

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: P211811

Luminaire Tested: **LE_4B20D010 EC4B10209050 4LBW1B**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P211811
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 EC4B10209050 4LBW1B
Description: PORTFOLIO 4 INCH CYLINDER
WIDE DISTRIBUTION WITH SPECULAR BLACK 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: 1000.8 lumens
Efficiency: N/A
Efficacy: 48.1 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.03
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Direct

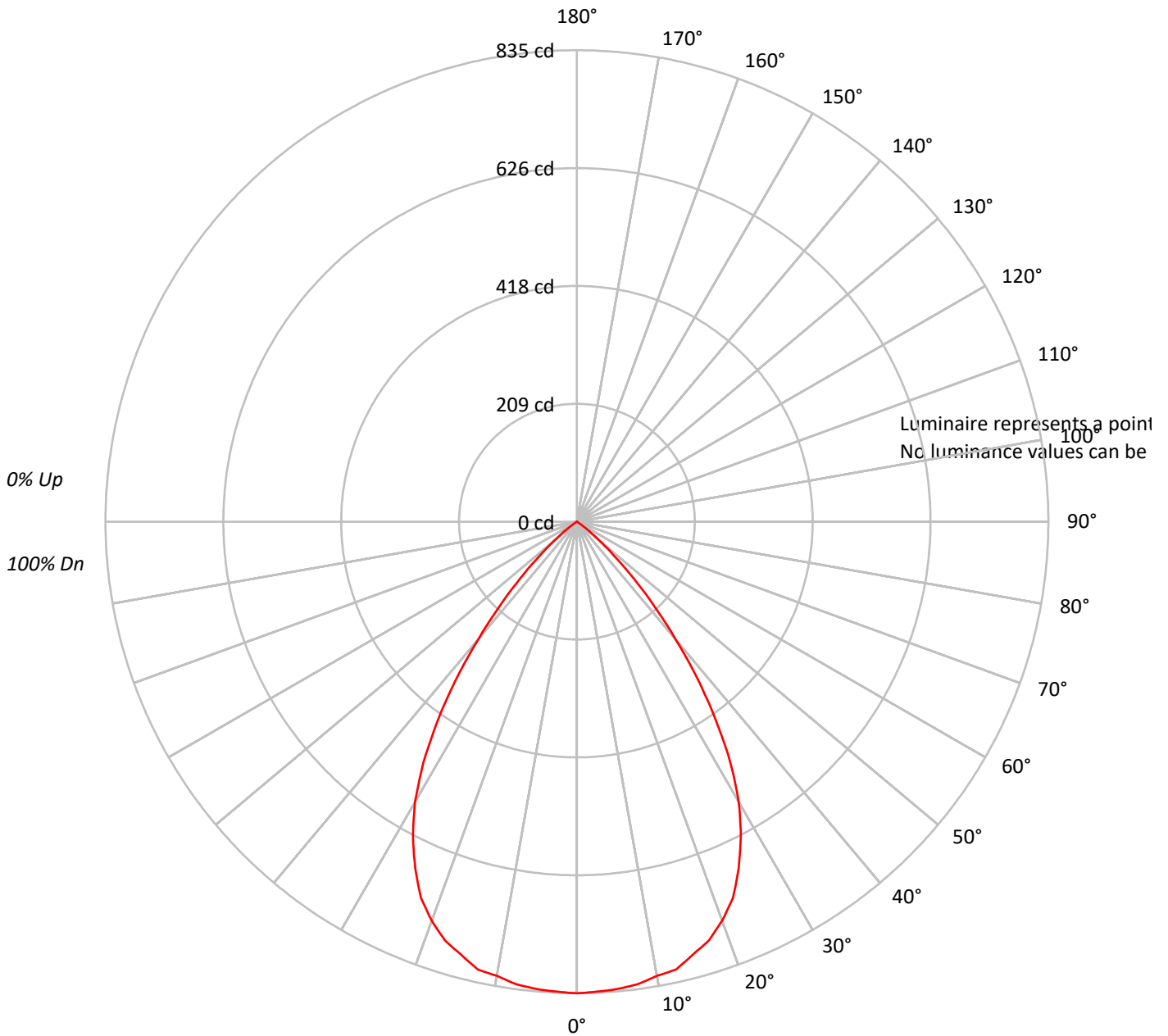
Input Watts (W): 20.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | | | 0 | |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | |
| 1 | 113 | 110 | 108 | 105 | 111 | 108 | 106 | 104 | 104 | 102 | 100 | 100 | 99 | 97 | 97 | 96 | 95 | 93 | | | |
| 2 | 107 | 102 | 98 | 94 | 105 | 100 | 96 | 93 | 97 | 94 | 91 | 94 | 91 | 89 | 91 | 89 | 87 | 86 | | | |
| 3 | 101 | 94 | 89 | 85 | 99 | 93 | 88 | 84 | 90 | 86 | 83 | 88 | 84 | 82 | 86 | 83 | 80 | 79 | | | |
| 4 | 96 | 88 | 82 | 77 | 94 | 86 | 81 | 77 | 84 | 79 | 76 | 82 | 78 | 75 | 80 | 77 | 74 | 72 | | | |
| 5 | 90 | 81 | 75 | 70 | 89 | 80 | 74 | 70 | 79 | 73 | 69 | 77 | 72 | 69 | 75 | 71 | 68 | 67 | | | |
| 6 | 85 | 76 | 69 | 65 | 84 | 75 | 69 | 64 | 73 | 68 | 64 | 72 | 67 | 64 | 70 | 66 | 63 | 62 | | | |
| 7 | 80 | 71 | 64 | 60 | 79 | 70 | 64 | 59 | 69 | 63 | 59 | 67 | 62 | 59 | 66 | 62 | 58 | 57 | | | |
| 8 | 76 | 66 | 60 | 55 | 75 | 65 | 59 | 55 | 64 | 59 | 55 | 63 | 58 | 54 | 62 | 58 | 54 | 53 | | | |
| 9 | 72 | 62 | 55 | 51 | 71 | 61 | 55 | 51 | 60 | 55 | 51 | 59 | 54 | 51 | 58 | 54 | 50 | 49 | | | |
| 10 | 68 | 58 | 52 | 48 | 67 | 58 | 52 | 48 | 57 | 51 | 47 | 56 | 51 | 47 | 55 | 50 | 47 | 46 | | | |

AVERAGE LUMINANCE (cd/sqm):





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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 78.9 | 7.9 |
| 10°-20° | 223.5 | 22.3 |
| 20°-30° | 308.9 | 30.9 |
| 30°-40° | 264.5 | 26.4 |
| 40°-50° | 112.4 | 11.2 |
| 50°-60° | 12.6 | 1.3 |
| 60°-70° | 0.0 | 0.0 |
| 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° | 611.3 | 61.1 |
| 0°-40° | 875.8 | 87.5 |
| 0°-60° | 1000.8 | 100.0 |
| 0°-90° | 1000.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1000.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-----|------|
| 0° | 835 | |
| 5° | 831 | 79 |
| 15° | 794 | 224 |
| 25° | 678 | 309 |
| 35° | 429 | 265 |
| 45° | 142 | 112 |
| 55° | 7 | 13 |
| 65° | 0 | 0 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|-------|
| 0° | 835.4 |
| 2.5° | 833.1 |
| 5° | 830.8 |
| 7.5° | 826.2 |
| 10° | 816.9 |
| 12.5° | 812.2 |
| 15° | 793.7 |
| 17.5° | 777.4 |
| 20° | 751.9 |
| 22.5° | 721.6 |
| 25° | 677.6 |
| 27.5° | 628.8 |
| 30° | 573.2 |
| 32.5° | 505.9 |
| 35° | 429.3 |
| 37.5° | 350.4 |
| 40° | 271.6 |
| 42.5° | 201.8 |
| 45° | 141.5 |
| 47.5° | 88.2 |
| 50° | 51.0 |
| 52.5° | 25.5 |
| 55° | 7.0 |
| 57.5° | 0.0 |
| 60° | 0.0 |
| 62.5° | 0.0 |
| 65° | 0.0 |
| 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 |



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— 0°-180°







(END OF REPORT)