

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: P211967

Luminaire Tested: **LSR4B30D010BZ EC4B30509030 4LBMH1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P211967
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: LSR4B30D010BZ EC4B30509030 4LBMH1
Description: PORTFOLIO 4 INCH CYLINDER
MEDIUM DISTRIBUTION WITH SEMI-SPECULAR CLEAR 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

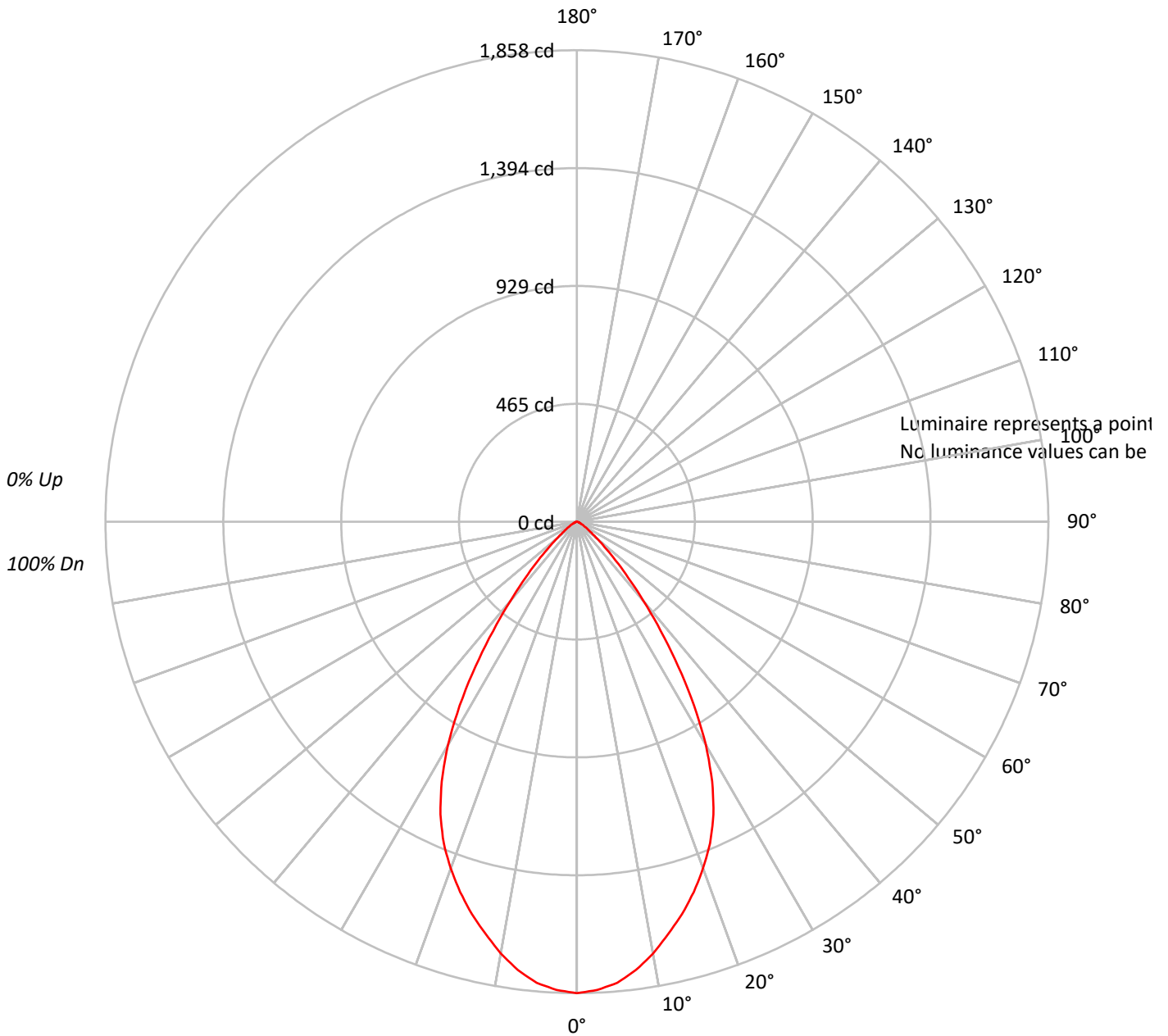
Lumens per Lamp: N/A
Luminaire Lumens: 1874.1 lumens
Efficiency: N/A
Efficacy: 66.9 lumens/watt
Spacing Criteria (0/90/45): 0.95 / 0.95 / 0.93
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):





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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 171.0 | 9.1 |
| 10°-20° | 448.6 | 23.9 |
| 20°-30° | 576.5 | 30.8 |
| 30°-40° | 433.8 | 23.1 |
| 40°-50° | 174.2 | 9.3 |
| 50°-60° | 49.5 | 2.6 |
| 60°-70° | 15.7 | 0.8 |
| 70°-80° | 4.5 | 0.2 |
| 80°-90° | 0.4 | 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° | 1196.1 | 63.8 |
| 0°-40° | 1629.9 | 87.0 |
| 0°-60° | 1853.6 | 98.9 |
| 0°-90° | 1874.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1874.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 1858 | |
| 5° | 1824 | 171 |
| 15° | 1601 | 449 |
| 25° | 1273 | 577 |
| 35° | 696 | 434 |
| 45° | 215 | 174 |
| 55° | 51 | 50 |
| 65° | 14 | 16 |
| 75° | 3 | 4 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 1858.4 |
| 2.5° | 1847.0 |
| 5° | 1824.4 |
| 7.5° | 1782.0 |
| 10° | 1728.2 |
| 12.5° | 1663.2 |
| 15° | 1601.0 |
| 17.5° | 1530.2 |
| 20° | 1453.9 |
| 22.5° | 1371.8 |
| 25° | 1272.8 |
| 27.5° | 1154.0 |
| 30° | 1015.4 |
| 32.5° | 859.9 |
| 35° | 695.8 |
| 37.5° | 543.1 |
| 40° | 407.3 |
| 42.5° | 299.8 |
| 45° | 215.0 |
| 47.5° | 147.1 |
| 50° | 101.8 |
| 52.5° | 70.7 |
| 55° | 50.9 |
| 57.5° | 36.8 |
| 60° | 28.3 |
| 62.5° | 19.8 |
| 65° | 14.1 |
| 67.5° | 11.3 |
| 70° | 8.5 |
| 72.5° | 5.7 |
| 75° | 2.8 |
| 77.5° | 2.8 |
| 80° | 2.8 |
| 82.5° | 0.0 |
| 85° | 0.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |



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— 0°-180°







(END OF REPORT)