

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: P1212387

Luminaire Tested: **LDSQA4A35940D010TE LAR15SP 4LSQA1H**

Issue Date: 3/3/2020

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

**Test Information**

Test Method: LM-41-14  
Report Number: P1212387  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26794)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQA4A35940D010TE LAR15SP 4LSQA1H  
Description: PORTFOLIO 4" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,  
SELF-FLANGED, 15° SPOT  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

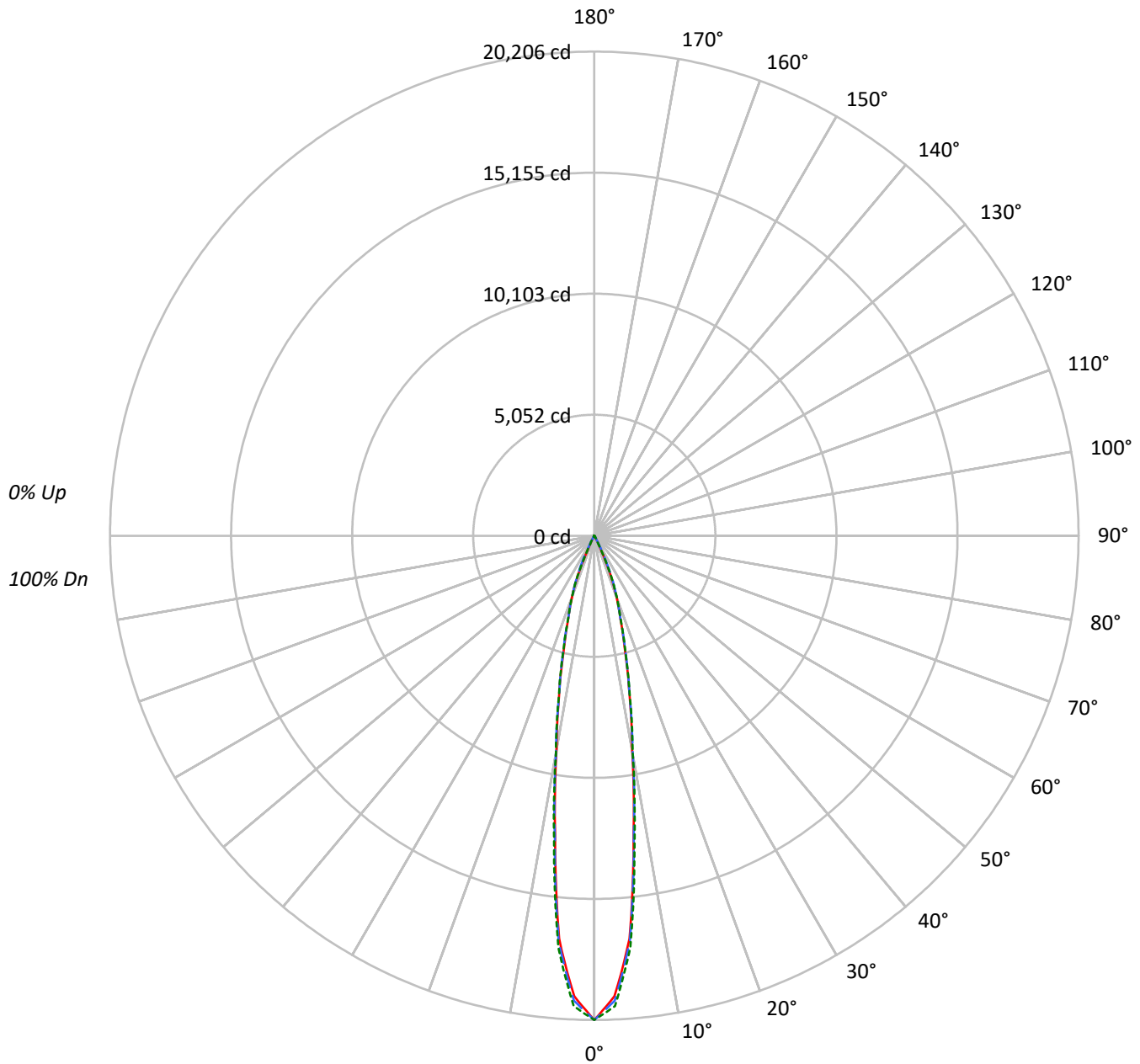
Lumens per Lamp: N/A  
Luminaire Lumens: 3317.3 lumens  
Efficiency: N/A  
Efficacy: 69.5 lumens/watt  
Spacing Criteria (0/90/45): 0.32 / 0.32 / 0.36  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 47.7  
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  | 30  | 10  | 50  | 30 | 10 |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |
| 1   | 115 | 113 | 111 | 110 | 113 | 111 | 110 | 108 | 107 | 106 | 105 | 104 | 103 | 102 | 100 | 99  | 99  | 97  |    |    |
| 2   | 112 | 108 | 105 | 103 | 110 | 107 | 104 | 102 | 104 | 102 | 100 | 101 | 99  | 98  | 98  | 97  | 96  | 94  |    |    |
| 3   | 108 | 104 | 101 | 98  | 107 | 103 | 100 | 97  | 100 | 98  | 96  | 98  | 96  | 94  | 96  | 94  | 93  | 92  |    |    |
| 4   | 105 | 100 | 97  | 94  | 104 | 99  | 96  | 93  | 97  | 95  | 92  | 96  | 93  | 91  | 94  | 92  | 90  | 89  |    |    |
| 5   | 103 | 97  | 93  | 90  | 101 | 96  | 93  | 90  | 95  | 92  | 89  | 93  | 91  | 89  | 92  | 90  | 88  | 87  |    |    |
| 6   | 100 | 94  | 90  | 87  | 99  | 93  | 90  | 87  | 92  | 89  | 87  | 91  | 88  | 86  | 90  | 87  | 86  | 85  |    |    |
| 7   | 97  | 91  | 88  | 85  | 96  | 91  | 87  | 85  | 90  | 87  | 84  | 89  | 86  | 84  | 88  | 85  | 83  | 82  |    |    |
| 8   | 95  | 89  | 85  | 82  | 94  | 88  | 85  | 82  | 88  | 84  | 82  | 87  | 84  | 82  | 86  | 83  | 81  | 80  |    |    |
| 9   | 93  | 87  | 83  | 80  | 92  | 86  | 83  | 80  | 85  | 82  | 80  | 85  | 82  | 80  | 84  | 81  | 79  | 79  |    |    |
| 10  | 91  | 84  | 81  | 78  | 90  | 84  | 81  | 78  | 83  | 80  | 78  | 83  | 80  | 78  | 82  | 80  | 78  | 77  |    |    |

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

|     | 0°      | 45°     | 90°     |
|-----|---------|---------|---------|
| 0°  | 1957465 | 1957465 | 1957465 |
| 5°  | 1640687 | 1654564 | 1678622 |
| 10° | 892608  | 905869  | 909292  |
| 15° | 493581  | 501544  | 503450  |
| 20° | 279515  | 280330  | 281969  |
| 25° | 76266   | 119482  | 74898   |
| 30° | 12238   | 18625   | 11869   |
| 35° | 4116    | 6930    | 3926    |
| 40° | 1808    | 2807    | 1808    |
| 45° | 1082    | 1302    | 863     |
| 50° | 708     | 708     | 467     |
| 55° | 524     | 524     | 270     |
| 60° | 310     | 310     | 310     |
| 65° | 367     | 367     | 367     |
| 70° | 453     | 453     | 453     |
| 75° | 0       | 0       | 0       |
| 80° | 0       | 0       | 0       |
| 85° | 0       | 0       | 0       |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 1346.9 | 40.6      |
| 10°-20°   | 1424.2 | 42.9      |
| 20°-30°   | 501.1  | 15.1      |
| 30°-40°   | 33.7   | 1.0       |
| 40°-50°   | 7.0    | 0.2       |
| 50°-60°   | 2.3    | 0.1       |
| 60°-70°   | 1.5    | 0.0       |
| 70°-80°   | 0.6    | 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°    | 3272.2 | 98.6      |
| 0°-40°    | 3305.9 | 99.7      |
| 0°-60°    | 3315.2 | 99.9      |
| 0°-90°    | 3317.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3317.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | 22.5° | 45°   | 67.5° | 90°   | Flux |
|-----|-------|-------|-------|-------|-------|------|
| 0°  | 20206 | 20206 | 20206 | 20206 | 20206 |      |
| 5°  | 16872 | 17125 | 17014 | 17046 | 17262 | 1331 |
| 15° | 4921  | 5004  | 5001  | 4990  | 5020  | 1410 |
| 25° | 714   | 1083  | 1118  | 1066  | 701   | 442  |
| 35° | 35    | 43    | 59    | 43    | 33    | 27   |
| 45° | 8     | 8     | 10    | 8     | 6     | 7    |
| 55° | 3     | 3     | 3     | 2     | 2     | 3    |
| 65° | 2     | 2     | 2     | 2     | 2     | 2    |
| 75° | 0     | 2     | 0     | 0     | 0     | 1    |
| 85° | 0     | 0     | 0     | 0     | 0     | 0    |
| 90° | 0     | 0     | 0     | 0     | 0     |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 22.5°   | 45°     | 67.5°   | 90°     |
|-------|---------|---------|---------|---------|---------|
| 0°    | 20206.0 | 20206.0 | 20206.0 | 20206.0 | 20206.0 |
| 2.5°  | 19235.6 | 19487.8 | 19424.4 | 19383.1 | 19647.9 |
| 5°    | 16871.6 | 17125.4 | 17014.3 | 17046.0 | 17261.7 |
| 7.5°  | 12543.2 | 12757.3 | 12643.0 | 12690.6 | 12855.5 |
| 10°   | 9074.0  | 9286.4  | 9208.8  | 9234.1  | 9243.6  |
| 12.5° | 6765.4  | 6858.9  | 6797.2  | 6814.7  | 6846.3  |
| 15°   | 4921.4  | 5004.0  | 5000.8  | 4989.6  | 5019.8  |
| 17.5° | 3611.8  | 3651.5  | 3611.8  | 3610.2  | 3630.9  |
| 20°   | 2711.3  | 2766.8  | 2719.2  | 2725.5  | 2735.1  |
| 22.5° | 1821.7  | 1932.7  | 1913.7  | 1889.9  | 1864.6  |
| 25°   | 713.5   | 1082.9  | 1117.8  | 1065.5  | 700.7   |
| 27.5° | 204.6   | 337.7   | 480.4   | 331.4   | 198.1   |
| 30°   | 109.4   | 129.9   | 166.5   | 126.8   | 106.1   |
| 32.5° | 58.6    | 74.5    | 95.1    | 72.9    | 57.0    |
| 35°   | 34.8    | 42.9    | 58.6    | 42.9    | 33.2    |
| 37.5° | 22.2    | 26.9    | 36.5    | 26.9    | 22.2    |
| 40°   | 14.3    | 17.4    | 22.2    | 17.4    | 14.3    |
| 42.5° | 11.0    | 12.8    | 14.3    | 11.0    | 9.5     |
| 45°   | 7.9     | 7.9     | 9.5     | 7.9     | 6.3     |
| 47.5° | 6.3     | 6.3     | 6.3     | 4.7     | 4.7     |
| 50°   | 4.7     | 4.7     | 4.7     | 3.1     | 3.1     |
| 52.5° | 3.1     | 3.1     | 3.1     | 3.1     | 3.1     |
| 55°   | 3.1     | 3.1     | 3.1     | 1.6     | 1.6     |
| 57.5° | 3.1     | 1.6     | 1.6     | 1.6     | 1.6     |
| 60°   | 1.6     | 1.6     | 1.6     | 1.6     | 1.6     |
| 62.5° | 1.6     | 1.6     | 1.6     | 1.6     | 1.6     |
| 65°   | 1.6     | 1.6     | 1.6     | 1.6     | 1.6     |
| 67.5° | 1.6     | 1.6     | 1.6     | 1.6     | 0.0     |
| 70°   | 1.6     | 1.6     | 1.6     | 1.6     | 1.6     |
| 72.5° | 1.6     | 1.6     | 1.6     | 0.0     | 0.0     |
| 75°   | 0.0     | 1.6     | 0.0     | 0.0     | 0.0     |
| 77.5° | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |
| 80°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |
| 82.5° | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |
| 85°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |
| 87.5° | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |
| 90°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |

Classified

Scaled Data Report

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Peachtree City, GA 30269



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

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