

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: P170541

Luminaire Tested: **LDA4A28827D010TE LAR25NF 4LAL1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P170541  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26145)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDA4A28827D010TE LAR25NF 4LAL1  
Description: PORTFOLIO 4" Lensed Adjustable, Self-flange Trim Ring, 25° Narrow Flood Optic, at 0° tilt  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2596.3 lumens  
Efficiency: N/A  
Efficacy: 58.4 lumens/watt  
Spacing Criteria (0/90/45): 0.41 / 0.41 / 0.45  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

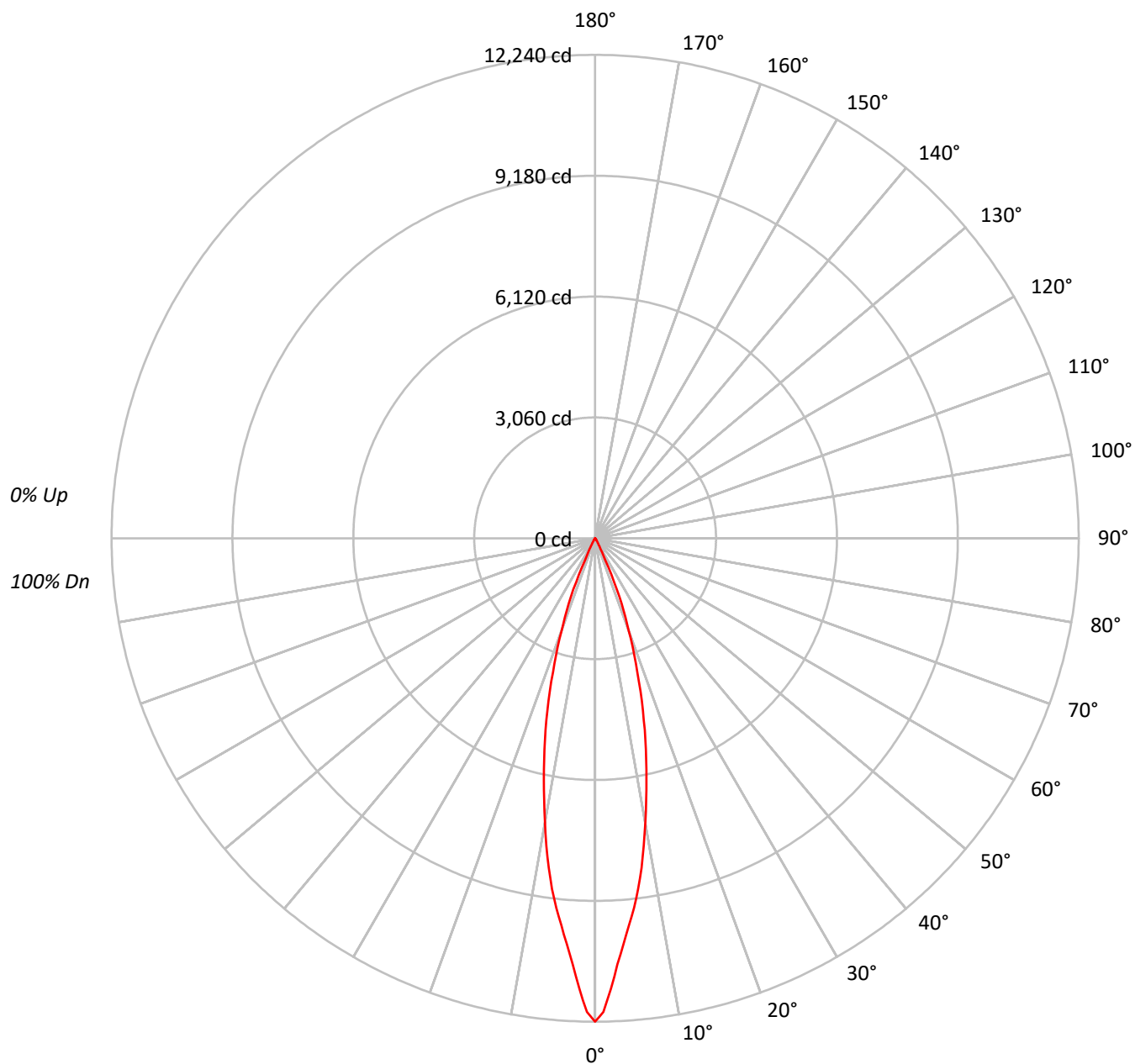
Input Watts (W): 44.49  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 115 | 113 | 111 | 109 | 113 | 111 | 109 | 108 | 107 | 106 | 104 |  | 103 | 102 | 101 |  | 100 |
| 2   | 111 | 108 | 105 | 103 | 109 | 106 | 104 | 101 | 103 | 101 | 99  |  | 100 | 99  | 97  |  | 98  |
| 3   | 108 | 103 | 100 | 97  | 106 | 102 | 99  | 96  | 100 | 97  | 95  |  | 97  | 95  | 93  |  | 95  |
| 4   | 105 | 100 | 96  | 93  | 103 | 98  | 95  | 92  | 97  | 94  | 91  |  | 95  | 92  | 90  |  | 93  |
| 5   | 102 | 96  | 92  | 89  | 100 | 95  | 91  | 89  | 94  | 90  | 88  |  | 92  | 89  | 87  |  | 91  |
| 6   | 99  | 93  | 89  | 86  | 98  | 92  | 88  | 86  | 91  | 87  | 85  |  | 90  | 87  | 84  |  | 88  |
| 7   | 96  | 90  | 86  | 83  | 95  | 89  | 85  | 83  | 88  | 85  | 82  |  | 87  | 84  | 82  |  | 86  |
| 8   | 94  | 87  | 83  | 80  | 93  | 87  | 83  | 80  | 86  | 82  | 80  |  | 85  | 82  | 80  |  | 84  |
| 9   | 91  | 85  | 81  | 78  | 90  | 84  | 80  | 78  | 83  | 80  | 78  |  | 83  | 80  | 77  |  | 82  |
| 10  | 89  | 82  | 78  | 76  | 88  | 82  | 78  | 76  | 81  | 78  | 76  |  | 81  | 78  | 75  |  | 80  |

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

|     |         |
|-----|---------|
|     | 0°      |
| 0°  | 1509812 |
| 5°  | 1217812 |
| 10° | 915353  |
| 15° | 608399  |
| 20° | 326330  |
| 25° | 82570   |
| 30° | 19598   |
| 35° | 6415    |
| 40° | 2657    |
| 45° | 1204    |
| 50° | 537     |
| 55° | 301     |
| 60° | 345     |
| 65° | 409     |
| 70° | 0       |
| 75° | 0       |
| 80° | 0       |
| 85° | 0       |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 864.5  | 33.3      |
| 10°-20°   | 1288.3 | 49.6      |
| 20°-30°   | 402.5  | 15.5      |
| 30°-40°   | 33.0   | 1.3       |
| 40°-50°   | 5.7    | 0.2       |
| 50°-60°   | 1.4    | 0.1       |
| 60°-70°   | 0.9    | 0.0       |
| 70°-80°   | 0.0    | 0.0       |
| 80°-90°   | 0.0    | 0.0       |
| 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°    | 2555.3 | 98.4      |
| 0°-40°    | 2588.3 | 99.7      |
| 0°-60°    | 2595.4 | 100.0     |
| 0°-90°    | 2596.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2596.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | Flux |
|-----|-------|------|
| 0°  | 12240 |      |
| 5°  | 9836  | 865  |
| 15° | 4764  | 1288 |
| 25° | 607   | 402  |
| 35° | 43    | 33   |
| 45° | 7     | 6    |
| 55° | 1     | 1    |
| 65° | 1     | 1    |
| 75° | 0     | 0    |
| 85° | 0     | 0    |
| 90° | 0     |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      |
|-------|---------|
| 0°    | 12240.5 |
| 1°    | 11998.4 |
| 2°    | 11413.7 |
| 3°    | 10800.1 |
| 4°    | 10293.8 |
| 5°    | 9835.6  |
| 6°    | 9407.8  |
| 7°    | 8946.9  |
| 8°    | 8424.1  |
| 9°    | 7882.0  |
| 10°   | 7308.3  |
| 11°   | 6759.3  |
| 12°   | 6243.4  |
| 13°   | 5745.4  |
| 14°   | 5252.8  |
| 15°   | 4764.4  |
| 17.5° | 3552.3  |
| 20°   | 2486.1  |
| 22.5° | 1611.1  |
| 25°   | 606.7   |
| 27.5° | 242.1   |
| 30°   | 137.6   |
| 32.5° | 72.9    |
| 35°   | 42.6    |
| 37.5° | 26.1    |
| 40°   | 16.5    |
| 42.5° | 9.6     |
| 45°   | 6.9     |
| 47.5° | 4.1     |
| 50°   | 2.8     |
| 52.5° | 1.4     |
| 55°   | 1.4     |
| 57.5° | 1.4     |
| 60°   | 1.4     |
| 62.5° | 1.4     |
| 65°   | 1.4     |
| 67.5° | 0.0     |
| 70°   | 0.0     |
| 72.5° | 0.0     |
| 75°   | 0.0     |
| 77.5° | 0.0     |
| 80°   | 0.0     |
| 82.5° | 0.0     |



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CANDELA DISTRIBUTION (continued):

0°  
90° | 0.0



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— 0°-180°







|       |     |
|-------|-----|
| 85°   | 0.0 |
| 87.5° | 0.0 |



(END OF REPORT)