

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: P210756

Luminaire Tested: **LE\_4B10D010 EC4B10209027 4LBN1LI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P210756  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35291)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LE\_4B10D010 EC4B10209027 4LBN1LI  
Description: PORTFOLIO 4 INCH CYLINDER  
NARROW DISTRIBUTION WITH SPECULAR CLEAR TRIM  
WATTAGE D010TR-10.05W DE010-10.58W D5LT-10.2W DMX-10.6W DL2-11.8W  
DL3-11.1W DLE-11.39W  
Light Source: HIGH LUMEN LED  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 753.2 lumens  
Efficiency: N/A  
Efficacy: 77.7 lumens/watt  
Spacing Criteria (0/90/45): 0.48 / 0.48 / 0.54  
Luminous Opening: Circular (Dia: 0.35' x H: 0')  
CIE Type: Direct

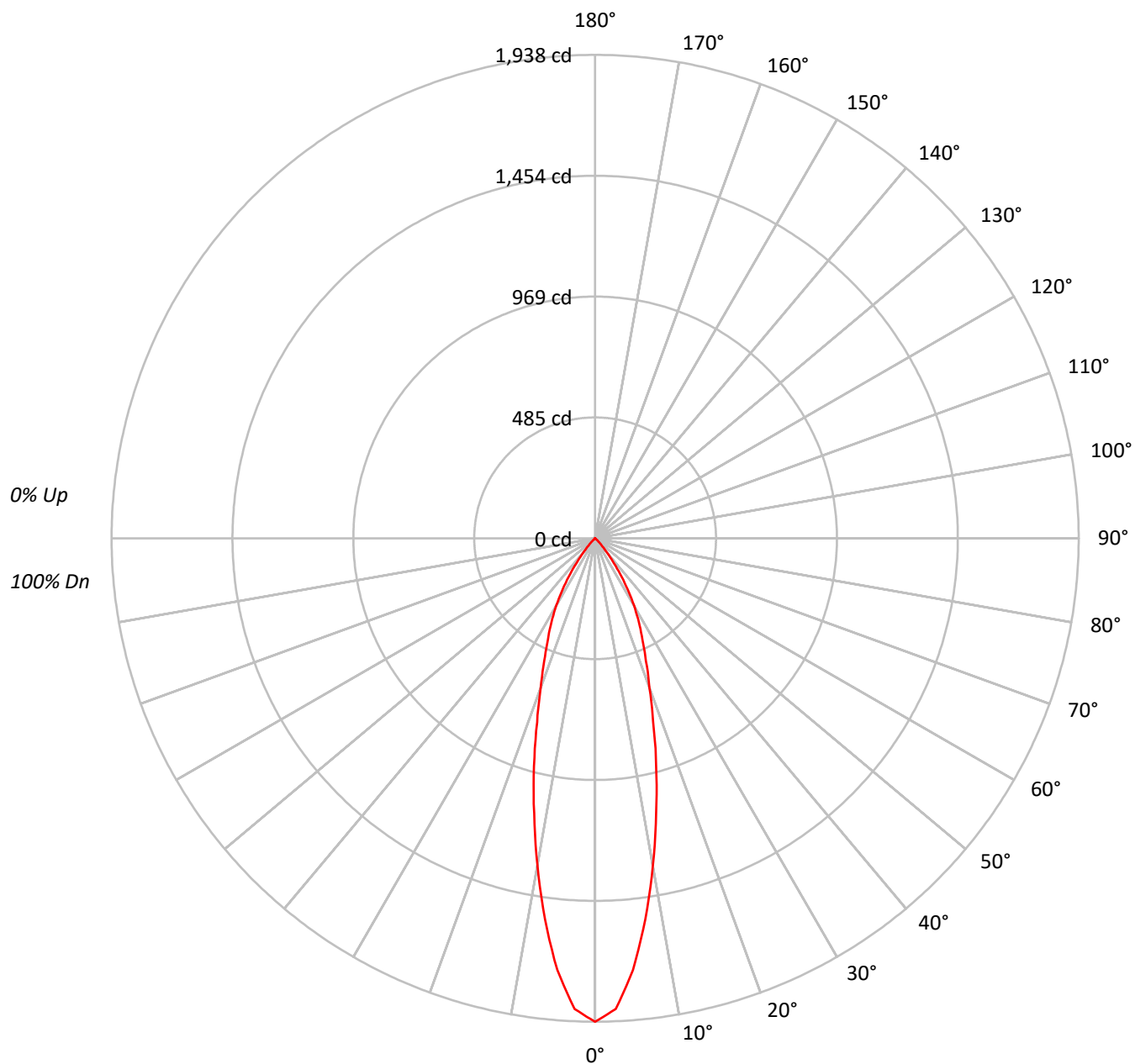
Input Watts (W): 9.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P210756

CATALOG NUMBER: LE\_4B10D010 EC4B10209027 4LBN1LI

### Luminous Intensity Polar Plot





TEST NUMBER: P210756

CATALOG NUMBER: LE\_4B10D010 EC4B10209027 4LBN1LI

**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   | 114 | 112 | 110 | 108 |  | 112 | 110 | 108 | 106 |  | 106 | 104 | 103 |  |  | 102 | 101 | 100 |  |  | 99  |
| 2   | 109 | 105 | 102 | 99  |  | 107 | 103 | 100 | 98  |  | 100 | 98  | 95  |  |  | 97  | 95  | 93  |  |  | 95  |
| 3   | 105 | 99  | 95  | 92  |  | 103 | 98  | 94  | 91  |  | 95  | 92  | 89  |  |  | 93  | 90  | 88  |  |  | 91  |
| 4   | 101 | 94  | 89  | 86  |  | 99  | 93  | 88  | 85  |  | 91  | 87  | 84  |  |  | 89  | 86  | 83  |  |  | 87  |
| 5   | 96  | 89  | 84  | 80  |  | 95  | 88  | 84  | 80  |  | 87  | 82  | 79  |  |  | 85  | 81  | 79  |  |  | 83  |
| 6   | 92  | 85  | 80  | 76  |  | 91  | 84  | 79  | 76  |  | 83  | 78  | 75  |  |  | 81  | 78  | 75  |  |  | 80  |
| 7   | 89  | 81  | 76  | 72  |  | 88  | 80  | 75  | 72  |  | 79  | 75  | 71  |  |  | 78  | 74  | 71  |  |  | 77  |
| 8   | 85  | 77  | 72  | 68  |  | 84  | 77  | 72  | 68  |  | 76  | 71  | 68  |  |  | 75  | 71  | 68  |  |  | 74  |
| 9   | 82  | 74  | 69  | 65  |  | 81  | 73  | 68  | 65  |  | 72  | 68  | 65  |  |  | 72  | 68  | 65  |  |  | 71  |
| 10  | 79  | 71  | 66  | 62  |  | 78  | 70  | 65  | 62  |  | 69  | 65  | 62  |  |  | 69  | 65  | 62  |  |  | 68  |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 211791 |
| 5°  | 190588 |
| 10° | 147747 |
| 15° | 106939 |
| 20° | 74043  |
| 25° | 53985  |
| 30° | 39224  |
| 35° | 23209  |
| 40° | 9756   |
| 45° | 3044   |
| 50° | 391    |
| 55° | 229    |
| 60° | 262    |
| 65° | 310    |
| 70° | 0      |
| 75° | 0      |
| 80° | 0      |
| 85° | 0      |



TEST NUMBER: P210756

CATALOG NUMBER: LE\_4B10D010 EC4B10209027 4LBN1LI

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 152.8  | 20.3      |
| 10°-20°   | 261.5  | 34.7      |
| 20°-30°   | 207.8  | 27.6      |
| 30°-40°   | 110.0  | 14.6      |
| 40°-50°   | 18.9   | 2.5       |
| 50°-60°   | 1.4    | 0.2       |
| 60°-70°   | 0.7    | 0.1       |
| 70°-80°   | 0.0    | 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°    | 622.1  | 82.6      |
| 0°-40°    | 732.1  | 97.2      |
| 0°-60°    | 752.5  | 99.9      |
| 0°-90°    | 753.2  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 753.2  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1938 |      |
| 5°  | 1738 | 153  |
| 15° | 945  | 262  |
| 25° | 448  | 208  |
| 35° | 174  | 110  |
| 45° | 20   | 19   |
| 55° | 1    | 1    |
| 65° | 1    | 1    |
| 75° | 0    | 0    |
| 85° | 0    | 0    |
| 90° | 0    |      |



TEST NUMBER: P210756

CATALOG NUMBER: LE\_4B10D010 EC4B10209027 4LBN1LI

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 1938.4 |
| 2.5°  | 1888.5 |
| 5°    | 1737.7 |
| 7.5°  | 1540.5 |
| 10°   | 1331.7 |
| 12.5° | 1129.8 |
| 15°   | 945.4  |
| 17.5° | 773.7  |
| 20°   | 636.8  |
| 22.5° | 532.4  |
| 25°   | 447.8  |
| 27.5° | 379.3  |
| 30°   | 310.9  |
| 32.5° | 241.3  |
| 35°   | 174.0  |
| 37.5° | 114.8  |
| 40°   | 68.4   |
| 42.5° | 39.4   |
| 45°   | 19.7   |
| 47.5° | 7.0    |
| 50°   | 2.3    |
| 52.5° | 2.3    |
| 55°   | 1.2    |
| 57.5° | 1.2    |
| 60°   | 1.2    |
| 62.5° | 1.2    |
| 65°   | 1.2    |
| 67.5° | 0.0    |
| 70°   | 0.0    |
| 72.5° | 0.0    |
| 75°   | 0.0    |
| 77.5° | 0.0    |
| 80°   | 0.0    |
| 82.5° | 0.0    |
| 85°   | 0.0    |
| 87.5° | 0.0    |
| 90°   | 0.0    |



Report Generated By E9808895 / USPTCWHP6082093







— 0°-180°







(END OF REPORT)