

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: P1212279

Luminaire Tested: **LDSQA4A25940D010TE LAR25NF 4LSQA1H**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: P1212279  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26785)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQA4A25940D010TE LAR25NF 4LSQA1H  
Description: PORTFOLIO 4" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,  
SELF-FLANGED, 25° NARROW FLOOD  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

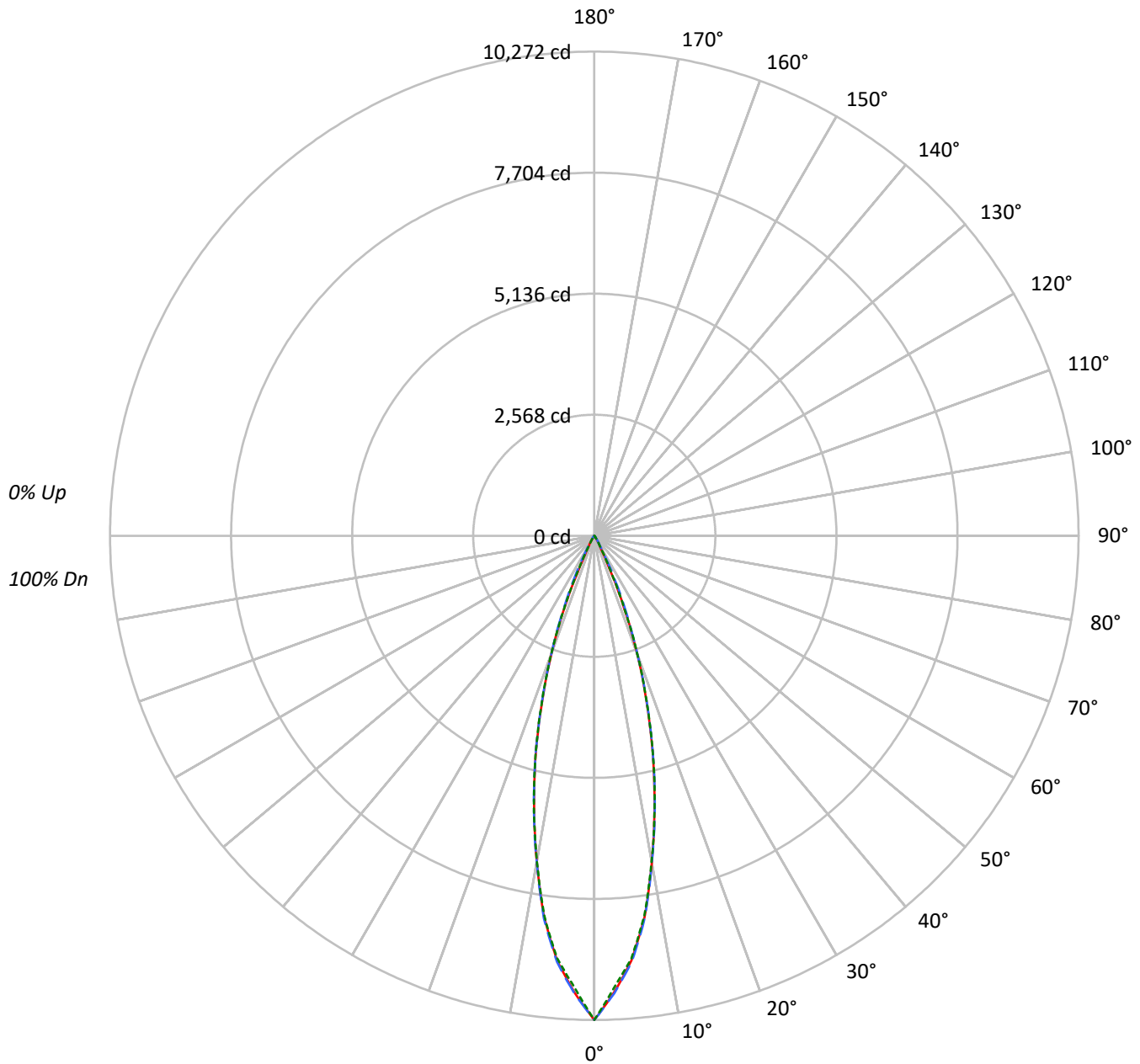
Lumens per Lamp: N/A  
Luminaire Lumens: 2663.5 lumens  
Efficiency: N/A  
Efficacy: 86.2 lumens/watt  
Spacing Criteria (0/90/45): 0.47 / 0.47 / 0.49  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 30.9  
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

TEST NUMBER: P1212279

CATALOG NUMBER: LDSQA4A25940D010TE LAR25NF 4LSQA1H

### Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P1212279

CATALOG NUMBER: LDSQA4A25940D010TE LAR25NF 4LSQA1H

**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 | 108 | 105 | 102 | 109 | 106 | 103 | 101 |  | 103 | 101 | 99  |  |  | 100 | 98  | 97  |  |  | 97  |
| 3   | 108 | 103 | 99  | 96  | 106 | 102 | 98  | 96  |  | 99  | 96  | 94  |  |  | 97  | 95  | 93  |  |  | 95  |
| 4   | 104 | 99  | 95  | 92  | 103 | 98  | 94  | 91  |  | 96  | 93  | 90  |  |  | 94  | 91  | 89  |  |  | 92  |
| 5   | 101 | 95  | 91  | 88  | 100 | 94  | 90  | 88  |  | 93  | 89  | 87  |  |  | 91  | 88  | 86  |  |  | 90  |
| 6   | 98  | 92  | 88  | 84  | 97  | 91  | 87  | 84  |  | 90  | 86  | 84  |  |  | 88  | 85  | 83  |  |  | 87  |
| 7   | 95  | 89  | 84  | 81  | 94  | 88  | 84  | 81  |  | 87  | 83  | 81  |  |  | 86  | 83  | 80  |  |  | 85  |
| 8   | 92  | 86  | 82  | 79  | 91  | 85  | 81  | 79  |  | 84  | 81  | 78  |  |  | 84  | 80  | 78  |  |  | 83  |
| 9   | 90  | 83  | 79  | 76  | 89  | 83  | 79  | 76  |  | 82  | 78  | 76  |  |  | 81  | 78  | 76  |  |  | 80  |
| 10  | 87  | 81  | 77  | 74  | 87  | 80  | 76  | 74  |  | 80  | 76  | 74  |  |  | 79  | 76  | 73  |  |  | 78  |

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

|     | 0°     | 45°    | 90°    |
|-----|--------|--------|--------|
| 0°  | 995153 | 995153 | 995153 |
| 5°  | 879663 | 882668 | 875200 |
| 10° | 691383 | 692180 | 689248 |
| 15° | 481295 | 482679 | 483020 |
| 20° | 273031 | 274804 | 275752 |
| 25° | 73594  | 111380 | 82797  |
| 30° | 18234  | 24912  | 18737  |
| 35° | 5428   | 11412  | 5830   |
| 40° | 2175   | 3781   | 2175   |
| 45° | 1096   | 1576   | 945    |
| 50° | 693    | 693    | 347    |
| 55° | 574    | 388    | 186    |
| 60° | 446    | 213    | 213    |
| 65° | 252    | 252    | 252    |
| 70° | 312    | 312    | 0      |
| 75° | 0      | 0      | 0      |
| 80° | 0      | 0      | 0      |
| 85° | 0      | 0      | 0      |



TEST NUMBER: P1212279

CATALOG NUMBER: LDSQA4A25940D010TE LAR25NF 4LSQA1H

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 805.9  | 30.3      |
| 10°-20°   | 1310.5 | 49.2      |
| 20°-30°   | 487.1  | 18.3      |
| 30°-40°   | 48.3   | 1.8       |
| 40°-50°   | 8.1    | 0.3       |
| 50°-60°   | 2.2    | 0.1       |
| 60°-70°   | 1.1    | 0.0       |
| 70°-80°   | 0.2    | 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°    | 2603.6 | 97.7      |
| 0°-40°    | 2651.9 | 99.6      |
| 0°-60°    | 2662.2 | 100.0     |
| 0°-90°    | 2663.5 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2663.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | 22.5° | 45°   | 67.5° | 90°   | Flux |
|-----|-------|-------|-------|-------|-------|------|
| 0°  | 10272 | 10272 | 10272 | 10272 | 10272 |      |
| 5°  | 9046  | 9136  | 9077  | 9183  | 9000  | 801  |
| 15° | 4799  | 4853  | 4813  | 4892  | 4816  | 1298 |
| 25° | 688   | 1011  | 1042  | 973   | 775   | 430  |
| 35° | 46    | 57    | 96    | 60    | 49    | 37   |
| 45° | 8     | 9     | 12    | 9     | 7     | 7    |
| 55° | 3     | 2     | 2     | 2     | 1     | 3    |
| 65° | 1     | 1     | 1     | 1     | 1     | 1    |
| 75° | 0     | 1     | 0     | 0     | 0     | 0    |
| 85° | 0     | 0     | 0     | 0     | 0     | 0    |
| 90° | 0     | 0     | 0     | 0     | 0     | 0    |

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P1212279

CATALOG NUMBER: LDSQA4A25940D010TE LAR25NF 4LSQA1H

**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 22.5°   | 45°     | 67.5°   | 90°     |
|-------|---------|---------|---------|---------|---------|
| 0°    | 10272.5 | 10272.5 | 10272.5 | 10272.5 | 10272.5 |
| 2.5°  | 9694.1  | 9745.7  | 9713.6  | 9799.6  | 9591.9  |
| 5°    | 9045.8  | 9136.4  | 9076.7  | 9183.4  | 8999.9  |
| 7.5°  | 8155.4  | 8249.4  | 8188.5  | 8291.8  | 8127.8  |
| 10°   | 7028.4  | 7098.4  | 7036.5  | 7136.3  | 7006.7  |
| 12.5° | 5901.6  | 5971.6  | 5925.8  | 6017.5  | 5914.3  |
| 15°   | 4798.9  | 4852.8  | 4812.7  | 4891.8  | 4816.1  |
| 17.5° | 3679.0  | 3730.6  | 3693.8  | 3758.0  | 3700.7  |
| 20°   | 2648.4  | 2693.2  | 2665.6  | 2719.6  | 2674.8  |
| 22.5° | 1644.4  | 1763.8  | 1783.2  | 1787.8  | 1658.2  |
| 25°   | 688.5   | 1010.9  | 1042.0  | 973.1   | 774.6   |
| 27.5° | 283.5   | 371.8   | 495.7   | 391.3   | 298.3   |
| 30°   | 163.0   | 189.3   | 222.7   | 195.1   | 167.5   |
| 32.5° | 81.5    | 105.5   | 145.7   | 111.3   | 86.1    |
| 35°   | 45.9    | 57.3    | 96.5    | 59.6    | 49.3    |
| 37.5° | 27.6    | 33.3    | 48.2    | 34.4    | 28.7    |
| 40°   | 17.2    | 20.7    | 29.9    | 21.8    | 17.2    |
| 42.5° | 11.5    | 13.8    | 18.4    | 13.8    | 11.5    |
| 45°   | 8.0     | 9.2     | 11.5    | 9.2     | 6.9     |
| 47.5° | 5.7     | 5.7     | 6.9     | 5.7     | 4.6     |
| 50°   | 4.6     | 4.6     | 4.6     | 3.4     | 2.3     |
| 52.5° | 3.4     | 3.4     | 3.4     | 2.3     | 2.3     |
| 55°   | 3.4     | 2.3     | 2.3     | 2.3     | 1.1     |
| 57.5° | 2.3     | 2.3     | 2.3     | 1.1     | 1.1     |
| 60°   | 2.3     | 2.3     | 1.1     | 1.1     | 1.1     |
| 62.5° | 1.1     | 1.1     | 1.1     | 1.1     | 1.1     |
| 65°   | 1.1     | 1.1     | 1.1     | 1.1     | 1.1     |
| 67.5° | 1.1     | 1.1     | 1.1     | 1.1     | 1.1     |
| 70°   | 1.1     | 1.1     | 1.1     | 1.1     | 0.0     |
| 72.5° | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |
| 75°   | 0.0     | 1.1     | 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

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



Report Generated By 670245859 / DESKTOP-T8S5UU9

Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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

Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)