

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: P179684

Luminaire Tested: **LDA6A55827D010TE LARH20SP 6LA1LI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P179684  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26676)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDA6A55827D010TE LARH20SP 6LA1LI  
Description: PORTFOLIO 6" Adjustable Reflector, Angle-cut Trim, Self-flanged, 20° Spot  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4589.6 lumens  
Efficiency: N/A  
Efficacy: 75.2 lumens/watt  
Spacing Criteria (0/90/45): 0.4 / 0.4 / 0.48  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

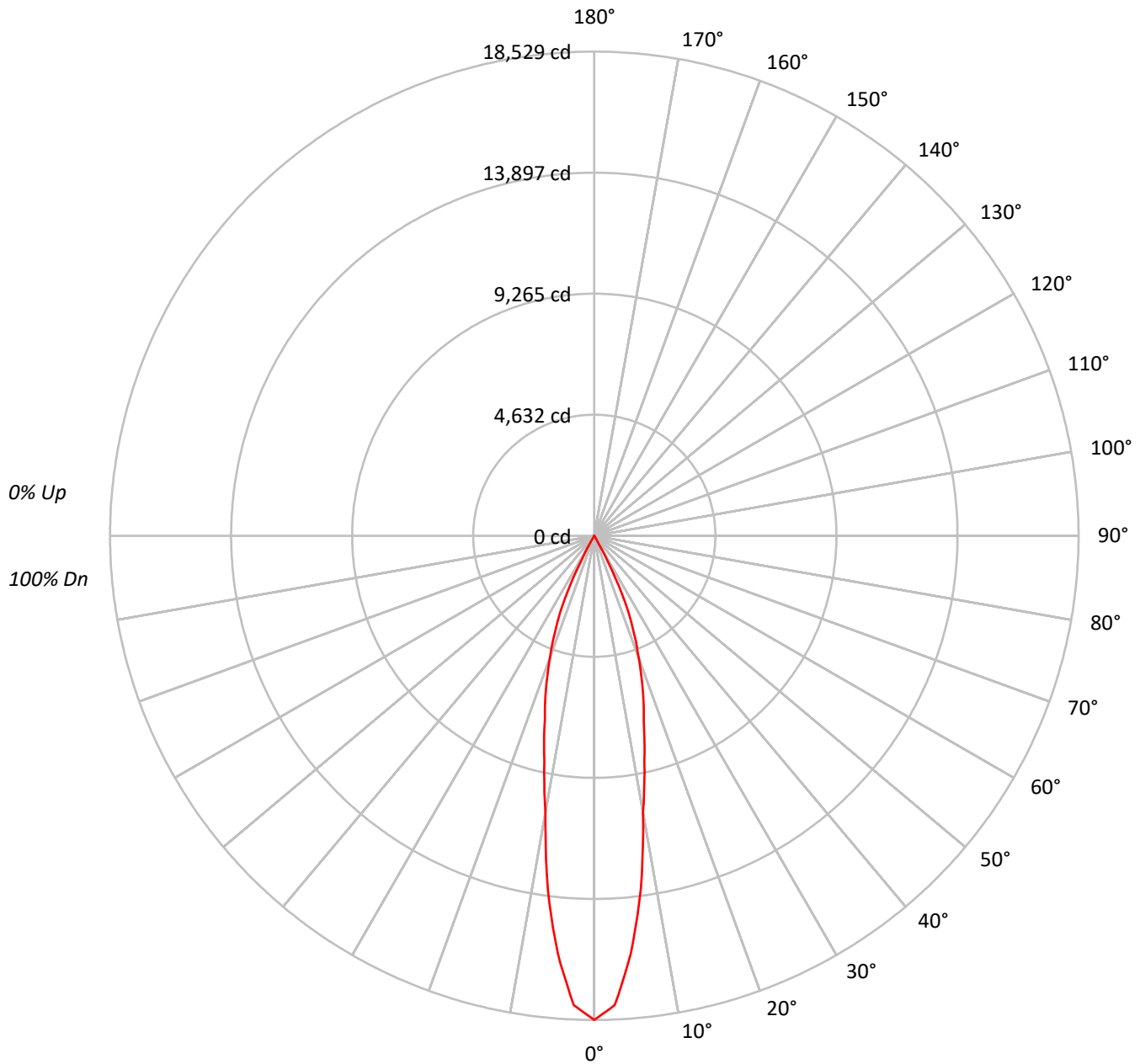
Input Watts (W): 61  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 107 |  | 107 | 105 | 104 |  |  | 103 | 102 | 101 |  |  | 100 |
| 2   | 111 | 107 | 104 | 102 | 109 | 106 | 103 | 101 |  | 103 | 100 | 98  |  |  | 100 | 98  | 96  |  |  | 97  |
| 3   | 107 | 103 | 99  | 96  | 106 | 101 | 98  | 95  |  | 99  | 96  | 94  |  |  | 97  | 94  | 92  |  |  | 94  |
| 4   | 104 | 98  | 94  | 91  | 102 | 97  | 94  | 91  |  | 95  | 92  | 90  |  |  | 94  | 91  | 89  |  |  | 92  |
| 5   | 101 | 95  | 90  | 87  | 99  | 94  | 90  | 87  |  | 92  | 89  | 86  |  |  | 91  | 88  | 86  |  |  | 89  |
| 6   | 98  | 91  | 87  | 84  | 96  | 91  | 87  | 84  |  | 89  | 86  | 83  |  |  | 88  | 85  | 83  |  |  | 87  |
| 7   | 95  | 88  | 84  | 81  | 94  | 87  | 83  | 81  |  | 86  | 83  | 80  |  |  | 85  | 82  | 80  |  |  | 84  |
| 8   | 92  | 85  | 81  | 78  | 91  | 85  | 81  | 78  |  | 84  | 80  | 78  |  |  | 83  | 80  | 77  |  |  | 82  |
| 9   | 89  | 82  | 78  | 75  | 88  | 82  | 78  | 75  |  | 81  | 78  | 75  |  |  | 80  | 77  | 75  |  |  | 80  |
| 10  | 87  | 80  | 76  | 73  | 86  | 80  | 76  | 73  |  | 79  | 75  | 73  |  |  | 78  | 75  | 73  |  |  | 78  |

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

|     |         |
|-----|---------|
|     | 0°      |
| 0°  | 1015752 |
| 5°  | 883071  |
| 10° | 598352  |
| 15° | 414781  |
| 20° | 289055  |
| 25° | 166328  |
| 30° | 13046   |
| 35° | 1071    |
| 40° | 537     |
| 45° | 364     |
| 50° | 324     |
| 55° | 268     |
| 60° | 307     |
| 65° | 363     |
| 70° | 305     |
| 75° | 191     |
| 80° | 284     |
| 85° | 0       |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 1365.7 | 29.8      |
| 10°-20°   | 2057.0 | 44.8      |
| 20°-30°   | 1133.2 | 24.7      |
| 30°-40°   | 23.4   | 0.5       |
| 40°-50°   | 3.8    | 0.1       |
| 50°-60°   | 2.8    | 0.1       |
| 60°-70°   | 2.4    | 0.1       |
| 70°-80°   | 1.1    | 0.0       |
| 80°-90°   | 0.1    | 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°    | 4555.9 | 99.3      |
| 0°-40°    | 4579.3 | 99.8      |
| 0°-60°    | 4585.9 | 99.9      |
| 0°-90°    | 4589.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4589.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | Flux |
|-----|-------|------|
| 0°  | 18529 |      |
| 5°  | 16047 | ###  |
| 15° | 7308  | 2057 |
| 25° | 2750  | 1133 |
| 35° | 16    | 23   |
| 45° | 5     | 4    |
| 55° | 3     | 3    |
| 65° | 3     | 2    |
| 75° | 1     | 1    |
| 85° | 0     | 0    |
| 90° | 0     |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |         |
|-------|---------|
| 0°    | 18528.8 |
| 2.5°  | 17974.5 |
| 5°    | 16047.2 |
| 7.5°  | 13639.9 |
| 10°   | 10749.0 |
| 12.5° | 8851.7  |
| 15°   | 7308.4  |
| 17.5° | 6161.2  |
| 20°   | 4954.8  |
| 22.5° | 3875.3  |
| 25°   | 2749.8  |
| 27.5° | 1173.5  |
| 30°   | 206.1   |
| 32.5° | 26.4    |
| 35°   | 16.0    |
| 37.5° | 10.4    |
| 40°   | 7.5     |
| 42.5° | 5.6     |
| 45°   | 4.7     |
| 47.5° | 3.8     |
| 50°   | 3.8     |
| 52.5° | 3.8     |
| 55°   | 2.8     |
| 57.5° | 2.8     |
| 60°   | 2.8     |
| 62.5° | 2.8     |
| 65°   | 2.8     |
| 67.5° | 1.9     |
| 70°   | 1.9     |
| 72.5° | 0.9     |
| 75°   | 0.9     |
| 77.5° | 0.9     |
| 80°   | 0.9     |
| 82.5° | 0.0     |
| 85°   | 0.0     |
| 87.5° | 0.0     |
| 90°   | 0.0     |



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— 0°-180°







(END OF REPORT)