

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: P211816

Luminaire Tested: **LSR4B20D010BZ EC4B10209050 4LBWWH1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P211816
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: LSR4B20D010BZ EC4B10209050 4LBWWH1
Description: PORTFOLIO 4 INCH CYLINDER
WIDE DISTRIBUTION WITH WHEAT 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: 1531.3 lumens
Efficiency: N/A
Efficacy: 73.6 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.26 / 1.16
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Direct

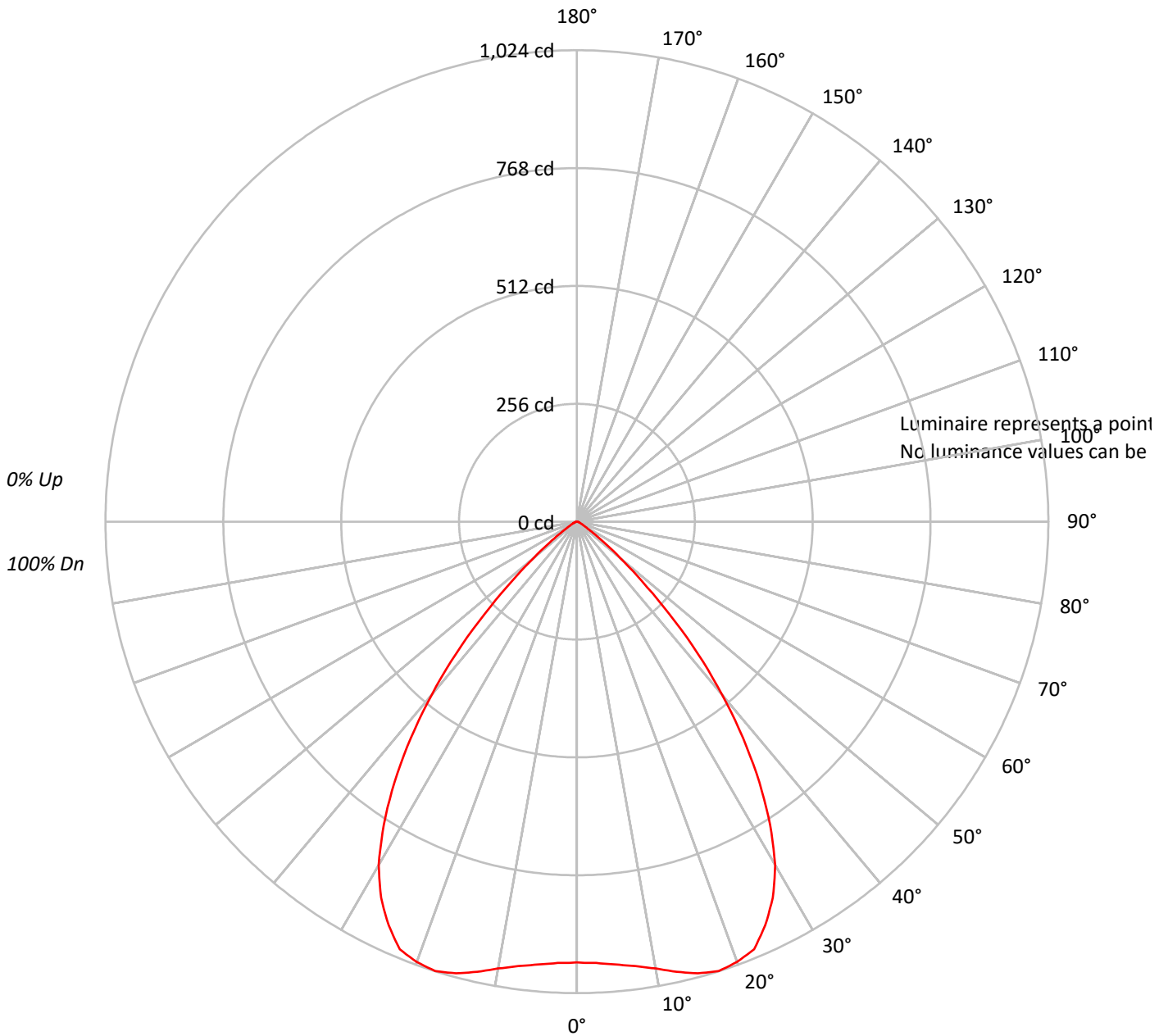
Input Watts (W): 20.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|-----|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | |
| RC | 80 | | | | | | | | | 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 | 107 | 104 | 110 | 107 | 105 | 103 | 103 | 101 | 100 | 100 | 98 | 97 | 96 | 95 | 94 | 92 | | | | 92 | | | | | | | | | | | | | | | |
| 2 | 106 | 101 | 96 | 92 | 104 | 99 | 95 | 91 | 96 | 92 | 89 | 93 | 90 | 87 | 90 | 88 | 85 | 84 | | | | 84 | | | | | | | | | | | | | | | |
| 3 | 100 | 93 | 87 | 82 | 98 | 91 | 86 | 82 | 88 | 84 | 80 | 86 | 82 | 79 | 84 | 80 | 78 | 76 | | | | 76 | | | | | | | | | | | | | | | |
| 4 | 94 | 85 | 79 | 74 | 92 | 84 | 78 | 74 | 82 | 77 | 73 | 80 | 75 | 72 | 78 | 74 | 71 | 69 | | | | 69 | | | | | | | | | | | | | | | |
| 5 | 88 | 79 | 72 | 67 | 86 | 78 | 71 | 67 | 76 | 70 | 66 | 74 | 69 | 65 | 72 | 68 | 65 | 63 | | | | 63 | | | | | | | | | | | | | | | |
| 6 | 83 | 73 | 66 | 61 | 81 | 72 | 65 | 61 | 70 | 64 | 60 | 69 | 64 | 60 | 67 | 63 | 59 | 58 | | | | 58 | | | | | | | | | | | | | | | |
| 7 | 78 | 67 | 60 | 56 | 76 | 67 | 60 | 55 | 65 | 59 | 55 | 64 | 59 | 55 | 63 | 58 | 54 | 53 | | | | 53 | | | | | | | | | | | | | | | |
| 8 | 73 | 62 | 56 | 51 | 72 | 62 | 55 | 51 | 61 | 55 | 51 | 60 | 54 | 50 | 59 | 54 | 50 | 49 | | | | 49 | | | | | | | | | | | | | | | |
| 9 | 69 | 58 | 51 | 47 | 68 | 58 | 51 | 47 | 57 | 51 | 47 | 56 | 50 | 47 | 55 | 50 | 46 | 45 | | | | 45 | | | | | | | | | | | | | | | |
| 10 | 65 | 54 | 48 | 43 | 64 | 54 | 48 | 43 | 53 | 47 | 43 | 52 | 47 | 43 | 51 | 46 | 43 | 41 | | | | 41 | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):





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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 92.8 | 6.1 |
| 10°-20° | 287.0 | 18.7 |
| 20°-30° | 441.5 | 28.8 |
| 30°-40° | 425.9 | 27.8 |
| 40°-50° | 222.1 | 14.5 |
| 50°-60° | 46.7 | 3.1 |
| 60°-70° | 10.8 | 0.7 |
| 70°-80° | 4.2 | 0.3 |
| 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° | 821.2 | 53.6 |
| 0°-40° | 1247.2 | 81.4 |
| 0°-60° | 1516.0 | 99.0 |
| 0°-90° | 1531.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1531.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 958 | |
| 5° | 966 | 93 |
| 15° | 1016 | 287 |
| 25° | 968 | 441 |
| 35° | 691 | 426 |
| 45° | 282 | 222 |
| 55° | 42 | 47 |
| 65° | 10 | 11 |
| 75° | 4 | 4 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 957.5 |
| 2.5° | 959.5 |
| 5° | 965.5 |
| 7.5° | 973.5 |
| 10° | 985.5 |
| 12.5° | 1001.5 |
| 15° | 1015.6 |
| 17.5° | 1023.6 |
| 20° | 1017.6 |
| 22.5° | 1005.5 |
| 25° | 967.5 |
| 27.5° | 921.4 |
| 30° | 861.3 |
| 32.5° | 781.2 |
| 35° | 691.1 |
| 37.5° | 592.9 |
| 40° | 490.7 |
| 42.5° | 388.6 |
| 45° | 282.4 |
| 47.5° | 190.3 |
| 50° | 122.2 |
| 52.5° | 74.1 |
| 55° | 42.1 |
| 57.5° | 26.0 |
| 60° | 18.0 |
| 62.5° | 14.0 |
| 65° | 10.0 |
| 67.5° | 8.0 |
| 70° | 6.0 |
| 72.5° | 6.0 |
| 75° | 4.0 |
| 77.5° | 2.0 |
| 80° | 2.0 |
| 82.5° | 0.0 |
| 85° | 0.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |



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— 0°-180°







(END OF REPORT)