

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: P179601

Luminaire Tested: **LDA6A45930D010TE LARH20SP 6LFC1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P179601  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26665)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDA6A45930D010TE LARH20SP 6LFC1H  
Description: PORTFOLIO 6" Flat Cone, Self-flanged, 20° Spot  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3445.8 lumens  
Efficiency: N/A  
Efficacy: 65.0 lumens/watt  
Spacing Criteria (0/90/45): 0.43 / 0.43 / 0.51  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

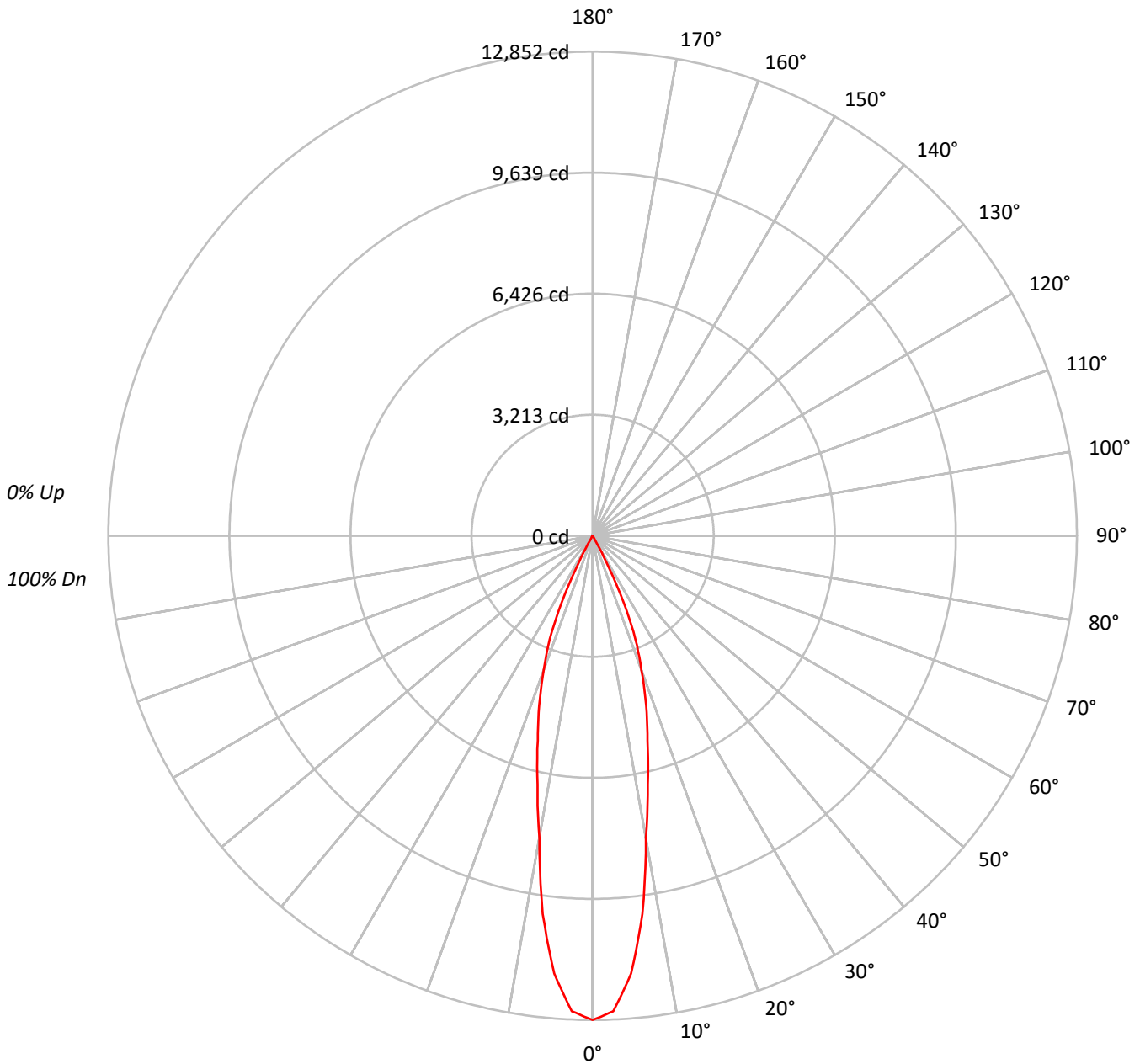
Input Watts (W): 53  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |     |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|-----|--|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF  | 20  |     |     |     |     |     |     |     |     | 20  |     |     |     |     |     |     |     |     | 20 |    |    |    |    |    |    |    |    | 20 |     |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 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 | 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 | 109 | 113 | 111 | 109 | 107 | 107 | 105 | 104 | 103 | 102 | 101 | 100 | 99  | 98  | 96  | 96 | 98 | 99 | 98 | 97 | 96 | 94 | 93 | 96 |    |     |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 111 | 107 | 104 | 102 | 109 | 106 | 103 | 101 | 103 | 100 | 98  | 100 | 98  | 96  | 97  | 96  | 94  | 93  | 96 | 98 | 99 | 97 | 96 | 94 | 93 | 96 | 93 |    |     |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 107 | 103 | 99  | 96  | 106 | 101 | 98  | 95  | 99  | 96  | 94  | 96  | 94  | 92  | 94  | 92  | 91  | 90  | 96 | 98 | 99 | 97 | 96 | 94 | 93 | 96 | 93 |    |     |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 104 | 98  | 94  | 91  | 102 | 97  | 94  | 91  | 95  | 92  | 90  | 93  | 91  | 89  | 92  | 89  | 88  | 86  | 96 | 98 | 99 | 97 | 96 | 94 | 93 | 96 | 93 |    |     |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 101 | 94  | 90  | 87  | 99  | 94  | 90  | 87  | 92  | 89  | 86  | 91  | 88  | 85  | 89  | 87  | 85  | 83  | 96 | 98 | 99 | 97 | 96 | 94 | 93 | 96 | 93 |    |     |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 97  | 91  | 87  | 84  | 96  | 90  | 86  | 83  | 89  | 85  | 83  | 88  | 85  | 82  | 87  | 84  | 82  | 81  | 96 | 98 | 99 | 97 | 96 | 94 | 93 | 96 | 93 |    |     |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 94  | 88  | 83  | 80  | 93  | 87  | 83  | 80  | 86  | 83  | 80  | 85  | 82  | 79  | 84  | 81  | 79  | 78  | 96 | 98 | 99 | 97 | 96 | 94 | 93 | 96 | 93 |    |     |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 92  | 85  | 81  | 78  | 91  | 84  | 80  | 77  | 83  | 80  | 77  | 83  | 79  | 77  | 82  | 79  | 77  | 76  | 96 | 98 | 99 | 97 | 96 | 94 | 93 | 96 | 93 |    |     |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 89  | 82  | 78  | 75  | 88  | 82  | 78  | 75  | 81  | 77  | 75  | 80  | 77  | 74  | 79  | 76  | 74  | 73  | 96 | 98 | 99 | 97 | 96 | 94 | 93 | 96 | 93 |    |     |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 87  | 80  | 75  | 73  | 86  | 79  | 75  | 73  | 79  | 75  | 72  | 78  | 75  | 72  | 77  | 74  | 72  | 71  | 96 | 98 | 99 | 97 | 96 | 94 | 93 | 96 | 93 |    |     |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 704549 |
| 5°  | 642025 |
| 10° | 453582 |
| 15° | 319338 |
| 20° | 220799 |
| 25° | 117418 |
| 30° | 7780   |
| 35° | 2014   |
| 40° | 1281   |
| 45° | 946    |
| 50° | 768    |
| 55° | 545    |
| 60° | 450    |
| 65° | 428    |
| 70° | 256    |
| 75° | 169    |
| 80° | 253    |
| 85° | 0      |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 1000.3 | 29.0      |
| 10°-20°   | 1573.5 | 45.7      |
| 20°-30°   | 827.7  | 24.0      |
| 30°-40°   | 24.9   | 0.7       |
| 40°-50°   | 9.6    | 0.3       |
| 50°-60°   | 5.3    | 0.2       |
| 60°-70°   | 2.9    | 0.1       |
| 70°-80°   | 1.2    | 0.0       |
| 80°-90°   | 0.3    | 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°    | 3401.6 | 98.7      |
| 0°-40°    | 3426.5 | 99.4      |
| 0°-60°    | 3441.4 | 99.9      |
| 0°-90°    | 3445.8 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3445.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | Flux |
|-----|-------|------|
| 0°  | 12852 |      |
| 5°  | 11667 | ###  |
| 15° | 5627  | 1574 |
| 25° | 1941  | 828  |
| 35° | 30    | 25   |
| 45° | 12    | 10   |
| 55° | 6     | 5    |
| 65° | 3     | 3    |
| 75° | 1     | 1    |
| 85° | 0     | 0    |
| 90° | 0     |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      |
|-------|---------|
| 0°    | 12852.0 |
| 2.5°  | 12631.4 |
| 5°    | 11666.9 |
| 7.5°  | 10128.6 |
| 10°   | 8148.3  |
| 12.5° | 6759.7  |
| 15°   | 5626.7  |
| 17.5° | 4717.5  |
| 20°   | 3784.8  |
| 22.5° | 2972.5  |
| 25°   | 1941.2  |
| 27.5° | 750.4   |
| 30°   | 122.9   |
| 32.5° | 41.5    |
| 35°   | 30.1    |
| 37.5° | 22.8    |
| 40°   | 17.9    |
| 42.5° | 14.7    |
| 45°   | 12.2    |
| 47.5° | 9.8     |
| 50°   | 9.0     |
| 52.5° | 6.5     |
| 55°   | 5.7     |
| 57.5° | 4.9     |
| 60°   | 4.1     |
| 62.5° | 3.3     |
| 65°   | 3.3     |
| 67.5° | 2.4     |
| 70°   | 1.6     |
| 72.5° | 1.6     |
| 75°   | 0.8     |
| 77.5° | 0.8     |
| 80°   | 0.8     |
| 82.5° | 0.8     |
| 85°   | 0.0     |
| 87.5° | 0.0     |
| 90°   | 0.0     |



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— 0°-180°







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