

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: P281283

Luminaire Tested: **LDA2B159035D010 EU2B15SP159035 2LBALD1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P281283  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-908-5)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDA2B159035D010 EU2B15SP159035 2LBALD1H  
Description: PORTFOLIO 2IN ADJ 1500 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in  
ADJ spun Refl w/lens Self-Flanged, LI  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1205.5 lumens  
Efficiency: N/A  
Efficacy: 85.5 lumens/watt  
Spacing Criteria (0/90/45): 0.33 / 0.31 / 0.32  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

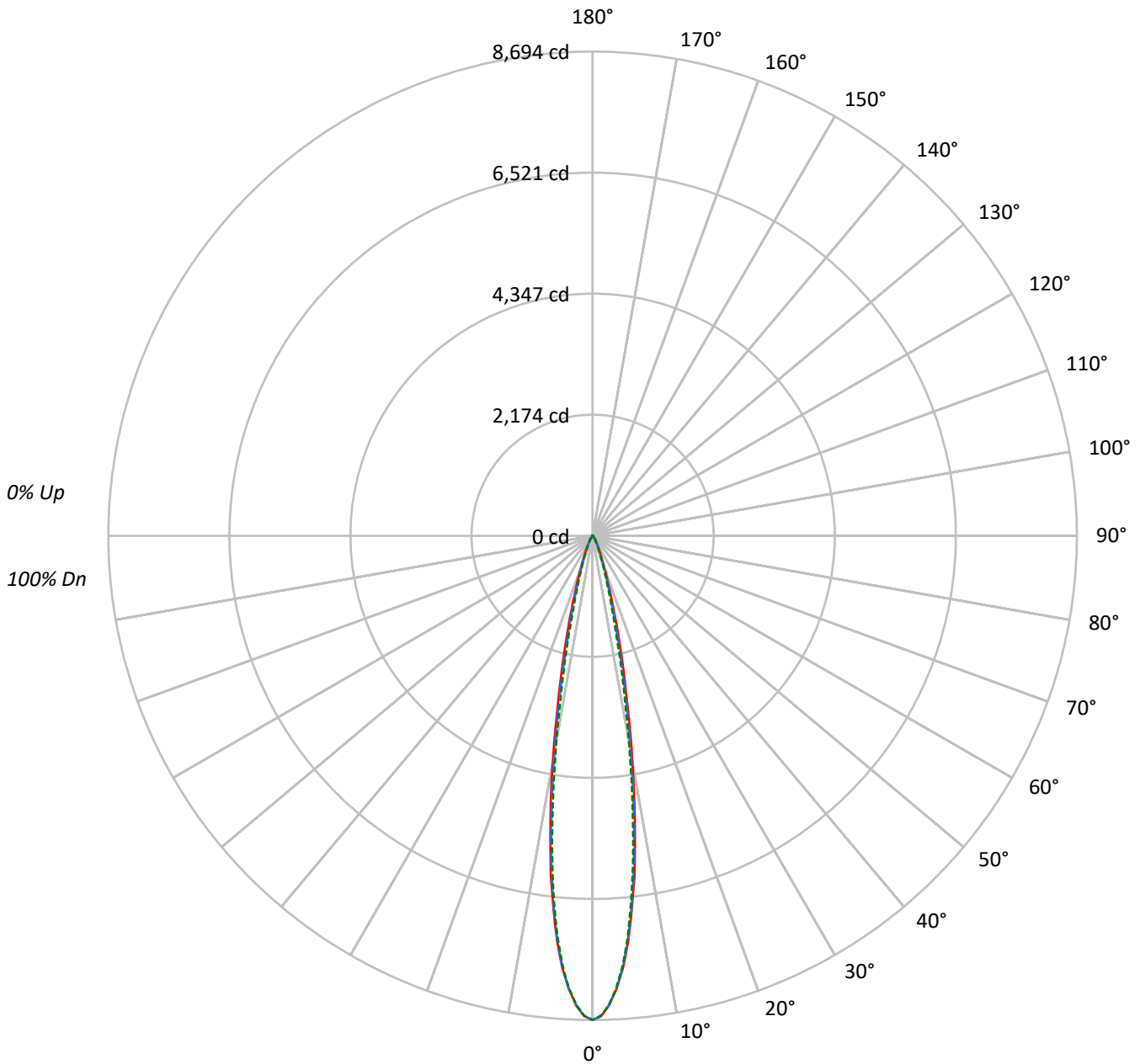
Input Watts (W): 14.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |   |     |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|-----|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF  | 20  |     |     |     |     |     |     |     |     | 20  |     |     |     |     |     |     |     |     | 20 |    |   |     |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |   |
| 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 |    |    |   | 100 |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 1   | 115 | 113 | 111 | 110 | 113 | 111 | 110 | 108 | 107 | 106 | 105 | 104 | 103 | 102 | 100 | 99  | 99  | 97  |    |    |   | 97  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 112 | 108 | 106 | 103 | 110 | 107 | 104 | 102 | 104 | 102 | 100 | 101 | 99  | 98  | 98  | 97  | 96  | 95  |    |    |   | 95  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 109 | 104 | 101 | 98  | 107 | 103 | 100 | 98  | 101 | 98  | 96  | 98  | 96  | 95  | 96  | 95  | 93  | 92  |    |    |   | 92  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 106 | 101 | 97  | 95  | 104 | 100 | 97  | 94  | 98  | 95  | 93  | 96  | 94  | 92  | 94  | 93  | 91  | 90  |    |    |   | 90  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 103 | 98  | 94  | 91  | 102 | 97  | 93  | 91  | 95  | 92  | 90  | 94  | 91  | 89  | 93  | 90  | 89  | 88  |    |    |   | 88  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 101 | 95  | 91  | 89  | 99  | 94  | 91  | 88  | 93  | 90  | 88  | 92  | 89  | 87  | 91  | 88  | 87  | 86  |    |    |   | 86  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 98  | 92  | 89  | 86  | 97  | 92  | 88  | 86  | 91  | 88  | 85  | 90  | 87  | 85  | 89  | 87  | 85  | 84  |    |    |   | 84  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 96  | 90  | 86  | 84  | 95  | 90  | 86  | 84  | 89  | 86  | 83  | 88  | 85  | 83  | 87  | 85  | 83  | 82  |    |    |   | 82  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 94  | 88  | 84  | 82  | 93  | 88  | 84  | 82  | 87  | 84  | 82  | 86  | 83  | 81  | 86  | 83  | 81  | 80  |    |    |   | 80  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 92  | 86  | 83  | 80  | 91  | 86  | 82  | 80  | 85  | 82  | 80  | 85  | 82  | 80  | 84  | 81  | 80  | 79  |    |    |   | 79  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°      | 45°     | 90°     |
|-----|---------|---------|---------|
| 0°  | 4289337 | 4289337 | 4289337 |
| 5°  | 3624064 | 3604750 | 3578155 |
| 10° | 2062805 | 1971979 | 1871684 |
| 15° | 854205  | 756648  | 666549  |
| 20° | 324938  | 284563  | 260517  |
| 25° | 143549  | 137888  | 122591  |
| 30° | 66425   | 73375   | 58393   |
| 35° | 34932   | 41196   | 32704   |
| 40° | 15328   | 17711   | 10240   |
| 45° | 5931    | 4675    | 6838    |
| 50° | 2840    | 3300    | 4682    |
| 55° | 0       | 2064    | 0       |
| 60° | 0       | 0       | 1184    |
| 65° | 0       | 0       | 0       |
| 70° | 0       | 865     | 0       |
| 75° | 0       | 0       | 0       |
| 80° | 3409    | 0       | 0       |
| 85° | 34530   | 31134   | 13586   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 581.3  | 48.2      |
| 10°-20°   | 444.4  | 36.9      |
| 20°-30°   | 123.6  | 10.3      |
| 30°-40°   | 40.2   | 3.3       |
| 40°-50°   | 8.9    | 0.7       |
| 50°-60°   | 2.7    | 0.2       |
| 60°-70°   | 1.6    | 0.1       |
| 70°-80°   | 0.9    | 0.1       |
| 80°-90°   | 2.0    | 0.2       |
| 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°    | 1149.3 | 95.3      |
| 0°-40°    | 1189.5 | 98.7      |
| 0°-60°    | 1201.0 | 99.6      |
| 0°-90°    | 1205.5 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1205.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 8694 | 8694  | 8694 | 8694  | 8694 |      |
| 5°  | 7318 | 7264  | 7279 | 7224  | 7225 | 592  |
| 15° | 1672 | 1614  | 1481 | 1367  | 1305 | 488  |
| 25° | 264  | 267   | 253  | 239   | 225  | 132  |
| 35° | 58   | 63    | 68   | 52    | 54   | 38   |
| 45° | 8    | 12    | 7    | 7     | 10   | 9    |
| 55° | 0    | 4     | 2    | 1     | 0    | 2    |
| 65° | 0    | 2     | 0    | 0     | 0    | 2    |
| 75° | 0    | 0     | 0    | 1     | 0    | 0    |
| 85° | 6    | 3     | 6    | 3     | 2    | 2    |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 8694.1 | 8694.1 | 8694.1 | 8694.1 | 8694.1 |
| 1°    | 8627.6 | 8595.3 | 8626.4 | 8608.1 | 8618.4 |
| 2°    | 8440.2 | 8399.9 | 8432.3 | 8406.6 | 8428.0 |
| 3°    | 8148.5 | 8117.3 | 8146.0 | 8113.7 | 8130.8 |
| 4°    | 7782.8 | 7737.7 | 7766.4 | 7723.0 | 7733.4 |
| 5°    | 7317.7 | 7264.0 | 7278.7 | 7224.4 | 7225.0 |
| 6°    | 6731.8 | 6694.6 | 6703.1 | 6618.3 | 6612.2 |
| 7°    | 6158.7 | 6070.8 | 6061.6 | 5964.6 | 5945.6 |
| 8°    | 5462.8 | 5382.9 | 5356.6 | 5242.5 | 5202.2 |
| 9°    | 4795.7 | 4696.2 | 4642.5 | 4510.0 | 4463.0 |
| 10°   | 4117.6 | 4016.9 | 3936.3 | 3786.7 | 3736.1 |
| 11°   | 3490.1 | 3399.2 | 3299.1 | 3139.1 | 3089.7 |
| 12°   | 2907.8 | 2836.4 | 2726.5 | 2572.1 | 2520.2 |
| 13°   | 2432.3 | 2349.9 | 2232.1 | 2088.7 | 2044.1 |
| 14°   | 2020.3 | 1931.8 | 1814.0 | 1691.3 | 1604.7 |
| 15°   | 1672.4 | 1614.4 | 1481.4 | 1367.2 | 1305.0 |
| 16°   | 1366.6 | 1317.2 | 1202.4 | 1103.6 | 1059.6 |
| 17°   | 1120.6 | 1081.0 | 983.3  | 905.8  | 869.2  |
| 18°   | 924.7  | 875.3  | 798.4  | 747.7  | 719.0  |
| 19°   | 750.1  | 711.7  | 655.5  | 616.5  | 587.8  |
| 20°   | 618.9  | 587.2  | 542.0  | 507.2  | 496.2  |
| 22.5° | 399.8  | 394.3  | 365.0  | 346.1  | 336.9  |
| 25°   | 263.7  | 266.7  | 253.3  | 238.7  | 225.2  |
| 26°   | 225.2  | 227.1  | 214.9  | 206.3  | 189.2  |
| 27°   | 192.9  | 193.5  | 193.5  | 177.6  | 161.1  |
| 28°   | 157.5  | 164.2  | 158.1  | 150.8  | 134.9  |
| 29°   | 134.9  | 143.4  | 140.4  | 133.1  | 117.8  |
| 30°   | 116.6  | 122.7  | 128.8  | 117.2  | 102.5  |
| 32.5° | 81.8   | 87.3   | 94.0   | 87.9   | 75.7   |
| 35°   | 58.0   | 62.9   | 68.4   | 51.9   | 54.3   |
| 37.5° | 39.7   | 48.2   | 46.4   | 42.1   | 36.0   |
| 40°   | 23.8   | 25.0   | 27.5   | 29.3   | 15.9   |
| 42.5° | 17.1   | 20.1   | 18.3   | 20.8   | 7.3    |
| 45°   | 8.5    | 12.2   | 6.7    | 6.7    | 9.8    |
| 47.5° | 6.1    | 10.4   | 3.7    | 3.7    | 1.2    |
| 50°   | 3.7    | 7.9    | 4.3    | 1.8    | 6.1    |
| 52.5° | 6.1    | 7.3    | 4.9    | 5.5    | 1.2    |
| 55°   | 0.0    | 3.7    | 2.4    | 1.2    | 0.0    |
| 57.5° | 2.4    | 4.3    | 2.4    | 1.2    | 2.4    |
| 60°   | 0.0    | 0.0    | 0.0    | 0.6    | 1.2    |
| 62.5° | 0.0    | 1.2    | 0.0    | 1.8    | 2.4    |
| 65°   | 0.0    | 2.4    | 0.0    | 0.0    | 0.0    |
| 67.5° | 3.7    | 4.3    | 2.4    | 4.9    | 7.3    |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 75°   | 0.0 | 0.0   | 0.0 | 1.2   | 0.0 |
| 77.5° | 0.0 | 6.1   | 1.8 | 1.8   | 2.4 |
| 80°   | 1.2 | 0.0   | 0.0 | 0.6   | 0.0 |
| 82.5° | 0.0 | 4.9   | 0.6 | 2.4   | 3.7 |
| 85°   | 6.1 | 3.1   | 5.5 | 3.1   | 2.4 |
| 87.5° | 0.0 | 0.6   | 1.2 | 0.6   | 0.0 |
| 90°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |



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







|       |     |     |     |     |     |
|-------|-----|-----|-----|-----|-----|
| 70°   | 0.0 | 0.0 | 0.6 | 0.6 | 0.0 |
| 72.5° | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 |



(END OF REPORT)