

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: P1212327

Luminaire Tested: **LDSQA4A30935D010TE LAR35FL 4LSQAL1H**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: P1212327  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26798)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQA4A30935D010TE LAR35FL 4LSQAL1H  
Description: PORTFOLIO 4" SQUARE LENSED ADJUSTABLE, SELF-FLANGED, 35° FLOOD  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

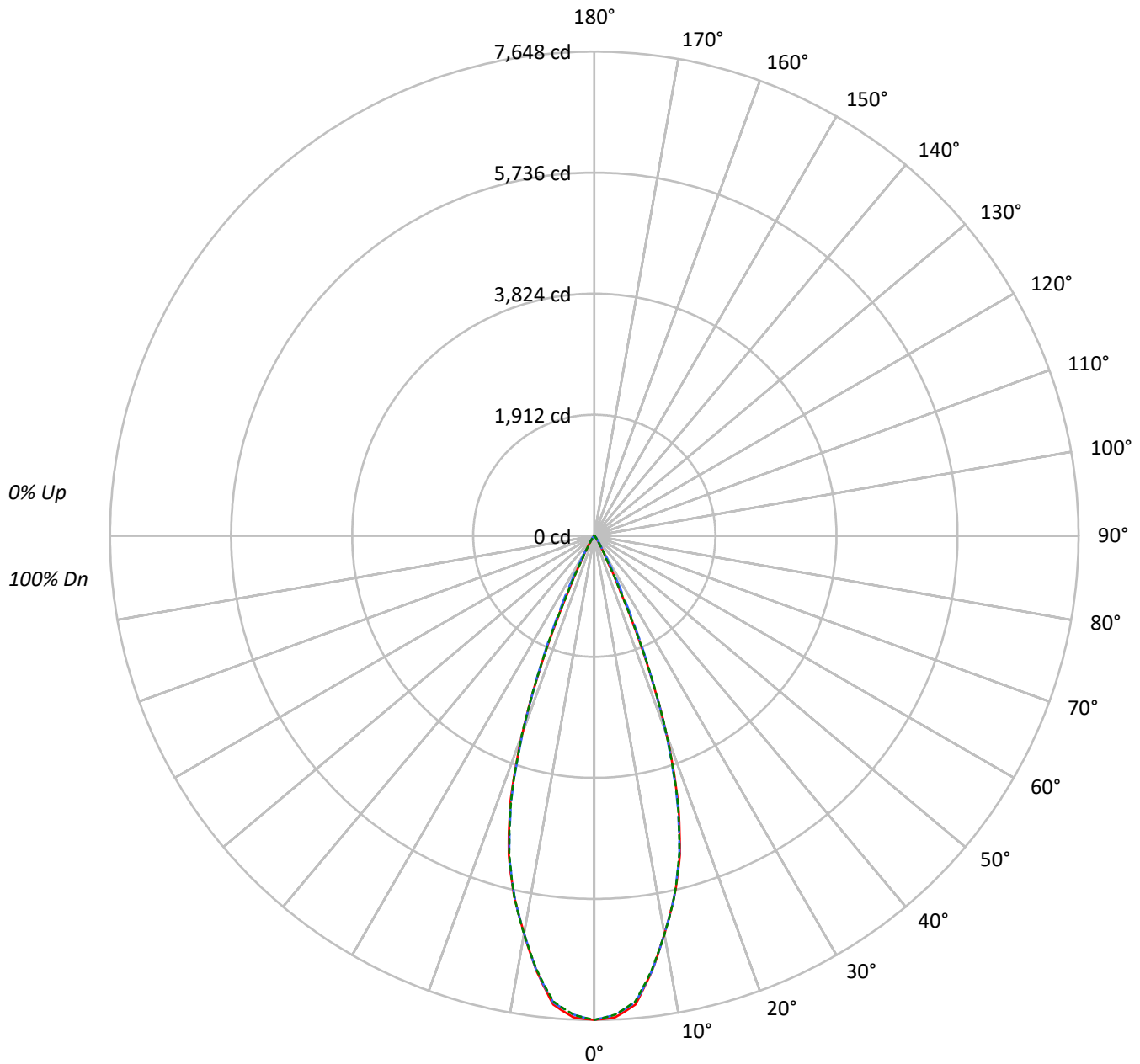
Lumens per Lamp: N/A  
Luminaire Lumens: 2758.3 lumens  
Efficiency: N/A  
Efficacy: 69.3 lumens/watt  
Spacing Criteria (0/90/45): 0.63 / 0.63 / 0.57  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 39.8  
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



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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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 | 112 | 110 | 109 | 107 |  | 106 | 105 | 104 |  |  | 103 | 102 | 101 |  |  | 99  |
| 2   | 111 | 107 | 104 | 101 | 109 | 105 | 102 | 100 |  | 102 | 100 | 98  |  |  | 99  | 97  | 96  |  |  | 97  |
| 3   | 107 | 102 | 98  | 95  | 105 | 101 | 97  | 94  |  | 98  | 95  | 93  |  |  | 96  | 94  | 92  |  |  | 94  |
| 4   | 103 | 98  | 93  | 90  | 102 | 97  | 93  | 90  |  | 95  | 91  | 89  |  |  | 93  | 90  | 88  |  |  | 91  |
| 5   | 100 | 94  | 89  | 86  | 98  | 93  | 89  | 86  |  | 91  | 88  | 85  |  |  | 90  | 87  | 84  |  |  | 88  |
| 6   | 97  | 90  | 86  | 82  | 95  | 89  | 85  | 82  |  | 88  | 84  | 82  |  |  | 87  | 83  | 81  |  |  | 86  |
| 7   | 94  | 87  | 82  | 79  | 92  | 86  | 82  | 79  |  | 85  | 81  | 78  |  |  | 84  | 81  | 78  |  |  | 83  |
| 8   | 91  | 84  | 79  | 76  | 90  | 83  | 79  | 76  |  | 82  | 78  | 76  |  |  | 81  | 78  | 75  |  |  | 80  |
| 9   | 88  | 81  | 76  | 73  | 87  | 80  | 76  | 73  |  | 79  | 76  | 73  |  |  | 79  | 75  | 73  |  |  | 78  |
| 10  | 85  | 78  | 74  | 71  | 84  | 78  | 74  | 71  |  | 77  | 73  | 71  |  |  | 76  | 73  | 70  |  |  | 76  |

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

|     | 0°     | 45°    | 90°    |
|-----|--------|--------|--------|
| 0°  | 740913 | 740913 | 740913 |
| 5°  | 722981 | 719792 | 718440 |
| 10° | 627846 | 627718 | 628466 |
| 15° | 523699 | 520911 | 520650 |
| 20° | 343505 | 340783 | 343773 |
| 25° | 105030 | 132854 | 104635 |
| 30° | 26276  | 31791  | 25706  |
| 35° | 8515   | 13151  | 8361   |
| 40° | 3984   | 6235   | 3516   |
| 45° | 2069   | 2603   | 1562   |
| 50° | 1145   | 1326   | 769    |
| 55° | 642    | 861    | 422    |
| 60° | 484    | 484    | 484    |
| 65° | 275    | 275    | 275    |
| 70° | 340    | 340    | 340    |
| 75° | 0      | 449    | 0      |
| 80° | 0      | 0      | 0      |
| 85° | 0      | 0      | 0      |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 671.9  | 24.4      |
| 10°-20°   | 1392.2 | 50.5      |
| 20°-30°   | 608.0  | 22.0      |
| 30°-40°   | 66.4   | 2.4       |
| 40°-50°   | 13.7   | 0.5       |
| 50°-60°   | 3.8    | 0.1       |
| 60°-70°   | 1.5    | 0.1       |
| 70°-80°   | 0.9    | 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°    | 2672.0 | 96.9      |
| 0°-40°    | 2738.4 | 99.3      |
| 0°-60°    | 2755.9 | 99.9      |
| 0°-90°    | 2758.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2758.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 7648 | 7648  | 7648 | 7648  | 7648 |      |
| 5°  | 7435 | 7414  | 7402 | 7421  | 7388 | 673  |
| 15° | 5222 | 5199  | 5194 | 5202  | 5191 | 1397 |
| 25° | 983  | 1211  | 1243 | 1223  | 979  | 569  |
| 35° | 72   | 86    | 111  | 85    | 71   | 57   |
| 45° | 15   | 16    | 19   | 14    | 11   | 13   |
| 55° | 4    | 4     | 5    | 2     | 2    | 4    |
| 65° | 1    | 1     | 1    | 1     | 1    | 1    |
| 75° | 0    | 1     | 1    | 0     | 0    | 0    |
| 85° | 0    | 0     | 0    | 0     | 0    | 0    |
| 90° | 0    | 0     | 0    | 0     | 0    | 0    |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 7648.1 | 7648.1 | 7648.1 | 7648.1 | 7648.1 |
| 2.5°  | 7614.1 | 7586.3 | 7571.0 | 7603.9 | 7571.0 |
| 5°    | 7434.6 | 7414.4 | 7401.8 | 7420.7 | 7387.9 |
| 7.5°  | 6943.3 | 6923.1 | 6940.8 | 6940.8 | 6924.3 |
| 10°   | 6382.5 | 6371.1 | 6381.2 | 6407.8 | 6388.8 |
| 12.5° | 5838.0 | 5829.2 | 5833.1 | 5860.9 | 5839.4 |
| 15°   | 5221.7 | 5198.9 | 5193.9 | 5201.5 | 5191.3 |
| 17.5° | 4400.7 | 4366.5 | 4345.1 | 4362.8 | 4367.8 |
| 20°   | 3332.0 | 3332.0 | 3305.6 | 3320.7 | 3334.6 |
| 22.5° | 2130.8 | 2180.1 | 2185.2 | 2182.6 | 2173.8 |
| 25°   | 982.6  | 1211.4 | 1242.9 | 1222.7 | 978.9  |
| 27.5° | 397.9  | 491.3  | 611.3  | 506.5  | 384.0  |
| 30°   | 234.9  | 247.6  | 284.2  | 243.7  | 229.8  |
| 32.5° | 123.7  | 149.0  | 174.4  | 147.8  | 120.0  |
| 35°   | 72.0   | 85.9   | 111.2  | 84.6   | 70.7   |
| 37.5° | 46.8   | 54.4   | 74.5   | 54.4   | 44.2   |
| 40°   | 31.5   | 35.4   | 49.3   | 34.1   | 27.8   |
| 42.5° | 21.5   | 24.0   | 31.5   | 21.5   | 17.6   |
| 45°   | 15.1   | 16.4   | 19.0   | 13.9   | 11.4   |
| 47.5° | 10.1   | 11.4   | 12.7   | 8.8    | 7.6    |
| 50°   | 7.6    | 7.6    | 8.8    | 6.3    | 5.1    |
| 52.5° | 5.1    | 6.3    | 6.3    | 3.8    | 3.8    |
| 55°   | 3.8    | 3.8    | 5.1    | 2.5    | 2.5    |
| 57.5° | 3.8    | 3.8    | 3.8    | 2.5    | 2.5    |
| 60°   | 2.5    | 2.5    | 2.5    | 2.5    | 2.5    |
| 62.5° | 1.2    | 2.5    | 2.5    | 1.2    | 1.2    |
| 65°   | 1.2    | 1.2    | 1.2    | 1.2    | 1.2    |
| 67.5° | 1.2    | 1.2    | 1.2    | 1.2    | 1.2    |
| 70°   | 1.2    | 1.2    | 1.2    | 1.2    | 1.2    |
| 72.5° | 1.2    | 1.2    | 1.2    | 1.2    | 1.2    |
| 75°   | 0.0    | 1.2    | 1.2    | 0.0    | 0.0    |
| 77.5° | 0.0    | 1.2    | 1.2    | 1.2    | 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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1121 Highway 74 South

Peachtree City, GA 30269



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

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