°   | 547.6  | 541.0  | 531.0  | 524.4  | 516.1  | 511.1  | 511.1  | 501.2  | 497.9  | 497.9  | 492.9  |
| 42.5° | 484.6  | 481.3  | 473.0  | 463.0  | 461.3  | 456.4  | 454.7  | 449.7  | 446.4  | 444.7  | 443.1  |
| 45°   | 431.5  | 426.5  | 418.2  | 413.2  | 408.2  | 408.2  | 403.3  | 398.3  | 396.6  | 395.0  | 393.3  |
| 47.5° | 385.0  | 378.4  | 371.7  | 366.8  | 363.4  | 361.8  | 356.8  | 353.5  | 351.8  | 351.8  | 350.2  |
| 50°   | 343.5  | 338.5  | 331.9  | 326.9  | 323.6  | 320.3  | 317.0  | 313.6  | 312.0  | 310.3  | 310.3  |
| 52.5° | 308.7  | 302.0  | 295.4  | 290.4  | 285.4  | 283.8  | 280.5  | 277.1  | 275.5  | 273.8  | 272.2  |
| 55°   | 277.1  | 272.2  | 263.9  | 258.9  | 253.9  | 253.9  | 248.9  | 243.9  | 240.6  | 239.0  | 237.3  |
| 57.5° | 247.3  | 242.3  | 234.0  | 229.0  | 225.7  | 222.4  | 219.1  | 215.7  | 212.4  | 209.1  | 205.8  |
| 60°   | 220.7  | 215.7  | 207.4  | 200.8  | 199.1  | 195.8  | 192.5  | 185.9  | 182.5  | 179.2  | 175.9  |
| 62.5° | 195.8  | 189.2  | 182.5  | 175.9  | 174.2  | 170.9  | 166.0  | 161.0  | 156.0  | 152.7  | 147.7  |
| 65°   | 172.6  | 167.6  | 159.3  | 154.3  | 149.4  | 147.7  | 142.7  | 136.1  | 131.1  | 127.8  | 122.8  |
| 67.5° | 151.0  | 144.4  | 136.1  | 131.1  | 127.8  | 124.5  | 119.5  | 114.5  | 109.5  | 104.5  | 99.6   |
| 70°   | 129.4  | 124.5  | 116.2  | 111.2  | 107.9  | 104.5  | 99.6   | 92.9   | 88.0   | 83.0   | 79.7   |
| 72.5° | 109.5  | 102.9  | 96.3   | 91.3   | 88.0   | 84.6   | 79.7   | 74.7   | 69.7   | 66.4   | 61.4   |
| 75°   | 91.3   | 84.6   | 79.7   | 73.0   | 71.4   | 68.0   | 63.1   | 58.1   | 53.1   | 49.8   | 46.5   |
| 77.5° | 73.0   | 68.0   | 61.4   | 58.1   | 54.8   | 51.4   | 48.1   | 43.1   | 39.8   | 34.8   | 31.5   |
| 80°   | 54.8   | 49.8   | 44.8   | 41.5   | 38.2   | 36.5   | 33.2   | 29.9   | 26.6   | 23.2   | 21.6   |
| 82.5° | 36.5   | 33.2   | 28.2   | 26.6   | 24.9   | 23.2   | 19.9   | 18.3   | 16.6   | 14.9   | 13.3   |
| 85°   | 19.9   | 18.3   | 16.6   | 13.3   | 13.3   | 11.6   | 10.0   | 10.0   | 8.3    | 8.3    | 6.6    |
| 87.5° | 8.3    | 6.6    | 6.6    | 5.0    | 5.0    | 5.0    | 3.3    | 3.3    | 3.3    | 1.7    | 1.7    |
| 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):**

|       | 100°   | 105°   | 110°   | 112.5° | 115°   | 120°   | 125°   | 130°   | 135°   | 140°   | 145°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 |
| 2.5°  | 1077.0 | 1070.4 | 1070.4 | 1070.4 | 1065.4 | 1067.1 | 1068.7 | 1070.4 | 1068.7 | 1063.7 | 1068.7 |
| 5°    | 1065.4 | 1058.8 | 1058.8 | 1055.5 | 1052.1 | 1052.1 | 1052.1 | 1053.8 | 1052.1 | 1047.2 | 1048.8 |
| 7.5°  | 1050.5 | 1042.2 | 1040.5 | 1037.2 | 1033.9 | 1032.2 | 1032.2 | 1032.2 | 1030.6 | 1023.9 | 1027.2 |
| 10°   | 1027.2 | 1018.9 | 1015.6 | 1014.0 | 1009.0 | 1007.3 | 1005.7 | 1004.0 | 1002.3 | 995.7  | 999.0  |
| 12.5° | 999.0  | 992.4  | 985.8  | 984.1  | 979.1  | 975.8  | 974.1  | 974.1  | 970.8  | 964.2  | 967.5  |
| 15°   | 965.8  | 955.9  | 950.9  | 947.6  | 942.6  | 939.3  | 936.0  | 937.6  | 936.0  | 929.3  | 931.0  |
| 17.5° | 926.0  | 916.1  | 911.1  | 909.4  | 902.8  | 899.5  | 897.8  | 897.8  | 896.1  | 889.5  | 891.2  |
| 20°   | 882.9  | 872.9  | 869.6  | 866.3  | 862.9  | 859.6  | 858.0  | 856.3  | 854.6  | 848.0  | 853.0  |
| 22.5° | 839.7  | 828.1  | 823.1  | 823.1  | 816.5  | 814.8  | 813.2  | 814.8  | 813.2  | 806.5  | 809.8  |
| 25°   | 794.9  | 783.3  | 780.0  | 775.0  | 771.7  | 770.0  | 770.0  | 770.0  | 768.4  | 765.0  | 768.4  |
| 27.5° | 745.1  | 736.8  | 731.8  | 730.2  | 726.9  | 725.2  | 723.5  | 725.2  | 725.2  | 720.2  | 723.5  |
| 30°   | 695.3  | 688.7  | 685.4  | 683.7  | 678.7  | 677.1  | 678.7  | 678.7  | 678.7  | 673.8  | 678.7  |
| 32.5° | 645.6  | 640.6  | 638.9  | 633.9  | 630.6  | 630.6  | 630.6  | 632.3  | 630.6  | 627.3  | 632.3  |
| 35°   | 595.8  | 589.1  | 587.5  | 585.8  | 585.8  | 582.5  | 585.8  | 584.1  | 587.5  | 582.5  | 585.8  |
| 37.5° | 542.7  | 539.3  | 537.7  | 537.7  | 534.4  | 536.0  | 536.0  | 536.0  | 539.3  | 534.4  | 537.7  |
| 40°   | 492.9  | 489.6  | 489.6  | 489.6  | 487.9  | 487.9  | 487.9  | 489.6  | 491.2  | 487.9  | 491.2  |
| 42.5° | 443.1  | 441.4  | 441.4  | 439.8  | 438.1  | 439.8  | 441.4  | 441.4  | 443.1  | 439.8  | 441.4  |
| 45°   | 395.0  | 393.3  | 395.0  | 393.3  | 393.3  | 391.6  | 393.3  | 395.0  | 395.0  | 393.3  | 393.3  |
| 47.5° | 350.2  | 350.2  | 348.5  | 348.5  | 348.5  | 348.5  | 348.5  | 348.5  | 348.5  | 345.2  | 348.5  |
| 50°   | 310.3  | 307.0  | 308.7  | 307.0  | 307.0  | 305.4  | 305.4  | 303.7  | 302.0  | 300.4  | 300.4  |
| 52.5° | 272.2  | 268.8  | 268.8  | 267.2  | 265.5  | 265.5  | 263.9  | 262.2  | 260.5  | 257.2  | 257.2  |
| 55°   | 235.7  | 232.3  | 230.7  | 229.0  | 227.4  | 225.7  | 224.0  | 222.4  | 219.1  | 217.4  | 217.4  |
| 57.5° | 202.5  | 199.1  | 195.8  | 195.8  | 192.5  | 190.8  | 187.5  | 184.2  | 182.5  | 179.2  | 179.2  |
| 60°   | 172.6  | 169.3  | 164.3  | 162.6  | 161.0  | 157.7  | 152.7  | 151.0  | 149.4  | 146.0  | 147.7  |
| 62.5° | 144.4  | 139.4  | 134.4  | 132.8  | 131.1  | 127.8  | 124.5  | 121.1  | 119.5  | 121.1  | 121.1  |
| 65°   | 117.8  | 112.8  | 109.5  | 106.2  | 104.5  | 101.2  | 99.6   | 97.9   | 97.9   | 97.9   | 99.6   |
| 67.5° | 94.6   | 89.6   | 86.3   | 84.6   | 81.3   | 79.7   | 79.7   | 79.7   | 79.7   | 79.7   | 79.7   |
| 70°   | 74.7   | 71.4   | 68.0   | 64.7   | 64.7   | 63.1   | 63.1   | 63.1   | 63.1   | 63.1   | 63.1   |
| 72.5° | 56.4   | 53.1   | 51.4   | 51.4   | 49.8   | 49.8   | 49.8   | 49.8   | 48.1   | 48.1   | 49.8   |
| 75°   | 41.5   | 39.8   | 38.2   | 38.2   | 38.2   | 36.5   | 36.5   | 36.5   | 36.5   | 36.5   | 36.5   |
| 77.5° | 29.9   | 28.2   | 28.2   | 26.6   | 26.6   | 26.6   | 26.6   | 26.6   | 26.6   | 24.9   | 24.9   |
| 80°   | 19.9   | 18.3   | 18.3   | 18.3   | 18.3   | 16.6   | 16.6   | 16.6   | 16.6   | 16.6   | 16.6   |
| 82.5° | 11.6   | 11.6   | 11.6   | 10.0   | 10.0   | 10.0   | 10.0   | 10.0   | 10.0   | 10.0   | 10.0   |
| 85°   | 6.6    | 5.0    | 5.0    | 5.0    | 5.0    | 5.0    | 5.0    | 5.0    | 5.0    | 5.0    | 5.0    |
| 87.5° | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 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: P251787

CATALOG NUMBER: LD4B30D010 EU4B30509050 4LBLWW1H

**CANDELA DISTRIBUTION (continued):**

|       | 150°   | 155°   | 157.5° | 160°   | 165°   | 170°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 | 1078.7 |
| 2.5°  | 1058.8 | 1065.4 | 1067.1 | 1062.1 | 1063.7 | 1060.4 | 1062.1 | 1058.8 |
| 5°    | 1040.5 | 1045.5 | 1047.2 | 1043.8 | 1043.8 | 1040.5 | 1042.2 | 1038.9 |
| 7.5°  | 1017.3 | 1022.3 | 1023.9 | 1020.6 | 1020.6 | 1017.3 | 1017.3 | 1015.6 |
| 10°   | 990.7  | 992.4  | 995.7  | 990.7  | 992.4  | 989.1  | 989.1  | 985.8  |
| 12.5° | 957.5  | 960.9  | 964.2  | 959.2  | 959.2  | 957.5  | 957.5  | 952.6  |
| 15°   | 922.7  | 926.0  | 927.7  | 924.3  | 924.3  | 922.7  | 921.0  | 919.4  |
| 17.5° | 886.2  | 887.8  | 891.2  | 886.2  | 889.5  | 886.2  | 886.2  | 882.9  |
| 20°   | 844.7  | 849.7  | 851.3  | 846.4  | 848.0  | 846.4  | 846.4  | 846.4  |
| 22.5° | 804.9  | 808.2  | 809.8  | 806.5  | 808.2  | 804.9  | 806.5  | 803.2  |
| 25°   | 763.4  | 765.0  | 766.7  | 763.4  | 766.7  | 765.0  | 763.4  | 763.4  |
| 27.5° | 720.2  | 721.9  | 723.5  | 720.2  | 723.5  | 721.9  | 723.5  | 720.2  |
| 30°   | 673.8  | 677.1  | 680.4  | 677.1  | 678.7  | 677.1  | 677.1  | 675.4  |
| 32.5° | 627.3  | 630.6  | 633.9  | 630.6  | 633.9  | 630.6  | 632.3  | 629.0  |
| 35°   | 584.1  | 585.8  | 587.5  | 584.1  | 585.8  | 585.8  | 585.8  | 584.1  |
| 37.5° | 536.0  | 539.3  | 539.3  | 537.7  | 541.0  | 539.3  | 539.3  | 536.0  |
| 40°   | 489.6  | 491.2  | 492.9  | 489.6  | 491.2  | 489.6  | 491.2  | 489.6  |
| 42.5° | 441.4  | 444.7  | 446.4  | 443.1  | 443.1  | 443.1  | 441.4  | 443.1  |
| 45°   | 391.6  | 395.0  | 398.3  | 393.3  | 395.0  | 395.0  | 395.0  | 393.3  |
| 47.5° | 346.8  | 346.8  | 348.5  | 346.8  | 348.5  | 345.2  | 348.5  | 346.8  |
| 50°   | 300.4  | 300.4  | 303.7  | 300.4  | 300.4  | 300.4  | 300.4  | 300.4  |
| 52.5° | 255.6  | 257.2  | 257.2  | 253.9  | 255.6  | 253.9  | 255.6  | 253.9  |
| 55°   | 214.1  | 214.1  | 215.7  | 214.1  | 214.1  | 214.1  | 214.1  | 214.1  |
| 57.5° | 177.6  | 179.2  | 179.2  | 177.6  | 179.2  | 177.6  | 177.6  | 177.6  |
| 60°   | 147.7  | 147.7  | 147.7  | 146.0  | 147.7  | 146.0  | 147.7  | 146.0  |
| 62.5° | 119.5  | 121.1  | 121.1  | 119.5  | 121.1  | 119.5  | 119.5  | 119.5  |
| 65°   | 97.9   | 97.9   | 97.9   | 97.9   | 97.9   | 97.9   | 97.9   | 96.3   |
| 67.5° | 78.0   | 78.0   | 79.7   | 78.0   | 79.7   | 79.7   | 79.7   | 79.7   |
| 70°   | 63.1   | 63.1   | 63.1   | 63.1   | 63.1   | 63.1   | 63.1   | 63.1   |
| 72.5° | 48.1   | 48.1   | 49.8   | 48.1   | 48.1   | 48.1   | 48.1   | 48.1   |
| 75°   | 36.5   | 36.5   | 36.5   | 36.5   | 36.5   | 34.8   | 34.8   | 36.5   |
| 77.5° | 24.9   | 24.9   | 24.9   | 24.9   | 24.9   | 24.9   | 24.9   | 26.6   |
| 80°   | 16.6   | 16.6   | 16.6   | 16.6   | 14.9   | 14.9   | 16.6   | 14.9   |
| 82.5° | 8.3    | 8.3    | 8.3    | 8.3    | 8.3    | 8.3    | 8.3    | 8.3    |
| 85°   | 5.0    | 5.0    | 3.3    | 3.3    | 3.3    | 3.3    | 3.3    | 3.3    |
| 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)