

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: P225369

Luminaire Tested: **LSR2B20FL409024D010 2LBDC*MW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P225369
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P14835)
Test Lab: INNOVATION CENTER (G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LSR2B20FL409024D010 2LBDC*MW
Description: 2000 Lumen, 2inch Portfolio LED Cylinder
FLOOD OPTIC
CAST ROUND TRIM WITH MATTE WHITE FINISH
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1162.9 lumens
Efficiency: N/A
Efficacy: 55.6 lumens/watt
Spacing Criteria (0/90/45): 0.61 / 0.61 / 0.59
Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')
CIE Type: Direct

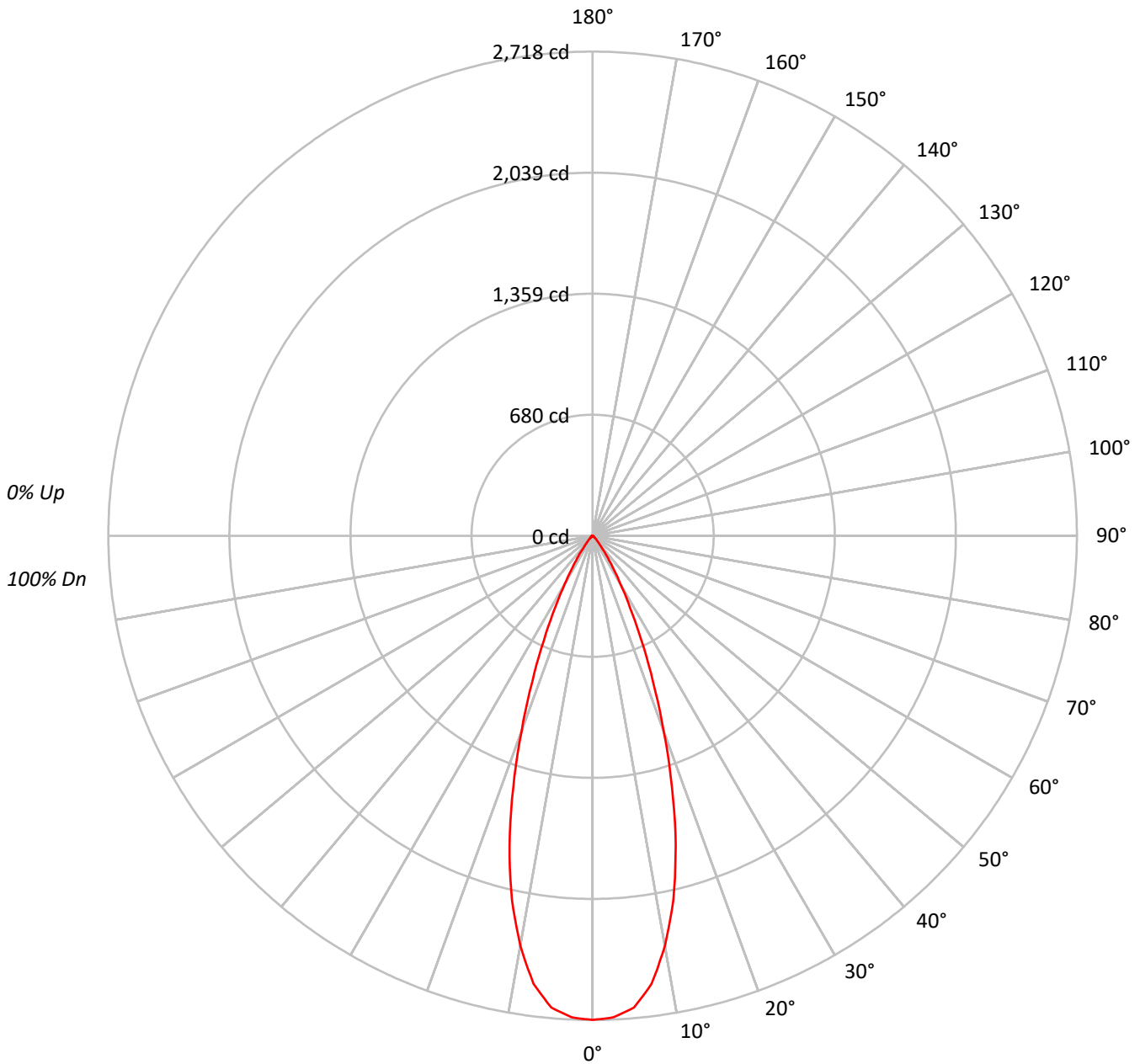
Input Watts (W): 20.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 114 | 112 | 110 | 108 | 112 | 110 | 108 | 106 | 106 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 95 | 95 | 95 | 95 |
| 2 | 110 | 106 | 102 | 99 | 108 | 104 | 101 | 98 | 101 | 98 | 96 | 98 | 96 | 94 | 95 | 94 | 92 | 91 | 91 | 91 | 91 |
| 3 | 105 | 100 | 96 | 93 | 104 | 99 | 95 | 92 | 96 | 93 | 90 | 94 | 91 | 89 | 92 | 90 | 88 | 86 | 86 | 86 | 86 |
| 4 | 101 | 95 | 90 | 87 | 100 | 94 | 90 | 86 | 92 | 88 | 85 | 90 | 87 | 85 | 88 | 86 | 84 | 82 | 82 | 82 | 82 |
| 5 | 98 | 91 | 86 | 82 | 96 | 90 | 85 | 82 | 88 | 84 | 81 | 86 | 83 | 80 | 85 | 82 | 80 | 79 | 79 | 79 | 79 |
| 6 | 94 | 86 | 82 | 78 | 93 | 86 | 81 | 78 | 84 | 80 | 77 | 83 | 79 | 77 | 82 | 79 | 76 | 75 | 75 | 75 | 75 |
| 7 | 90 | 83 | 78 | 74 | 89 | 82 | 77 | 74 | 81 | 77 | 74 | 80 | 76 | 73 | 79 | 76 | 73 | 72 | 72 | 72 | 72 |
| 8 | 87 | 79 | 74 | 71 | 86 | 79 | 74 | 71 | 78 | 74 | 71 | 77 | 73 | 70 | 76 | 73 | 70 | 69 | 69 | 69 | 69 |
| 9 | 84 | 76 | 71 | 68 | 83 | 76 | 71 | 68 | 75 | 71 | 68 | 74 | 70 | 67 | 73 | 70 | 67 | 66 | 66 | 66 | 66 |
| 10 | 81 | 73 | 68 | 65 | 80 | 73 | 68 | 65 | 72 | 68 | 65 | 71 | 68 | 65 | 71 | 67 | 65 | 64 | 64 | 64 | 64 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|---------|
| | 0° |
| 0° | 1052768 |
| 5° | 1033615 |
| 10° | 918838 |
| 15° | 722620 |
| 20° | 480837 |
| 25° | 276051 |
| 30° | 139458 |
| 35° | 65586 |
| 40° | 26395 |
| 45° | 13092 |
| 50° | 7171 |
| 55° | 5065 |
| 60° | 4648 |
| 65° | 2750 |
| 70° | 3398 |
| 75° | 2245 |
| 80° | 3346 |
| 85° | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 243.5 | 20.9 |
| 10°-20° | 488.1 | 42.0 |
| 20°-30° | 303.7 | 26.1 |
| 30°-40° | 93.4 | 8.0 |
| 40°-50° | 20.5 | 1.8 |
| 50°-60° | 7.3 | 0.6 |
| 60°-70° | 3.7 | 0.3 |
| 70°-80° | 2.2 | 0.2 |
| 80°-90° | 0.6 | 0.1 |
| 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° | 1035.3 | 89.0 |
| 0°-40° | 1128.6 | 97.0 |
| 0°-60° | 1156.4 | 99.4 |
| 0°-90° | 1162.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1162.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 2718 | |
| 5° | 2658 | 243 |
| 15° | 1802 | 488 |
| 25° | 646 | 304 |
| 35° | 139 | 93 |
| 45° | 24 | 21 |
| 55° | 8 | 7 |
| 65° | 3 | 4 |
| 75° | 2 | 2 |
| 85° | 0 | 1 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 2717.9 |
| 2.5° | 2706.0 |
| 5° | 2658.3 |
| 7.5° | 2537.4 |
| 10° | 2336.1 |
| 12.5° | 2094.4 |
| 15° | 1802.0 |
| 17.5° | 1482.8 |
| 20° | 1166.5 |
| 22.5° | 884.6 |
| 25° | 645.9 |
| 27.5° | 455.0 |
| 30° | 311.8 |
| 32.5° | 210.3 |
| 35° | 138.7 |
| 37.5° | 83.5 |
| 40° | 52.2 |
| 42.5° | 35.8 |
| 45° | 23.9 |
| 47.5° | 16.4 |
| 50° | 11.9 |
| 52.5° | 10.4 |
| 55° | 7.5 |
| 57.5° | 6.0 |
| 60° | 6.0 |
| 62.5° | 4.5 |
| 65° | 3.0 |
| 67.5° | 3.0 |
| 70° | 3.0 |
| 72.5° | 3.0 |
| 75° | 1.5 |
| 77.5° | 1.5 |
| 80° | 1.5 |
| 82.5° | 1.5 |
| 85° | 0.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |



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— 0°-180°







(END OF REPORT)