

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: P205677

Luminaire Tested: **LD4B10D010 EU4B10208027 4LBSH1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P205677
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: LD4B10D010 EU4B10208027 4LBSH1
Description: PORTFOLIO 4 INCH SHALLOW RECESSED DOWNLIGHT
SHALLOW DISTRIBUTION WITH SEMI-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: 1008.7 lumens
Efficiency: N/A
Efficacy: 101.9 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.06 / 1.17
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Direct

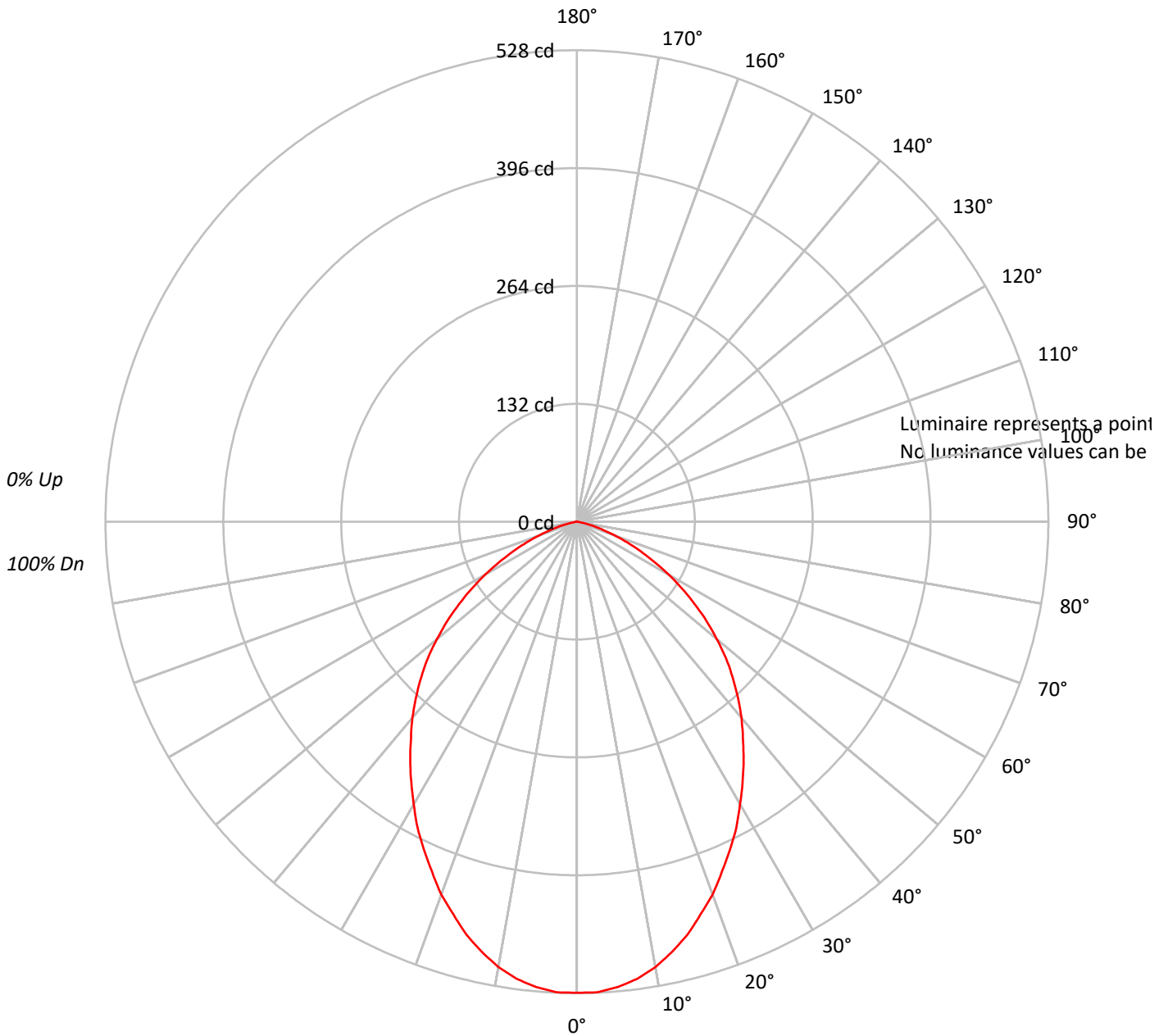
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P205677

CATALOG NUMBER: LD4B10D010 EU4B10208027 4LB5H1

Luminous Intensity Polar Plot





TEST NUMBER: P205677

CATALOG NUMBER: LD4B10D010 EU4B10208027 4LBSH1

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 | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 | | | |
| 2 | 102 | 96 | 90 | 85 | 100 | 94 | 88 | 84 | 90 | 86 | 82 | 87 | 83 | 80 | 84 | 81 | 79 | 77 | | | |
| 3 | 95 | 85 | 78 | 73 | 92 | 84 | 77 | 72 | 81 | 75 | 71 | 78 | 74 | 70 | 76 | 72 | 69 | 67 | | | |
| 4 | 87 | 77 | 69 | 63 | 85 | 75 | 68 | 63 | 73 | 67 | 62 | 71 | 65 | 61 | 69 | 64 | 60 | 58 | | | |
| 5 | 81 | 69 | 61 | 55 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 64 | 59 | 54 | 63 | 58 | 53 | 51 | | | |
| 6 | 75 | 63 | 55 | 49 | 73 | 62 | 54 | 49 | 60 | 54 | 49 | 59 | 53 | 48 | 57 | 52 | 48 | 46 | | | |
| 7 | 70 | 58 | 50 | 44 | 68 | 57 | 49 | 44 | 55 | 49 | 44 | 54 | 48 | 43 | 53 | 47 | 43 | 41 | | | |
| 8 | 65 | 53 | 45 | 40 | 64 | 52 | 45 | 40 | 51 | 44 | 39 | 50 | 44 | 39 | 49 | 43 | 39 | 37 | | | |
| 9 | 61 | 49 | 41 | 36 | 60 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 36 | 45 | 40 | 35 | 34 | | | |
| 10 | 58 | 45 | 38 | 33 | 56 | 45 | 38 | 33 | 44 | 37 | 33 | 43 | 37 | 33 | 42 | 37 | 33 | 31 | | | |

AVERAGE LUMINANCE (cd/sqm):





TEST NUMBER: P205677

CATALOG NUMBER: LD4B10D010 EU4B10208027 4LBSH1

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 49.4 | 4.9 |
| 10°-20° | 134.3 | 13.3 |
| 20°-30° | 186.5 | 18.5 |
| 30°-40° | 203.5 | 20.2 |
| 40°-50° | 189.9 | 18.8 |
| 50°-60° | 144.1 | 14.3 |
| 60°-70° | 78.9 | 7.8 |
| 70°-80° | 21.7 | 2.2 |
| 80°-90° | 0.3 | 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° | 370.3 | 36.7 |
| 0°-40° | 573.8 | 56.9 |
| 0°-60° | 907.8 | 90.0 |
| 0°-90° | 1008.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1008.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-----|------|
| 0° | 528 | |
| 5° | 523 | 49 |
| 15° | 479 | 134 |
| 25° | 405 | 187 |
| 35° | 325 | 204 |
| 45° | 247 | 190 |
| 55° | 161 | 144 |
| 65° | 79 | 79 |
| 75° | 19 | 22 |
| 85° | 0 | 0 |
| 90° | 0 | |



TEST NUMBER: P205677

CATALOG NUMBER: LD4B10D010 EU4B10208027 4LBSH1

CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|-------|
| 0° | 527.6 |
| 2.5° | 527.6 |
| 5° | 523.1 |
| 7.5° | 516.5 |
| 10° | 506.5 |
| 12.5° | 493.1 |
| 15° | 478.7 |
| 17.5° | 460.9 |
| 20° | 444.3 |
| 22.5° | 424.3 |
| 25° | 405.4 |
| 27.5° | 386.5 |
| 30° | 365.4 |
| 32.5° | 345.4 |
| 35° | 325.4 |
| 37.5° | 305.4 |
| 40° | 286.6 |
| 42.5° | 266.6 |
| 45° | 246.6 |
| 47.5° | 226.6 |
| 50° | 204.4 |
| 52.5° | 183.3 |
| 55° | 161.0 |
| 57.5° | 139.9 |
| 60° | 118.8 |
| 62.5° | 97.7 |
| 65° | 78.9 |
| 67.5° | 61.1 |
| 70° | 45.5 |
| 72.5° | 31.1 |
| 75° | 18.9 |
| 77.5° | 8.9 |
| 80° | 2.2 |
| 82.5° | 0.0 |
| 85° | 0.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |



Report Generated By E9808895 / USPTCWHP6082093





— 0°-180°







(END OF REPORT)