

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: P211621

Luminaire Tested: **LE_4B20D010 EC4B10209730 4LBM1MW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P211621
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 EC4B10209730 4LBM1MW
Description: PORTFOLIO 4 INCH CYLINDER
MEDIUM DISTRIBUTION WITH MATTE WHITE 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: 1372.3 lumens
Efficiency: N/A
Efficacy: 66.0 lumens/watt
Spacing Criteria (0/90/45): 0.99 / 0.99 / 0.97
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Direct

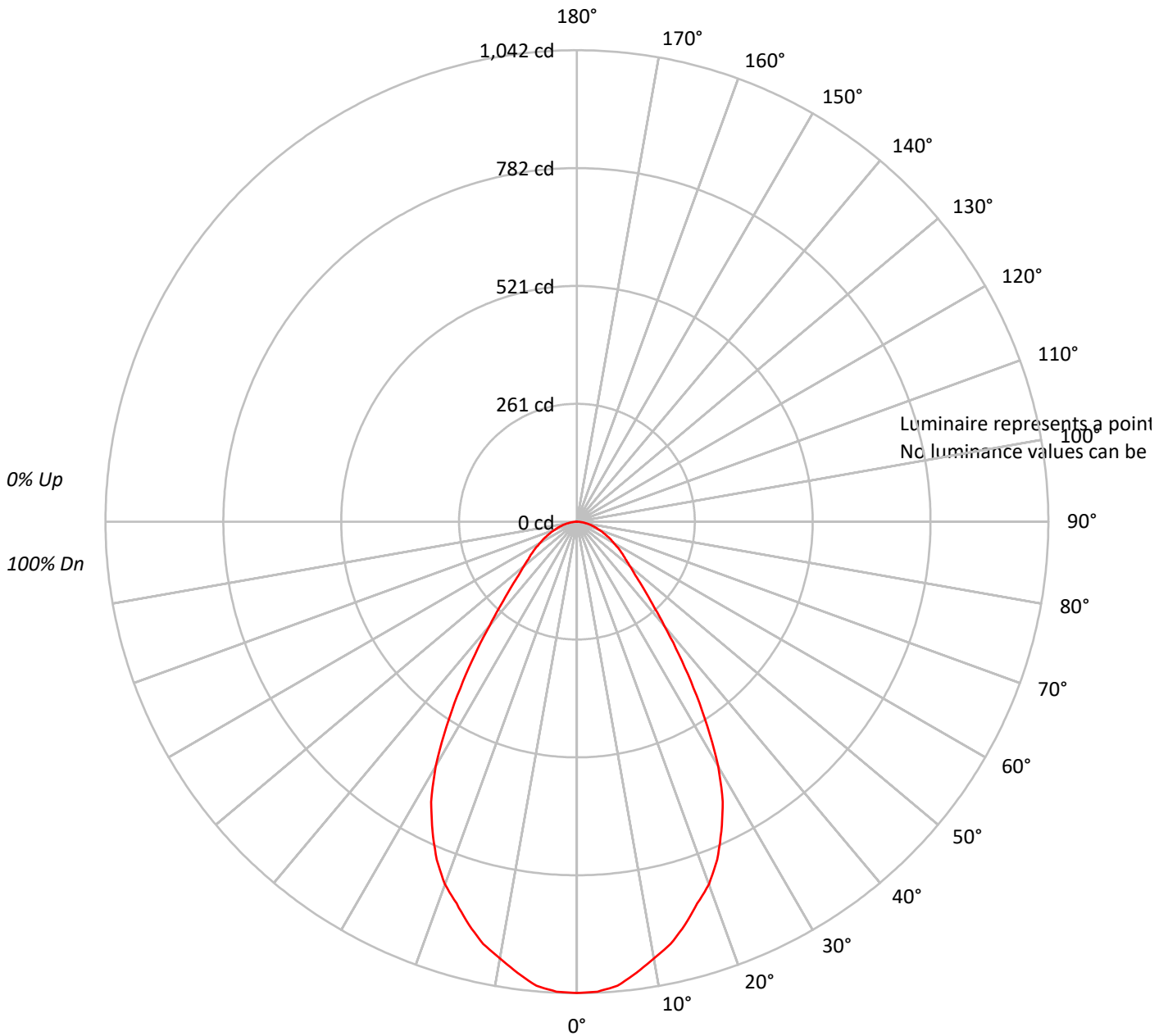
Input Watts (W): 20.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 100 | 100 | 100 |
| 1 | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 100 | 102 | 99 | 97 | 98 | 96 | 94 | 94 | 93 | 91 | 89 | 89 | 89 | 89 |
| 2 | 104 | 98 | 92 | 88 | 102 | 96 | 91 | 87 | 93 | 89 | 85 | 89 | 86 | 83 | 87 | 84 | 81 | 80 | 80 | 80 | 80 |
| 3 | 97 | 89 | 83 | 77 | 95 | 87 | 82 | 77 | 85 | 80 | 76 | 82 | 78 | 74 | 80 | 76 | 73 | 71 | 71 | 71 | 71 |
| 4 | 91 | 81 | 74 | 69 | 89 | 80 | 74 | 69 | 78 | 72 | 68 | 76 | 71 | 67 | 74 | 69 | 66 | 64 | 64 | 64 | 64 |
| 5 | 85 | 75 | 67 | 62 | 83 | 74 | 67 | 62 | 72 | 66 | 61 | 70 | 65 | 61 | 68 | 64 | 60 | 58 | 58 | 58 | 58 |
| 6 | 80 | 69 | 62 | 56 | 78 | 68 | 61 | 56 | 66 | 60 | 56 | 65 | 59 | 55 | 63 | 59 | 55 | 53 | 53 | 53 | 53 |
| 7 | 75 | 64 | 57 | 52 | 74 | 63 | 56 | 51 | 62 | 56 | 51 | 60 | 55 | 51 | 59 | 54 | 50 | 49 | 49 | 49 | 49 |
| 8 | 71 | 59 | 52 | 47 | 69 | 59 | 52 | 47 | 58 | 51 | 47 | 56 | 51 | 47 | 55 | 50 | 47 | 45 | 45 | 45 | 45 |
| 9 | 67 | 55 | 48 | 44 | 66 | 55 | 48 | 44 | 54 | 48 | 44 | 53 | 47 | 43 | 52 | 47 | 43 | 42 | 42 | 42 | 42 |
| 10 | 63 | 52 | 45 | 41 | 62 | 51 | 45 | 41 | 51 | 45 | 40 | 50 | 44 | 40 | 49 | 44 | 40 | 39 | 39 | 39 | 39 |

AVERAGE LUMINANCE (cd/sqm):





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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 96.6 | 7.0 |
| 10°-20° | 258.9 | 18.9 |
| 20°-30° | 344.2 | 25.1 |
| 30°-40° | 281.5 | 20.5 |
| 40°-50° | 164.0 | 11.9 |
| 50°-60° | 108.8 | 7.9 |
| 60°-70° | 71.5 | 5.2 |
| 70°-80° | 37.7 | 2.7 |
| 80°-90° | 9.2 | 0.7 |
| 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° | 699.7 | 51.0 |
| 0°-40° | 981.2 | 71.5 |
| 0°-60° | 1253.9 | 91.4 |
| 0°-90° | 1372.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1372.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 1042 | |
| 5° | 1030 | 97 |
| 15° | 922 | 259 |
| 25° | 756 | 344 |
| 35° | 449 | 282 |
| 45° | 207 | 164 |
| 55° | 121 | 109 |
| 65° | 72 | 72 |
| 75° | 36 | 38 |
| 85° | 8 | 9 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 1041.8 |
| 2.5° | 1039.8 |
| 5° | 1029.8 |
| 7.5° | 1006.1 |
| 10° | 980.2 |
| 12.5° | 956.3 |
| 15° | 922.5 |
| 17.5° | 884.7 |
| 20° | 852.9 |
| 22.5° | 809.2 |
| 25° | 755.5 |
| 27.5° | 697.9 |
| 30° | 624.3 |
| 32.5° | 536.8 |
| 35° | 449.4 |
| 37.5° | 369.8 |
| 40° | 300.2 |
| 42.5° | 246.5 |
| 45° | 206.8 |
| 47.5° | 174.9 |
| 50° | 153.1 |
| 52.5° | 135.1 |
| 55° | 121.3 |
| 57.5° | 107.4 |
| 60° | 93.5 |
| 62.5° | 83.5 |
| 65° | 71.6 |
| 67.5° | 61.6 |
| 70° | 51.7 |
| 72.5° | 43.7 |
| 75° | 35.8 |
| 77.5° | 27.8 |
| 80° | 19.8 |
| 82.5° | 13.9 |
| 85° | 8.0 |
| 87.5° | 2.0 |
| 90° | 0.0 |



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— 0°-180°







(END OF REPORT)