

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: P170632

Luminaire Tested: **LDA4A13840D010TE LAR25NF 4LFC1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P170632  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26142)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDA4A13840D010TE LAR25NF 4LFC1  
Description: PORTFOLIO 4" Flat Cone, Self-flange Trim Ring, 25° Narrow Flood Optic, at 0° tilt  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1713.6 lumens  
Efficiency: N/A  
Efficacy: 76.9 lumens/watt  
Spacing Criteria (0/90/45): 0.46 / 0.46 / 0.47  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

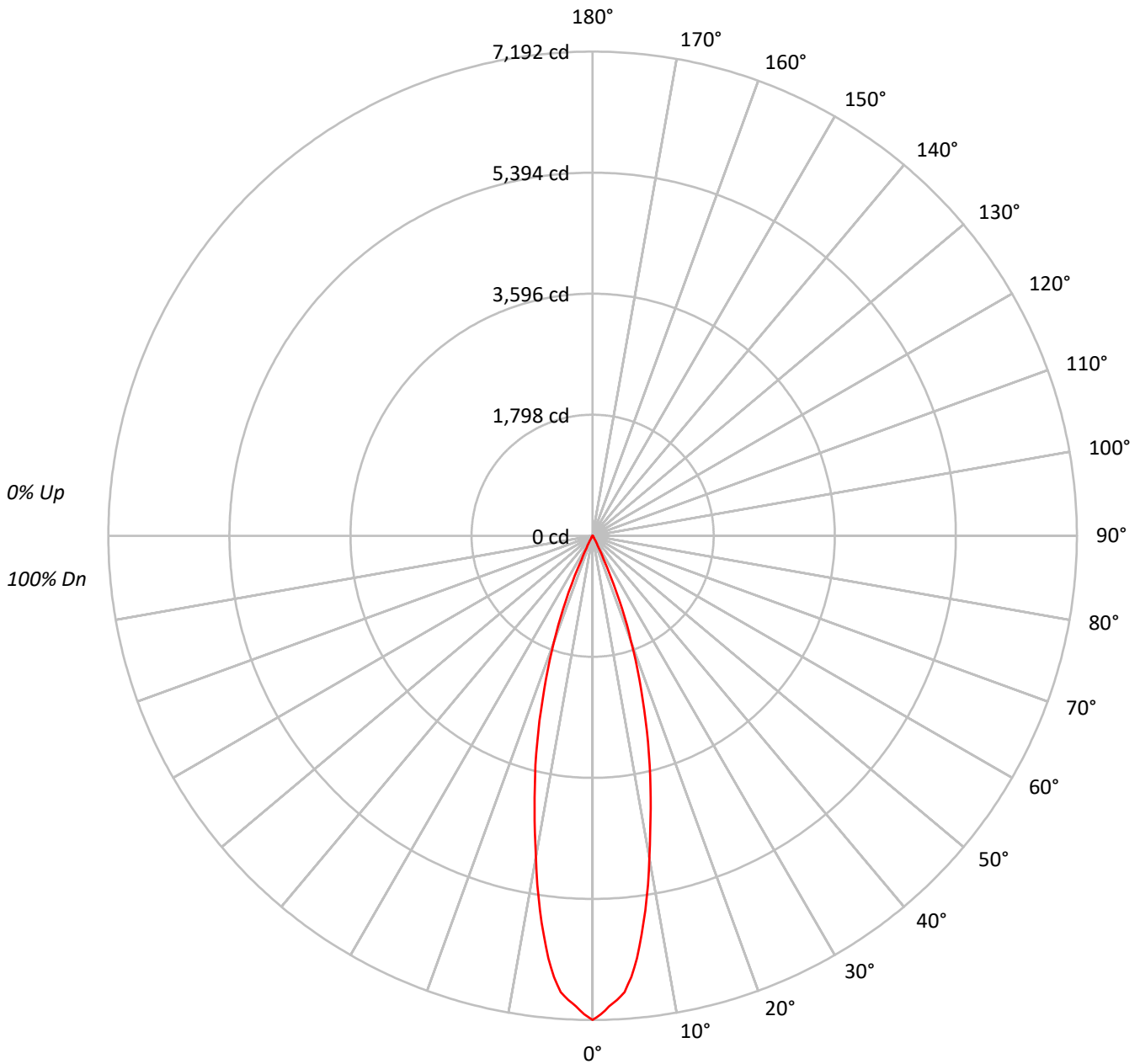
Input Watts (W): 22.27  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 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 | 100 | 100 |
| 1   | 115 | 113 | 111 | 110 | 113 | 111 | 109 | 108 | 107 | 106 | 104 | 103 | 102 | 101 | 100 | 99  | 99  | 97  | 97  | 97  | 97  |
| 2   | 111 | 108 | 105 | 103 | 109 | 106 | 104 | 101 | 103 | 101 | 99  | 100 | 99  | 97  | 98  | 96  | 95  | 94  | 94  | 94  | 94  |
| 3   | 108 | 104 | 100 | 97  | 106 | 102 | 99  | 96  | 100 | 97  | 95  | 98  | 95  | 94  | 95  | 94  | 92  | 91  | 91  | 91  | 91  |
| 4   | 105 | 100 | 96  | 93  | 103 | 99  | 95  | 92  | 97  | 94  | 91  | 95  | 92  | 90  | 93  | 91  | 89  | 88  | 88  | 88  | 88  |
| 5   | 102 | 96  | 92  | 89  | 100 | 95  | 92  | 89  | 94  | 91  | 88  | 92  | 89  | 87  | 91  | 89  | 87  | 86  | 86  | 86  | 86  |
| 6   | 99  | 93  | 89  | 86  | 98  | 92  | 88  | 86  | 91  | 88  | 85  | 90  | 87  | 85  | 89  | 86  | 84  | 83  | 83  | 83  | 83  |
| 7   | 96  | 90  | 86  | 83  | 95  | 89  | 86  | 83  | 88  | 85  | 83  | 87  | 84  | 82  | 86  | 84  | 82  | 81  | 81  | 81  | 81  |
| 8   | 94  | 87  | 83  | 81  | 93  | 87  | 83  | 80  | 86  | 83  | 80  | 85  | 82  | 80  | 84  | 82  | 80  | 79  | 79  | 79  | 79  |
| 9   | 91  | 85  | 81  | 78  | 90  | 84  | 81  | 78  | 84  | 80  | 78  | 83  | 80  | 78  | 82  | 79  | 77  | 76  | 76  | 76  | 76  |
| 10  | 89  | 82  | 79  | 76  | 88  | 82  | 78  | 76  | 81  | 78  | 76  | 81  | 78  | 76  | 80  | 77  | 75  | 74  | 74  | 74  | 74  |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 887052 |
| 5°  | 814603 |
| 10° | 608507 |
| 15° | 405322 |
| 20° | 219561 |
| 25° | 52384  |
| 30° | 12263  |
| 35° | 3493   |
| 40° | 1192   |
| 45° | 436    |
| 50° | 154    |
| 55° | 0      |
| 60° | 0      |
| 65° | 0      |
| 70° | 0      |
| 75° | 0      |
| 80° | 0      |
| 85° | 0      |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 570.2  | 33.3      |
| 10°-20°   | 859.7  | 50.2      |
| 20°-30°   | 262.5  | 15.3      |
| 30°-40°   | 18.9   | 1.1       |
| 40°-50°   | 2.2    | 0.1       |
| 50°-60°   | 0.1    | 0.0       |
| 60°-70°   | 0.0    | 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°    | 1692.4 | 98.8      |
| 0°-40°    | 1711.4 | 99.9      |
| 0°-60°    | 1713.6 | 100.0     |
| 0°-90°    | 1713.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1713.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 7192 |      |
| 5°  | 6579 | 570  |
| 15° | 3174 | 860  |
| 25° | 385  | 263  |
| 35° | 23   | 19   |
| 45° | 2    | 2    |
| 55° | 0    | 0    |
| 65° | 0    | 0    |
| 75° | 0    | 0    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 7191.6 |
| 1°    | 7110.5 |
| 2°    | 6993.8 |
| 3°    | 6906.0 |
| 4°    | 6794.3 |
| 5°    | 6579.1 |
| 6°    | 6308.5 |
| 7°    | 5969.9 |
| 8°    | 5620.7 |
| 9°    | 5248.2 |
| 10°   | 4858.4 |
| 11°   | 4486.8 |
| 12°   | 4146.6 |
| 13°   | 3820.5 |
| 14°   | 3506.0 |
| 15°   | 3174.1 |
| 17.5° | 2384.5 |
| 20°   | 1672.7 |
| 22.5° | 1043.7 |
| 25°   | 384.9  |
| 27.5° | 155.6  |
| 30°   | 86.1   |
| 32.5° | 43.0   |
| 35°   | 23.2   |
| 37.5° | 13.2   |
| 40°   | 7.4    |
| 42.5° | 4.1    |
| 45°   | 2.5    |
| 47.5° | 0.8    |
| 50°   | 0.8    |
| 52.5° | 0.0    |
| 55°   | 0.0    |
| 57.5° | 0.0    |
| 60°   | 0.0    |
| 62.5° | 0.0    |
| 65°   | 0.0    |
| 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)