

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: P211671

Luminaire Tested: **LE\_4B20D010 EC4B10208035 4LBW1WH**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P211671  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35319)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LE\_4B20D010 EC4B10208035 4LBW1WH  
Description: PORTFOLIO 4 INCH CYLINDER  
WIDE DISTRIBUTION WITH WHEAT TRIM  
WATTAGE D010TR-21.86W DE010-20.46W D5LT-21.24W DMX-20.89W DL2-22.5W  
DL3-21.8 6W DLE-22.46W  
Light Source: HIGH LUMEN LED  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2088.9 lumens  
Efficiency: N/A  
Efficacy: 100.4 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.26 / 1.16  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Direct

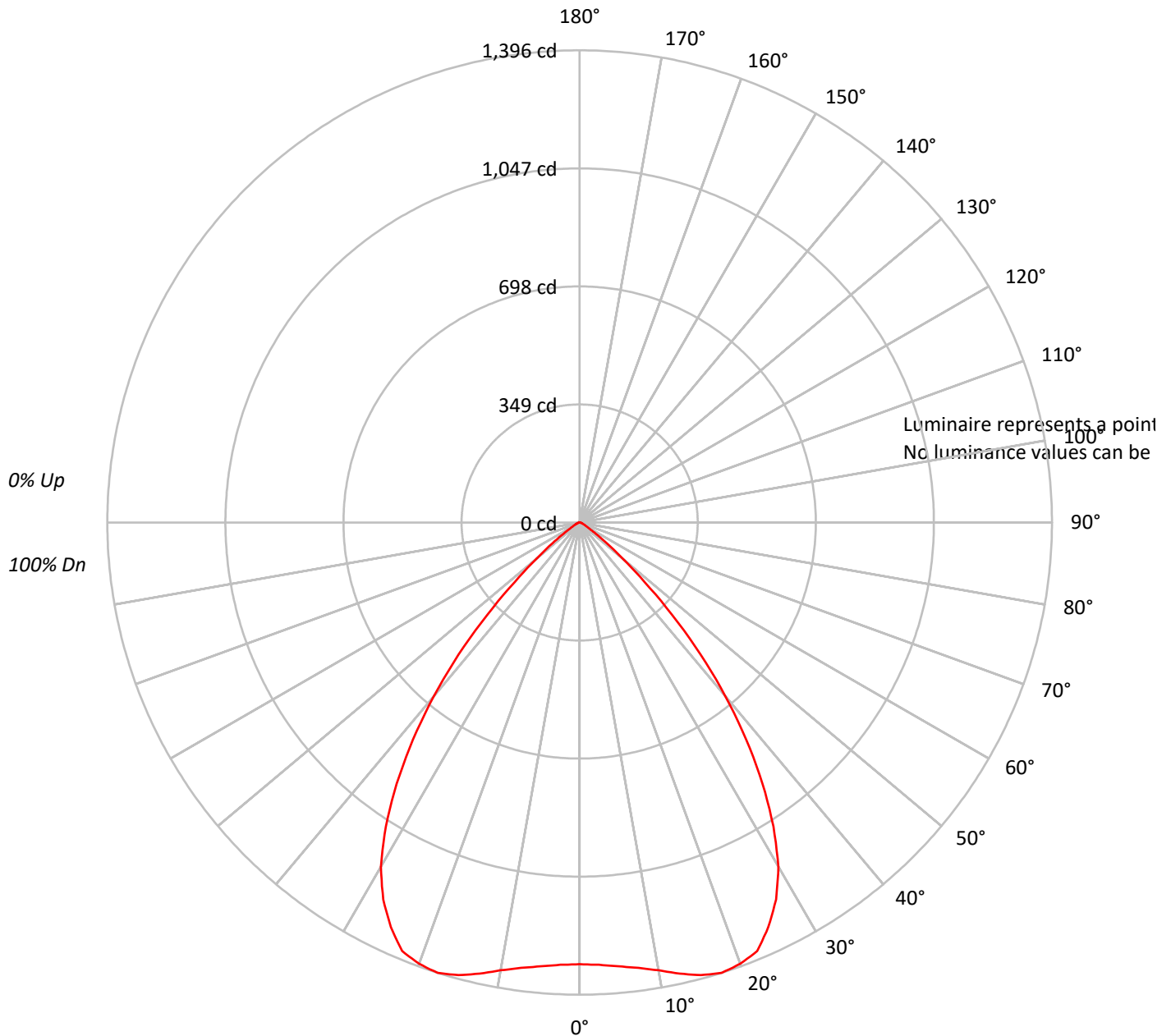
Input Watts (W): 20.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





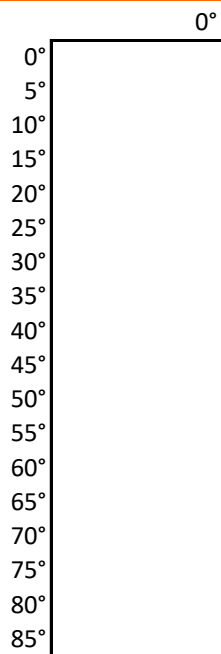
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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |  |     |     |     |     |  |     |     |     |  |  |     |     |     |  |  |     |
|-----|-----|-----|-----|-----|--|-----|-----|-----|-----|--|-----|-----|-----|--|--|-----|-----|-----|--|--|-----|
| 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   | 113 | 110 | 107 | 104 |  | 110 | 107 | 105 | 103 |  | 103 | 101 | 100 |  |  | 100 | 98  | 97  |  |  | 96  |
| 2   | 106 | 101 | 96  | 92  |  | 104 | 99  | 95  | 91  |  | 96  | 92  | 89  |  |  | 93  | 90  | 87  |  |  | 90  |
| 3   | 100 | 93  | 87  | 82  |  | 98  | 91  | 86  | 82  |  | 88  | 84  | 80  |  |  | 86  | 82  | 79  |  |  | 84  |
| 4   | 94  | 85  | 79  | 74  |  | 92  | 84  | 78  | 74  |  | 82  | 77  | 73  |  |  | 80  | 75  | 72  |  |  | 78  |
| 5   | 88  | 79  | 72  | 67  |  | 86  | 78  | 71  | 67  |  | 76  | 70  | 66  |  |  | 74  | 69  | 65  |  |  | 72  |
| 6   | 83  | 73  | 66  | 61  |  | 81  | 72  | 65  | 61  |  | 70  | 64  | 60  |  |  | 69  | 64  | 60  |  |  | 67  |
| 7   | 78  | 67  | 60  | 56  |  | 76  | 67  | 60  | 55  |  | 65  | 59  | 55  |  |  | 64  | 59  | 55  |  |  | 63  |
| 8   | 73  | 62  | 56  | 51  |  | 72  | 62  | 55  | 51  |  | 61  | 55  | 51  |  |  | 60  | 54  | 50  |  |  | 59  |
| 9   | 69  | 58  | 51  | 47  |  | 68  | 58  | 51  | 47  |  | 57  | 51  | 47  |  |  | 56  | 50  | 47  |  |  | 55  |
| 10  | 65  | 54  | 48  | 43  |  | 64  | 54  | 48  | 43  |  | 53  | 47  | 43  |  |  | 52  | 47  | 43  |  |  | 51  |

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





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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 126.5  | 6.1       |
| 10°-20°   | 391.5  | 18.7      |
| 20°-30°   | 602.2  | 28.8      |
| 30°-40°   | 581.0  | 27.8      |
| 40°-50°   | 302.9  | 14.5      |
| 50°-60°   | 63.8   | 3.1       |
| 60°-70°   | 14.8   | 0.7       |
| 70°-80°   | 5.8    | 0.3       |
| 80°-90°   | 0.4    | 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°    | 1120.2 | 53.6      |
| 0°-40°    | 1701.2 | 81.4      |
| 0°-60°    | 2067.9 | 99.0      |
| 0°-90°    | 2088.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2088.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1306 |      |
| 5°  | 1317 | 127  |
| 15° | 1385 | 391  |
| 25° | 1320 | 602  |
| 35° | 943  | 581  |
| 45° | 385  | 303  |
| 55° | 57   | 64   |
| 65° | 14   | 15   |
| 75° | 6    | 6    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 1306.0 |
| 2.5°  | 1308.7 |
| 5°    | 1316.9 |
| 7.5°  | 1327.9 |
| 10°   | 1344.3 |
| 12.5° | 1366.1 |
| 15°   | 1385.3 |
| 17.5° | 1396.2 |
| 20°   | 1388.1 |
| 22.5° | 1371.6 |
| 25°   | 1319.7 |
| 27.5° | 1256.9 |
| 30°   | 1174.8 |
| 32.5° | 1065.6 |
| 35°   | 942.6  |
| 37.5° | 808.8  |
| 40°   | 669.4  |
| 42.5° | 530.1  |
| 45°   | 385.2  |
| 47.5° | 259.6  |
| 50°   | 166.7  |
| 52.5° | 101.2  |
| 55°   | 57.4   |
| 57.5° | 35.5   |
| 60°   | 24.6   |
| 62.5° | 19.1   |
| 65°   | 13.7   |
| 67.5° | 10.9   |
| 70°   | 8.2    |
| 72.5° | 8.2    |
| 75°   | 5.5    |
| 77.5° | 2.8    |
| 80°   | 2.8    |
| 82.5° | 0.0    |
| 85°   | 0.0    |
| 87.5° | 0.0    |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)