

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: P252086

Luminaire Tested: **LD4B20D010 EU4B10209050 4LBBA1MB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P252086
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1712-453-4)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD4B20D010 EU4B10209050 4LBBA1MB
Description: PORTFOLIO 4 INCH BAFFLE RECESSED DOWNLIGHT, WITH MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 882.1 lumens
Efficiency: N/A
Efficacy: 42.4 lumens/watt
Spacing Criteria (0/90/45): 1.04 / 1.04 / 0.94
Luminous Opening: Circular (Dia: 0.38' x H: 0')
CIE Type: Direct

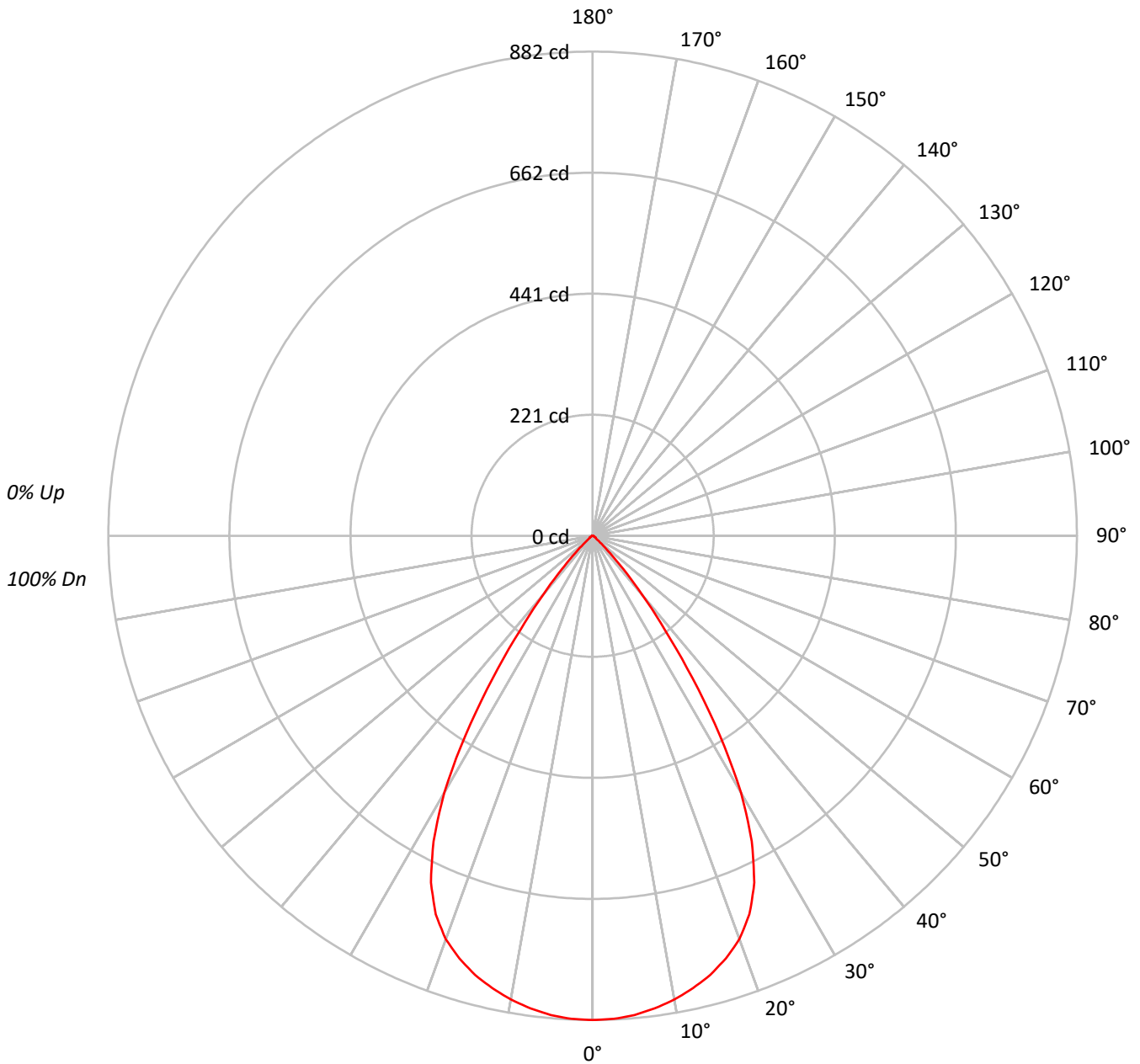
Input Watts (W): 20.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | | | 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 | 111 | 108 | 106 | 111 | 109 | 106 | 104 | 105 | 103 | 101 | 101 | 99 | 98 | 97 | 96 | 95 | 93 | | | |
| 2 | 108 | 103 | 99 | 96 | 106 | 101 | 98 | 94 | 98 | 95 | 92 | 95 | 93 | 90 | 92 | 90 | 89 | 87 | | | |
| 3 | 102 | 96 | 91 | 87 | 100 | 95 | 90 | 86 | 92 | 88 | 85 | 90 | 86 | 84 | 87 | 85 | 82 | 81 | | | |
| 4 | 97 | 90 | 84 | 80 | 95 | 88 | 83 | 79 | 86 | 82 | 78 | 84 | 81 | 77 | 82 | 79 | 77 | 75 | | | |
| 5 | 92 | 84 | 78 | 74 | 91 | 83 | 77 | 73 | 81 | 76 | 73 | 79 | 75 | 72 | 78 | 74 | 71 | 70 | | | |
| 6 | 87 | 79 | 73 | 68 | 86 | 78 | 72 | 68 | 76 | 71 | 68 | 75 | 70 | 67 | 74 | 70 | 67 | 65 | | | |
| 7 | 83 | 74 | 68 | 63 | 82 | 73 | 67 | 63 | 72 | 67 | 63 | 71 | 66 | 63 | 69 | 65 | 62 | 61 | | | |
| 8 | 79 | 69 | 63 | 59 | 78 | 69 | 63 | 59 | 68 | 63 | 59 | 67 | 62 | 59 | 66 | 61 | 58 | 57 | | | |
| 9 | 75 | 65 | 59 | 55 | 74 | 65 | 59 | 55 | 64 | 59 | 55 | 63 | 58 | 55 | 62 | 58 | 55 | 53 | | | |
| 10 | 72 | 62 | 56 | 52 | 71 | 61 | 56 | 52 | 60 | 55 | 52 | 60 | 55 | 52 | 59 | 55 | 51 | 50 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|-------|
| | 0° |
| 0° | 85968 |
| 5° | 85729 |
| 10° | 84899 |
| 15° | 83542 |
| 20° | 81093 |
| 25° | 74918 |
| 30° | 60780 |
| 35° | 37679 |
| 40° | 17722 |
| 45° | 6188 |
| 50° | 1744 |
| 55° | 1172 |
| 60° | 897 |
| 65° | 807 |
| 70° | 655 |
| 75° | 452 |
| 80° | 673 |
| 85° | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 83.1 | 9.4 |
| 10°-20° | 232.7 | 26.4 |
| 20°-30° | 312.8 | 35.5 |
| 30°-40° | 199.8 | 22.7 |
| 40°-50° | 42.5 | 4.8 |
| 50°-60° | 6.4 | 0.7 |
| 60°-70° | 3.1 | 0.4 |
| 70°-80° | 1.4 | 0.2 |
| 80°-90° | 0.2 | 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° | 628.6 | 71.3 |
| 0°-40° | 828.5 | 93.9 |
| 0°-60° | 877.3 | 99.5 |
| 0°-90° | 882.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 882.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-----|------|
| 0° | 882 | |
| 5° | 876 | 83 |
| 15° | 828 | 233 |
| 25° | 697 | 313 |
| 35° | 317 | 200 |
| 45° | 45 | 42 |
| 55° | 7 | 6 |
| 65° | 4 | 3 |
| 75° | 1 | 1 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|-------|
| 0° | 882.1 |
| 2.5° | 880.9 |
| 5° | 876.3 |
| 7.5° | 868.3 |
| 10° | 857.9 |
| 12.5° | 844.1 |
| 15° | 828.0 |
| 17.5° | 807.2 |
| 20° | 781.9 |
| 22.5° | 746.2 |
| 25° | 696.7 |
| 27.5° | 627.6 |
| 30° | 540.1 |
| 32.5° | 431.8 |
| 35° | 316.7 |
| 37.5° | 216.5 |
| 40° | 139.3 |
| 42.5° | 82.9 |
| 45° | 44.9 |
| 47.5° | 23.0 |
| 50° | 11.5 |
| 52.5° | 8.1 |
| 55° | 6.9 |
| 57.5° | 5.8 |
| 60° | 4.6 |
| 62.5° | 3.5 |
| 65° | 3.5 |
| 67.5° | 2.3 |
| 70° | 2.3 |
| 72.5° | 1.2 |
| 75° | 1.2 |
| 77.5° | 1.2 |
| 80° | 1.2 |
| 82.5° | 0.0 |
| 85° | 0.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |



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— 0°-180°







(END OF REPORT)