

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: P1191563

Luminaire Tested: **LDA4A15940D010TE LAR15SP 4LA1 30° Tilt**

Issue Date: 3/3/2020

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

**Test Information**

Test Method: LM-41-14  
Report Number: P1191563  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25648)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDA4A15940D010TE LAR15SP 4LA1 30° Tilt  
Description: PORTFOLIO 4" Adjustable Reflector, Self-flanged Trim Ring, 15° Spot  
Optic, at 30° tilt  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

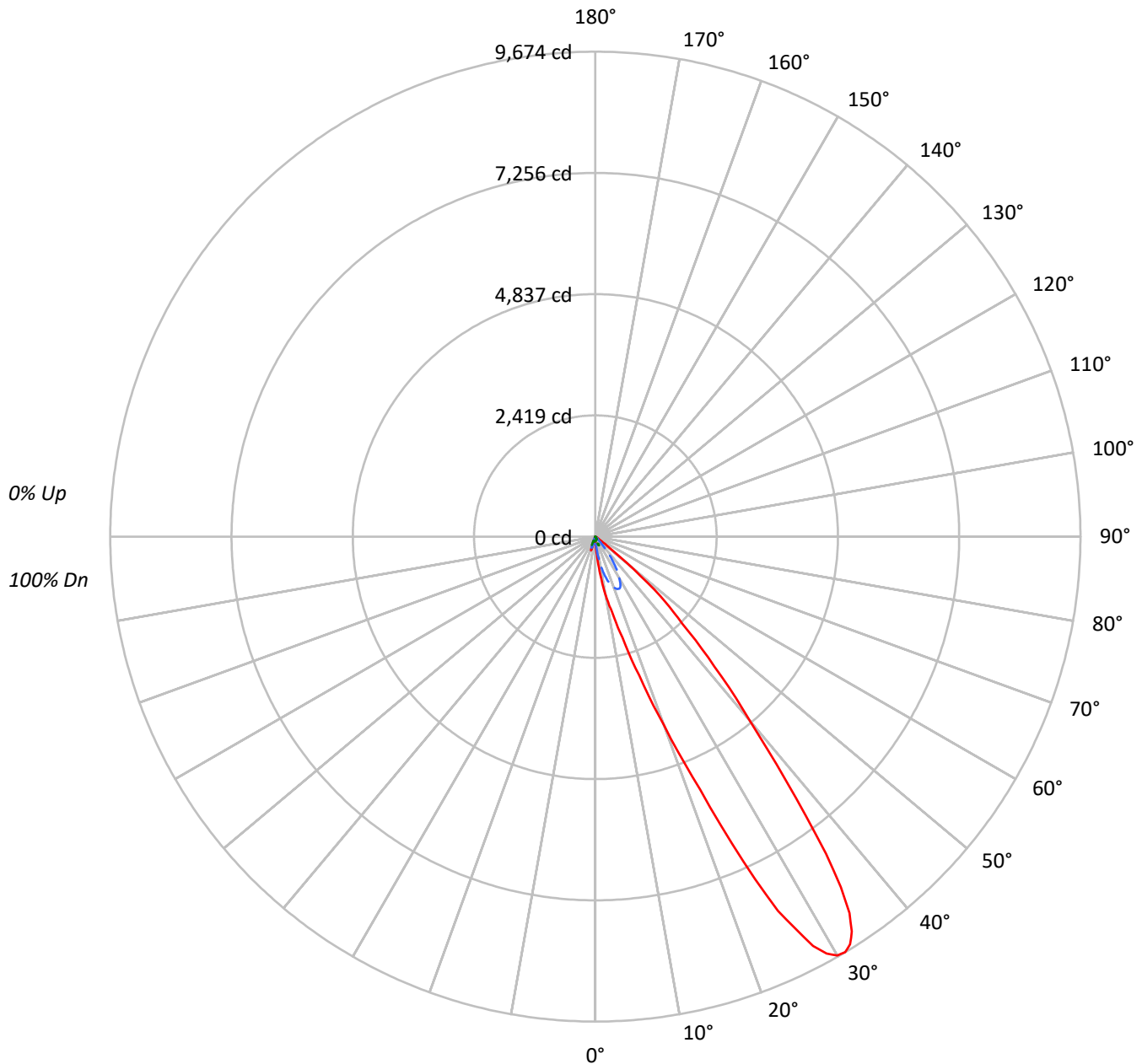
Lumens per Lamp: N/A  
Luminaire Lumens: 1560.6 lumens  
Efficiency: N/A  
Efficacy: 76.5 lumens/watt  
Spacing Criteria (0/90/45): 2.52 / 1.04 / 1.28  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 20.4  
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  |
| RCR |     |     |     |     |     |     |     |     |  |     |     |     |  |  |     |     |     |  |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 |  | 111 | 111 | 111 |  |  | 106 | 106 | 106 |  |  | 102 |
| 1   | 112 | 109 | 106 | 104 | 110 | 107 | 104 | 102 |  | 103 | 101 | 99  |  |  | 99  | 98  | 96  |  |  | 96  |
| 2   | 106 | 100 | 95  | 91  | 103 | 98  | 94  | 90  |  | 95  | 91  | 88  |  |  | 92  | 89  | 86  |  |  | 89  |
| 3   | 99  | 91  | 85  | 80  | 97  | 90  | 84  | 80  |  | 87  | 82  | 78  |  |  | 84  | 80  | 77  |  |  | 82  |
| 4   | 92  | 83  | 77  | 71  | 90  | 82  | 76  | 71  |  | 80  | 74  | 70  |  |  | 78  | 73  | 69  |  |  | 76  |
| 5   | 86  | 76  | 69  | 64  | 84  | 75  | 68  | 63  |  | 73  | 67  | 63  |  |  | 71  | 66  | 62  |  |  | 70  |
| 6   | 80  | 69  | 62  | 57  | 79  | 69  | 62  | 57  |  | 67  | 61  | 56  |  |  | 65  | 60  | 56  |  |  | 64  |
| 7   | 75  | 64  | 56  | 51  | 73  | 63  | 56  | 51  |  | 62  | 55  | 51  |  |  | 60  | 55  | 50  |  |  | 59  |
| 8   | 70  | 58  | 51  | 46  | 69  | 58  | 51  | 46  |  | 57  | 50  | 46  |  |  | 55  | 50  | 46  |  |  | 54  |
| 9   | 65  | 54  | 47  | 42  | 64  | 53  | 46  | 42  |  | 52  | 46  | 41  |  |  | 51  | 45  | 41  |  |  | 50  |
| 10  | 61  | 49  | 42  | 38  | 60  | 49  | 42  | 38  |  | 48  | 42  | 38  |  |  | 47  | 41  | 37  |  |  | 46  |

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

|     | 0°      | 90°   | 180°  |
|-----|---------|-------|-------|
| 0°  | 11237   | 11237 | 11237 |
| 5°  | 50369   | 10549 | 6835  |
| 10° | 149083  | 9707  | 8730  |
| 15° | 266158  | 11505 | 24607 |
| 20° | 527226  | 22630 | 26436 |
| 25° | 1025939 | 14767 | 7513  |
| 30° | 1374252 | 5512  | 2621  |
| 35° | 1285899 | 2334  | 1024  |
| 40° | 770576  | 1095  | 306   |
| 45° | 427615  | 663   | 0     |
| 50° | 156871  | 556   | 0     |
| 55° | 23956   | 409   | 0     |
| 60° | 5255    | 469   | 0     |
| 65° | 1722    | 555   | 0     |
| 70° | 361     | 685   | 0     |
| 75° | 0       | 1382  | 0     |
| 80° | 0       | 2060  | 0     |
| 85° | 0       | 4104  | 0     |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 20.0   | 1.3       |
| 10°-20°   | 168.6  | 10.8      |
| 20°-30°   | 503.2  | 32.2      |
| 30°-40°   | 595.9  | 38.2      |
| 40°-50°   | 247.2  | 15.8      |
| 50°-60°   | 19.2   | 1.2       |
| 60°-70°   | 2.6    | 0.2       |
| 70°-80°   | 2.0    | 0.1       |
| 80°-90°   | 1.8    | 0.1       |
| 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°    | 691.8  | 44.3      |
| 0°-40°    | 1287.7 | 82.5      |
| 0°-60°    | 1554.2 | 99.6      |
| 0°-90°    | 1560.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1560.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45°  | 90° | 135° | 180° | Flux |
|-----|------|------|-----|------|------|------|
| 0°  | 91   | 91   | 91  | 91   | 91   |      |
| 5°  | 407  | 205  | 85  | 59   | 55   | 64   |
| 15° | 2084 | 880  | 90  | 135  | 193  | 688  |
| 25° | 7538 | 1144 | 108 | 63   | 55   | 3443 |
| 35° | 8540 | 637  | 16  | 9    | 7    | 4949 |
| 45° | 2451 | 56   | 4   | 3    | 0    | 1998 |
| 55° | 111  | 8    | 2   | 1    | 0    | 163  |
| 65° | 6    | 2    | 2   | 2    | 0    | 7    |
| 75° | 0    | 2    | 3   | 2    | 0    | 0    |
| 85° | 0    | 2    | 3   | 2    | 0    | 0    |
| 90° | 0    | 0    | 0   | 0    | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 2.5°   | 5°     | 7.5°   | 10°    | 12.5°  | 15°    | 17.5°  | 20°    | 22.5°  | 25°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 91.1   | 91.1   | 91.1   | 91.1   | 91.1   | 91.1   | 91.1   | 91.1   | 91.1   | 91.1   | 91.1   |
| 2.5°  | 157.9  | 150.1  | 154.0  | 147.3  | 151.1  | 144.3  | 139.5  | 144.3  | 144.3  | 140.5  | 134.6  |
| 5°    | 406.8  | 404.9  | 412.6  | 394.2  | 399.0  | 378.7  | 361.2  | 366.1  | 362.2  | 349.6  | 327.4  |
| 7.5°  | 774.8  | 767.0  | 775.8  | 749.7  | 750.7  | 716.7  | 690.5  | 696.4  | 679.0  | 657.7  | 619.0  |
| 10°   | 1190.3 | 1179.7 | 1189.4 | 1158.4 | 1152.5 | 1105.1 | 1068.3 | 1074.1 | 1034.5 | 999.5  | 940.5  |
| 12.5° | 1550.7 | 1549.6 | 1518.7 | 1524.5 | 1513.0 | 1440.3 | 1417.0 | 1419.0 | 1364.7 | 1326.0 | 1255.2 |
| 15°   | 2084.3 | 2104.6 | 2110.5 | 2070.8 | 1999.1 | 1867.4 | 1809.3 | 1787.1 | 1698.8 | 1633.9 | 1532.3 |
| 17.5° | 2904.7 | 2932.8 | 2836.9 | 2860.2 | 2742.0 | 2535.7 | 2420.5 | 2351.7 | 2186.1 | 2064.0 | 1880.1 |
| 20°   | 4016.6 | 3992.5 | 3853.9 | 3836.5 | 3635.1 | 3369.7 | 3127.5 | 2997.7 | 2743.0 | 2564.7 | 2296.5 |
| 22.5° | 5452.1 | 5433.7 | 5196.4 | 5090.7 | 4669.5 | 4295.6 | 3981.8 | 3656.3 | 3277.6 | 3039.4 | 2675.2 |
| 25°   | 7538.3 | 7454.1 | 6997.0 | 6696.7 | 5955.7 | 5320.4 | 4797.3 | 4291.8 | 3711.6 | 3453.0 | 2989.9 |
| 26°   | 8306.5 | 8286.2 | 7809.6 | 7414.4 | 6521.3 | 5733.0 | 5027.9 | 4521.3 | 3882.0 | 3579.8 | 3079.1 |
| 27°   | 8767.5 | 8929.3 | 8485.7 | 8038.1 | 7061.9 | 6117.4 | 5300.1 | 4706.3 | 4014.7 | 3668.9 | 3136.2 |
| 28°   | 9245.9 | 9350.5 | 8953.4 | 8391.7 | 7494.8 | 6423.6 | 5506.2 | 4831.2 | 4096.1 | 3712.5 | 3155.6 |
| 29°   | 9509.3 | 9610.1 | 9241.1 | 8714.2 | 7778.6 | 6622.1 | 5628.3 | 4886.5 | 4126.1 | 3711.6 | 3138.1 |
| 30°   | 9648.8 | 9742.8 | 9382.5 | 8871.2 | 7895.7 | 6684.0 | 5654.5 | 4864.1 | 4097.1 | 3667.0 | 3088.8 |
| 31°   | 9674.1 | 9752.5 | 9397.0 | 8866.3 | 7851.2 | 6607.5 | 5580.8 | 4772.2 | 4019.6 | 3584.6 | 3014.2 |
| 32°   | 9588.8 | 9649.8 | 9288.6 | 8722.9 | 7650.7 | 6413.9 | 5427.8 | 4629.7 | 3901.4 | 3482.1 | 2918.3 |
| 33°   | 9389.3 | 9498.7 | 9058.0 | 8433.3 | 7302.0 | 6127.1 | 5210.9 | 4443.8 | 3754.1 | 3348.3 | 2801.1 |
| 34°   | 9059.1 | 9128.8 | 8672.6 | 7980.0 | 6837.2 | 5778.4 | 4944.6 | 4227.8 | 3585.7 | 3190.5 | 2668.4 |
| 35°   | 8539.8 | 8601.8 | 8097.2 | 7367.9 | 6307.2 | 5385.3 | 4640.5 | 3989.5 | 3396.8 | 3013.2 | 2521.2 |
| 36°   | 7821.2 | 7880.2 | 7352.3 | 6688.0 | 5772.7 | 4975.5 | 4319.9 | 3730.0 | 3192.4 | 2823.4 | 2365.2 |
| 37°   | 6981.4 | 7032.7 | 6563.1 | 6020.6 | 5247.7 | 4561.0 | 3995.3 | 3466.5 | 2976.4 | 2629.6 | 2217.0 |
| 38°   | 6169.8 | 6216.3 | 5836.7 | 5395.0 | 4741.1 | 4156.1 | 3671.9 | 3193.4 | 2753.6 | 2434.9 | 2061.1 |
| 39°   | 5437.5 | 5478.2 | 5172.2 | 4807.9 | 4258.8 | 3767.7 | 3349.4 | 2922.1 | 2530.0 | 2240.3 | 1900.4 |
| 40°   | 4785.7 | 4820.6 | 4568.7 | 4269.4 | 3821.1 | 3404.5 | 3035.5 | 2659.6 | 2311.0 | 2051.5 | 1750.2 |
| 42.5° | 3513.0 | 3520.8 | 3370.6 | 3194.3 | 2845.6 | 2606.5 | 2344.0 | 2072.7 | 1818.0 | 1639.8 | 1448.0 |
| 45°   | 2451.4 | 2547.3 | 2449.5 | 2332.4 | 2082.4 | 1932.3 | 1764.7 | 1601.0 | 1453.8 | 1282.4 | 1092.5 |
| 47.5° | 1762.8 | 1766.7 | 1708.5 | 1635.0 | 1437.4 | 1334.7 | 1197.1 | 998.6  | 852.3  | 609.3  | 452.3  |
| 50°   | 817.5  | 772.0  | 774.8  | 724.5  | 646.1  | 513.3  | 429.1  | 306.0  | 244.1  | 174.4  | 140.5  |
| 51°   | 486.3  | 452.3  | 457.2  | 421.4  | 369.0  | 287.7  | 244.1  | 195.7  | 169.5  | 131.7  | 108.5  |
| 52°   | 283.8  | 272.2  | 271.2  | 254.7  | 217.0  | 199.5  | 176.3  | 147.3  | 128.9  | 101.7  | 84.3   |
| 53°   | 206.3  | 198.5  | 198.5  | 187.9  | 161.7  | 150.1  | 133.6  | 113.3  | 98.7   | 77.5   | 64.0   |
| 54°   | 154.0  | 148.2  | 148.2  | 141.4  | 130.8  | 112.4  | 100.8  | 84.3   | 73.6   | 60.0   | 47.5   |
| 55°   | 111.4  | 107.5  | 107.5  | 102.7  | 94.9   | 81.4   | 72.7   | 61.0   | 54.3   | 43.6   | 34.9   |
| 57.5° | 46.5   | 44.6   | 44.6   | 42.7   | 40.6   | 34.9   | 32.9   | 28.1   | 24.3   | 21.3   | 17.5   |
| 60°   | 21.3   | 20.3   | 21.3   | 20.3   | 18.4   | 19.4   | 16.5   | 14.6   | 13.5   | 11.6   | 9.7    |
| 61°   | 16.5   | 15.5   | 15.5   | 15.5   | 13.5   | 13.5   | 12.5   | 11.6   | 10.6   | 8.7    | 7.8    |
| 62°   | 12.5   | 11.6   | 11.6   | 11.6   | 10.6   | 10.6   | 9.7    | 8.7    | 8.7    | 6.8    | 5.9    |
| 63°   | 9.7    | 8.7    | 8.7    | 8.7    | 7.8    | 7.8    | 7.8    | 6.8    | 6.8    | 5.9    | 4.9    |
| 64°   | 6.8    | 6.8    | 6.8    | 6.8    | 6.8    | 5.9    | 5.9    | 5.9    | 4.9    | 3.8    | 3.8    |
| 65°   | 5.9    | 4.9    | 5.9    | 4.9    | 4.9    | 4.9    | 4.9    | 4.9    | 3.8    | 2.9    | 2.9    |
| 66°   | 3.8    | 3.8    | 3.8    | 3.8    | 3.8    | 3.8    | 3.8    | 3.8    | 3.8    | 2.9    | 1.9    |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 2.5° | 5°  | 7.5° | 10° | 12.5° | 15° | 17.5° | 20° | 22.5° | 25° |
|-------|-----|------|-----|------|-----|-------|-----|-------|-----|-------|-----|
| 72.5° | 0.0 | 0.0  | 0.0 | 0.0  | 1.0 | 1.0   | 1.0 | 1.0   | 1.0 | 1.0   | 1.0 |
| 75°   | 0.0 | 0.0  | 0.0 | 0.0  | 0.0 | 1.0   | 1.0 | 1.0   | 1.0 | 1.0   | 1.0 |
| 77.5° | 0.0 | 0.0  | 0.0 | 0.0  | 0.0 | 0.0   | 1.0 | 1.0   | 1.0 | 1.0   | 1.0 |
| 80°   | 0.0 | 0.0  | 0.0 | 0.0  | 0.0 | 0.0   | 1.0 | 1.0   | 1.0 | 1.0   | 1.0 |
| 82.5° | 0.0 | 0.0  | 0.0 | 0.0  | 0.0 | 0.0   | 1.0 | 1.0   | 1.0 | 1.0   | 1.0 |
| 85°   | 0.0 | 0.0  | 0.0 | 0.0  | 0.0 | 1.0   | 1.0 | 1.0   | 1.0 | 1.0   | 1.0 |
| 87.5° | 0.0 | 0.0  | 0.0 | 0.0  | 0.0 | 0.0   | 1.0 | 1.0   | 1.0 | 1.0   | 1.0 |
| 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):**

|       | 27.5°  | 30°    | 32.5°  | 35°    | 37.5°  | 40°    | 42.5°  | 45°    | 67.5° | 90°   | 112.5° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|--------|
| 0°    | 91.1   | 91.1   | 91.1   | 91.1   | 91.1   | 91.1   | 91.1   | 91.1   | 91.1  | 91.1  | 91.1   |
| 2.5°  | 131.7  | 135.5  | 132.7  | 124.9  | 128.9  | 126.8  | 123.0  | 120.1  | 102.7 | 89.0  | 75.5   |
| 5°    | 310.9  | 313.8  | 297.4  | 268.2  | 258.5  | 243.1  | 220.8  | 205.4  | 116.2 | 85.2  | 66.8   |
| 7.5°  | 587.9  | 568.5  | 553.1  | 498.8  | 475.5  | 439.8  | 397.1  | 367.1  | 132.7 | 80.5  | 62.0   |
| 10°   | 890.0  | 859.1  | 827.2  | 747.7  | 706.1  | 650.9  | 589.9  | 555.0  | 150.1 | 77.5  | 62.0   |
| 12.5° | 1189.4 | 1147.8 | 1089.7 | 1002.4 | 943.4  | 868.8  | 785.5  | 723.5  | 162.7 | 79.4  | 71.7   |
| 15°   | 1449.0 | 1398.5 | 1334.7 | 1235.9 | 1167.1 | 1074.1 | 965.6  | 880.4  | 168.5 | 90.1  | 99.8   |
| 17.5° | 1731.8 | 1640.7 | 1535.2 | 1409.3 | 1333.8 | 1226.2 | 1104.1 | 1000.5 | 168.5 | 114.3 | 159.8  |
| 20°   | 2057.2 | 1890.7 | 1721.2 | 1544.9 | 1438.4 | 1326.0 | 1195.2 | 1083.8 | 175.4 | 172.4 | 219.8  |
| 22.5° | 2360.5 | 2130.8 | 1891.6 | 1662.0 | 1513.9 | 1391.9 | 1259.2 | 1131.3 | 203.5 | 189.8 | 146.3  |
| 25°   | 2595.8 | 2304.3 | 2022.4 | 1743.4 | 1575.8 | 1440.3 | 1297.9 | 1143.8 | 186.0 | 108.5 | 79.4   |
| 26°   | 2656.8 | 2342.1 | 2048.5 | 1753.1 | 1578.8 | 1439.3 | 1294.0 | 1130.3 | 156.0 | 86.2  | 64.0   |
| 27°   | 2688.7 | 2354.6 | 2050.5 | 1744.4 | 1567.1 | 1422.8 | 1272.7 | 1102.2 | 124.9 | 69.7  | 52.4   |
| 28°   | 2688.7 | 2340.0 | 2030.1 | 1720.2 | 1537.1 | 1391.9 | 1235.9 | 1057.6 | 101.7 | 57.1  | 41.6   |
| 29°   | 2661.7 | 2302.2 | 1989.4 | 1683.4 | 1496.5 | 1348.2 | 1185.5 | 1005.4 | 86.2  | 47.5  | 34.0   |
| 30°   | 2609.3 | 2247.1 | 1935.1 | 1636.0 | 1444.1 | 1298.9 | 1130.3 | 951.1  | 74.6  | 38.7  | 27.1   |
| 31°   | 2535.7 | 2185.1 | 1868.3 | 1584.5 | 1395.7 | 1253.3 | 1080.0 | 895.9  | 64.9  | 31.0  | 22.2   |
| 32°   | 2447.6 | 2107.6 | 1799.6 | 1531.4 | 1356.0 | 1210.8 | 1027.6 | 837.8  | 56.2  | 26.2  | 19.4   |
| 33°   | 2345.9 | 2020.4 | 1727.9 | 1479.0 | 1317.3 | 1162.2 | 970.5  | 774.8  | 48.4  | 21.3  | 16.5   |
| 34°   | 2233.5 | 1924.5 | 1654.4 | 1422.8 | 1269.8 | 1101.3 | 903.7  | 708.0  | 41.6  | 18.4  | 13.5   |
| 35°   | 2111.5 | 1817.1 | 1578.8 | 1365.7 | 1216.5 | 1033.5 | 832.0  | 637.4  | 35.9  | 15.5  | 11.6   |
| 36°   | 1979.7 | 1716.3 | 1505.2 | 1308.5 | 1150.6 | 959.9  | 753.5  | 564.7  | 31.0  | 12.5  | 10.6   |
| 37°   | 1848.0 | 1621.4 | 1432.5 | 1247.5 | 1074.1 | 876.5  | 671.2  | 489.1  | 27.1  | 10.6  | 8.7    |
| 38°   | 1723.1 | 1529.3 | 1360.8 | 1176.8 | 985.1  | 784.5  | 586.0  | 413.6  | 23.2  | 9.7   | 7.8    |
| 39°   | 1605.8 | 1440.3 | 1287.3 | 1092.5 | 893.0  | 695.5  | 503.6  | 335.2  | 20.3  | 8.7   | 6.8    |
| 40°   | 1500.3 | 1356.0 | 1206.8 | 998.6  | 798.1  | 604.4  | 420.4  | 250.0  | 17.5  | 6.8   | 5.9    |
| 42.5° | 1277.6 | 1124.5 | 927.8  | 696.4  | 539.5  | 350.6  | 195.7  | 93.0   | 12.5  | 4.9   | 4.9    |
| 45°   | 843.7  | 649.0  | 440.7  | 262.5  | 177.3  | 106.5  | 79.4   | 56.2   | 9.7   | 3.8   | 3.8    |
| 47.5° | 281.9  | 179.2  | 130.8  | 94.0   | 80.5   | 64.0   | 51.3   | 34.9   | 6.8   | 2.9   | 2.9    |
| 50°   | 107.5  | 87.1   | 71.7   | 54.3   | 48.4   | 38.7   | 31.0   | 20.3   | 4.9   | 2.9   | 2.9    |
| 51°   | 84.3   | 68.7   | 56.2   | 42.7   | 38.7   | 31.0   | 25.2   | 17.5   | 3.8   | 2.9   | 2.9    |
| 52°   | 64.9   | 53.3   | 43.6   | 32.9   | 31.0   | 25.2   | 21.3   | 14.6   | 3.8   | 1.9   | 2.9    |
| 53°   | 49.4   | 40.6   | 32.9   | 25.2   | 24.3   | 20.3   | 17.5   | 11.6   | 2.9   | 1.9   | 2.9    |
| 54°   | 36.8   | 31.0   | 26.2   | 20.3   | 20.3   | 17.5   | 14.6   | 9.7    | 2.9   | 1.9   | 2.9    |
| 55°   | 28.1   | 23.2   | 20.3   | 15.5   | 16.5   | 14.6   | 12.5   | 7.8    | 2.9   | 1.9   | 2.9    |
| 57.5° | 14.6   | 13.5   | 11.6   | 9.7    | 10.6   | 9.7    | 8.7    | 4.9    | 2.9   | 1.9   | 2.9    |
| 60°   | 8.7    | 7.8    | 6.8    | 5.9    | 6.8    | 6.8    | 6.8    | 2.9    | 2.9   | 1.9   | 2.9    |
| 61°   | 6.8    | 5.9    | 4.9    | 4.9    | 5.9    | 5.9    | 5.9    | 2.9    | 2.9   | 1.9   | 2.9    |
| 62°   | 4.9    | 4.9    | 3.8    | 3.8    | 5.9    | 4.9    | 4.9    | 2.9    | 2.9   | 1.9   | 2.9    |
| 63°   | 3.8    | 3.8    | 3.8    | 2.9    | 4.9    | 4.9    | 4.9    | 2.9    | 2.9   | 1.9   | 2.9    |
| 64°   | 2.9    | 2.9    | 2.9    | 2.9    | 3.8    | 4.9    | 4.9    | 1.9    | 2.9   | 1.9   | 2.9    |
| 65°   | 2.9    | 2.9    | 1.9    | 1.9    | 3.8    | 3.8    | 3.8    | 1.9    | 2.9   | 1.9   | 2.9    |
| 66°   | 1.9    | 1.9    | 1.9    | 1.9    | 3.8    | 3.8    | 3.8    | 1.9    | 2.9   | 1.9   | 2.9    |



TEST NUMBER: P1191563

CATALOG NUMBER: LDA4A15940D010TE LAR15SP 4LA1 30° Tilt

**CANDELA DISTRIBUTION (continued):**

|       | 27.5° | 30° | 32.5° | 35° | 37.5° | 40° | 42.5° | 45° | 67.5° | 90° | 112.5° |
|-------|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|--------|
| 72.5° | 1.0   | 1.0 | 1.0   | 1.0 | 2.9   | 2.9 | 3.8   | 1.9 | 2.9   | 2.9 | 2.9    |
| 75°   | 1.0   | 1.0 | 1.0   | 1.0 | 2.9   | 2.9 | 3.8   | 1.9 | 2.9   | 2.9 | 2.9    |
| 77.5° | 1.0   | 1.0 | 1.0   | 1.0 | 2.9   | 2.9 | 3.8   | 1.9 | 2.9   | 2.9 | 3.8    |
| 80°   | 1.0   | 1.0 | 1.0   | 1.0 | 2.9   | 2.9 | 3.8   | 1.9 | 2.9   | 2.9 | 3.8    |
| 82.5° | 1.0   | 1.0 | 1.0   | 1.0 | 2.9   | 2.9 | 3.8   | 1.9 | 2.9   | 2.9 | 3.8    |
| 85°   | 1.0   | 1.0 | 1.0   | 1.0 | 2.9   | 2.9 | 3.8   | 1.9 | 2.9   | 2.9 | 3.8    |
| 87.5° | 1.0   | 1.0 | 1.0   | 1.0 | 2.9   | 2.9 | 3.8   | 1.9 | 2.9   | 2.9 | 2.9    |
| 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: P1191563

CATALOG NUMBER: LDA4A15940D010TE LAR15SP 4LA1 30° Tilt

**CANDELA DISTRIBUTION (continued):**

|       | 135°  | 157.5° | 180°  |
|-------|-------|--------|-------|
| 0°    | 91.1  | 91.1   | 91.1  |
| 2.5°  | 68.7  | 65.9   | 64.0  |
| 5°    | 59.0  | 56.2   | 55.2  |
| 7.5°  | 55.2  | 54.3   | 55.2  |
| 10°   | 61.0  | 64.9   | 69.7  |
| 12.5° | 81.4  | 95.9   | 103.6 |
| 15°   | 134.6 | 175.4  | 192.7 |
| 17.5° | 237.3 | 270.3  | 289.6 |
| 20°   | 209.2 | 190.8  | 201.4 |
| 22.5° | 113.3 | 98.7   | 101.7 |
| 25°   | 63.0  | 54.3   | 55.2  |
| 26°   | 50.3  | 43.6   | 43.6  |
| 27°   | 40.6  | 34.9   | 34.9  |
| 28°   | 32.9  | 28.1   | 28.1  |
| 29°   | 26.2  | 22.2   | 22.2  |
| 30°   | 21.3  | 18.4   | 18.4  |
| 31°   | 17.5  | 14.6   | 14.6  |
| 32°   | 14.6  | 12.5   | 11.6  |
| 33°   | 12.5  | 10.6   | 9.7   |
| 34°   | 10.6  | 8.7    | 7.8   |
| 35°   | 8.7   | 6.8    | 6.8   |
| 36°   | 7.8   | 5.9    | 5.9   |
| 37°   | 6.8   | 4.9    | 4.9   |
| 38°   | 5.9   | 3.8    | 3.8   |
| 39°   | 4.9   | 3.8    | 2.9   |
| 40°   | 3.8   | 2.9    | 1.9   |
| 42.5° | 2.9   | 1.9    | 1.0   |
| 45°   | 2.9   | 1.0    | 0.0   |
| 47.5° | 1.9   | 1.0    | 0.0   |
| 50°   | 1.9   | 0.0    | 0.0   |
| 51°   | 1.9   | 0.0    | 0.0   |
| 52°   | 1.9   | 0.0    | 0.0   |
| 53°   | 1.0   | 0.0    | 0.0   |
| 54°   | 1.9   | 0.0    | 0.0   |
| 55°   | 1.0   | 0.0    | 0.0   |
| 57.5° | 1.9   | 0.0    | 0.0   |
| 60°   | 1.9   | 0.0    | 0.0   |
| 61°   | 1.9   | 0.0    | 0.0   |
| 62°   | 1.9   | 0.0    | 0.0   |
| 63°   | 1.9   | 0.0    | 0.0   |
| 64°   | 1.9   | 1.0    | 0.0   |
| 65°   | 1.9   | 1.0    | 0.0   |
| 66°   | 1.9   | 1.0    | 0.0   |



TEST NUMBER: P1191563

CATALOG NUMBER: LDA4A15940D010TE LAR15SP 4LA1 30° Tilt

**CANDELA DISTRIBUTION (continued):**

|       | 135° | 157.5° | 180° |
|-------|------|--------|------|
| 72.5° | 1.9  | 1.0    | 0.0  |
| 75°   | 1.9  | 1.0    | 0.0  |
| 77.5° | 1.9  | 1.0    | 0.0  |
| 80°   | 1.9  | 1.0    | 0.0  |
| 82.5° | 1.9  | 1.0    | 0.0  |
| 85°   | 1.9  | 1.0    | 0.0  |
| 87.5° | 1.9  | 1.0    | 0.0  |
| 90°   | 0.0  | 0.0    | 0.0  |

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Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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1121 Highway 74 South

Peachtree City, GA 30269

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Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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

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1121 Highway 74 South

Peachtree City, GA 30269

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Peachtree City, GA 30269

Scaled Data Report





|       |     |     |     |     |     |     |     |     |     |     |     |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 67.5° | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 1.9 | 1.9 |
| 70°   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.9 | 1.9 | 1.0 | 1.0 |

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|       |     |     |     |     |     |     |     |     |     |     |     |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 67.5° | 1.9 | 1.0 | 1.9 | 1.9 | 2.9 | 3.8 | 3.8 | 1.9 | 2.9 | 1.9 | 2.9 |
| 70°   | 1.0 | 1.0 | 1.0 | 1.0 | 2.9 | 2.9 | 3.8 | 1.9 | 2.9 | 1.9 | 2.9 |

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|       |     |     |     |
|-------|-----|-----|-----|
| 67.5° | 1.9 | 1.0 | 0.0 |
| 70°   | 1.9 | 1.0 | 0.0 |

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(END OF REPORT)