

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: P205824

Luminaire Tested: **LD4B30D010 EU4B30508050 4LBSWH1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P205824
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: LD4B30D010 EU4B30508050 4LBSWH1
Description: PORTFOLIO 4 INCH SHALLOW RECESSED DOWNLIGHT
SHALLOW DISTRIBUTION WITH WHEAT TRIM
WATTAGE D010TR-27.4W DE010-27.95W D5LT-27.65W DMX-27.73W DL2-29.56W
DL3-29.67W DLE-29.73W
Light Source: HIGH LUMEN LED
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2983.3 lumens
Efficiency: N/A
Efficacy: 106.5 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.08
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Direct

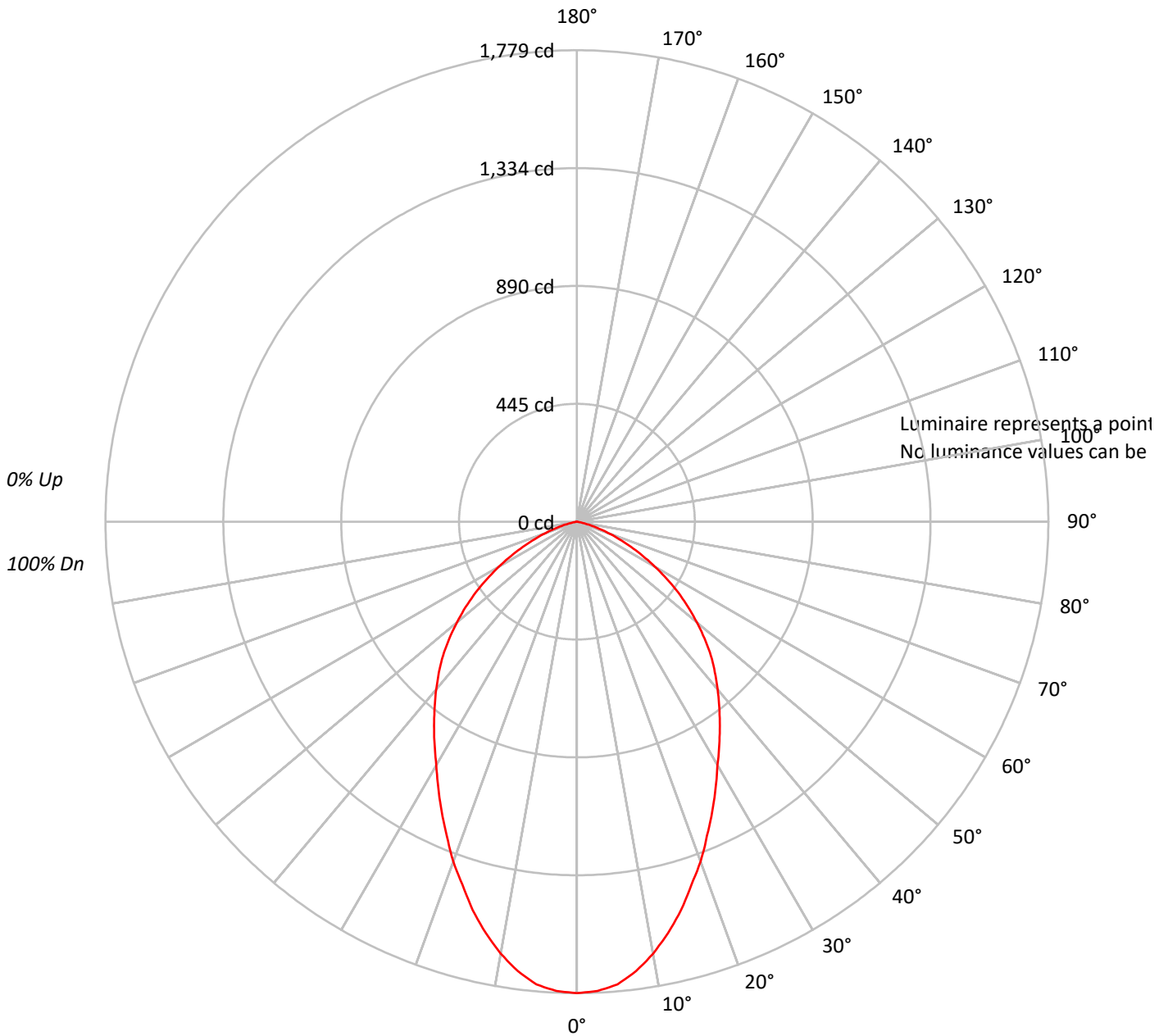
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|-----|
| RF | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 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 | | | | 100 |
| 1 | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 94 | 92 | 90 | 89 | | | | 89 |
| 2 | 103 | 96 | 90 | 85 | 100 | 94 | 89 | 84 | 91 | 86 | 83 | 87 | 84 | 81 | 85 | 82 | 79 | 77 | | | | 77 |
| 3 | 95 | 86 | 79 | 73 | 93 | 84 | 78 | 73 | 82 | 76 | 72 | 79 | 74 | 70 | 76 | 73 | 69 | 67 | | | | 67 |
| 4 | 88 | 77 | 70 | 64 | 86 | 76 | 69 | 63 | 74 | 68 | 63 | 72 | 66 | 62 | 69 | 65 | 61 | 59 | | | | 59 |
| 5 | 81 | 70 | 62 | 56 | 79 | 69 | 62 | 56 | 67 | 60 | 55 | 65 | 59 | 55 | 63 | 58 | 54 | 52 | | | | 52 |
| 6 | 76 | 64 | 56 | 50 | 74 | 63 | 55 | 50 | 61 | 54 | 49 | 60 | 54 | 49 | 58 | 53 | 49 | 47 | | | | 47 |
| 7 | 71 | 58 | 51 | 45 | 69 | 58 | 50 | 45 | 56 | 49 | 45 | 55 | 49 | 44 | 54 | 48 | 44 | 42 | | | | 42 |
| 8 | 66 | 54 | 46 | 41 | 65 | 53 | 46 | 41 | 52 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | 38 | | | | 38 |
| 9 | 62 | 50 | 42 | 37 | 61 | 49 | 42 | 37 | 48 | 41 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 | | | | 35 |
| 10 | 58 | 46 | 39 | 34 | 57 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 34 | 43 | 38 | 34 | 32 | | | | 32 |

AVERAGE LUMINANCE (cd/sqm):





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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 164.1 | 5.5 |
| 10°-20° | 424.8 | 14.2 |
| 20°-30° | 555.6 | 18.6 |
| 30°-40° | 588.3 | 19.7 |
| 40°-50° | 548.7 | 18.4 |
| 50°-60° | 415.6 | 13.9 |
| 60°-70° | 225.1 | 7.5 |
| 70°-80° | 60.4 | 2.0 |
| 80°-90° | 0.9 | 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° | 1144.4 | 38.4 |
| 0°-40° | 1732.7 | 58.1 |
| 0°-60° | 2697.0 | 90.4 |
| 0°-90° | 2983.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2983.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 1779 | |
| 5° | 1753 | 164 |
| 15° | 1518 | 425 |
| 25° | 1208 | 556 |
| 35° | 940 | 588 |
| 45° | 715 | 549 |
| 55° | 467 | 416 |
| 65° | 225 | 225 |
| 75° | 52 | 60 |
| 85° | 0 | 1 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 1779.2 |
| 2.5° | 1772.7 |
| 5° | 1753.1 |
| 7.5° | 1710.7 |
| 10° | 1655.2 |
| 12.5° | 1589.9 |
| 15° | 1518.1 |
| 17.5° | 1436.4 |
| 20° | 1364.6 |
| 22.5° | 1283.0 |
| 25° | 1207.9 |
| 27.5° | 1132.8 |
| 30° | 1061.0 |
| 32.5° | 999.0 |
| 35° | 940.2 |
| 37.5° | 881.5 |
| 40° | 826.0 |
| 42.5° | 770.5 |
| 45° | 715.0 |
| 47.5° | 652.9 |
| 50° | 590.9 |
| 52.5° | 528.9 |
| 55° | 466.8 |
| 57.5° | 401.6 |
| 60° | 339.5 |
| 62.5° | 280.8 |
| 65° | 225.3 |
| 67.5° | 173.0 |
| 70° | 127.3 |
| 72.5° | 88.1 |
| 75° | 52.2 |
| 77.5° | 22.9 |
| 80° | 6.5 |
| 82.5° | 0.0 |
| 85° | 0.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |



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— 0°-180°







(END OF REPORT)