

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: P170444

Luminaire Tested: **LDA4A13940D010TE LAR25NF 4LA1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P170444
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25629)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA4A13940D010TE LAR25NF 4LA1
Description: PORTFOLIO 4" Adjustable Reflector, Self-flange Trim Ring, 25° Narrow Flood Optic, at 0° tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1230.4 lumens
Efficiency: N/A
Efficacy: 55.2 lumens/watt
Spacing Criteria (0/90/45): 0.43 / 0.43 / 0.45
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

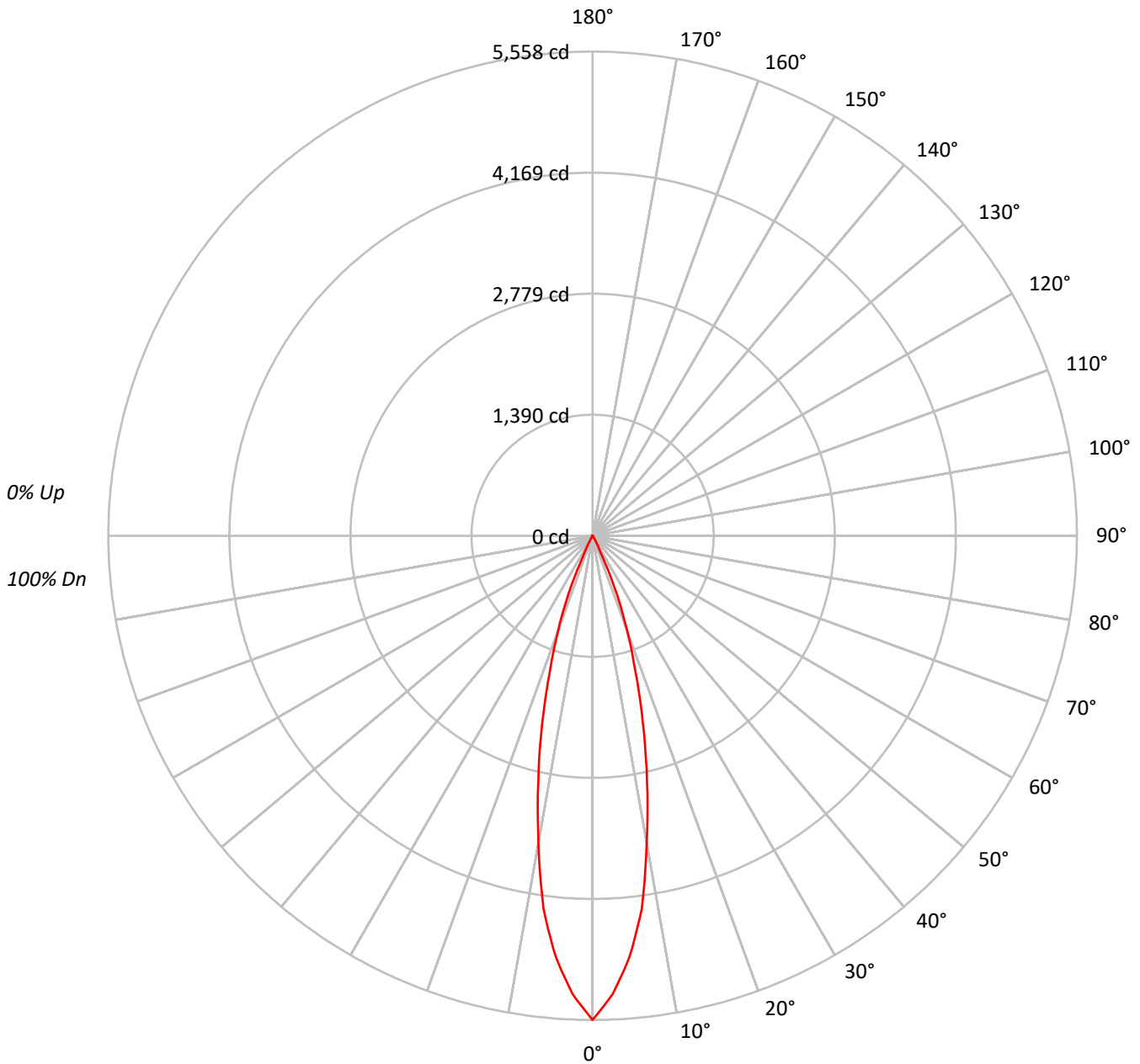
Input Watts (W): 22.27
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | | | | | | | | | 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 | 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 | 115 | 113 | 111 | 110 | 113 | 111 | 109 | 108 | 107 | 106 | 105 | 103 | 102 | 101 | 100 | 99 | 99 | 97 | 98 | 96 | 95 | 94 | 94 | 92 | 91 | 91 | 90 | 88 | | | | | | | | | | | | | | | | | | |
| 2 | 112 | 108 | 105 | 103 | 109 | 106 | 104 | 102 | 103 | 101 | 99 | 100 | 99 | 97 | 98 | 96 | 94 | 96 | 94 | 92 | 91 | 90 | 88 | 87 | 86 | 84 | 83 | | | | | | | | | | | | | | | | | | | |
| 3 | 108 | 104 | 100 | 97 | 106 | 102 | 99 | 97 | 100 | 97 | 95 | 98 | 96 | 94 | 96 | 94 | 92 | 91 | 90 | 88 | 87 | 86 | 84 | 83 | 81 | 80 | 79 | | | | | | | | | | | | | | | | | | | |
| 4 | 105 | 100 | 96 | 93 | 103 | 99 | 95 | 93 | 97 | 94 | 92 | 95 | 93 | 91 | 93 | 91 | 90 | 88 | 87 | 86 | 84 | 83 | 81 | 80 | 78 | 77 | 76 | | | | | | | | | | | | | | | | | | | |
| 5 | 102 | 96 | 92 | 89 | 101 | 95 | 92 | 89 | 94 | 91 | 88 | 92 | 90 | 88 | 91 | 89 | 87 | 86 | 84 | 83 | 81 | 80 | 78 | 77 | 76 | 75 | 74 | | | | | | | | | | | | | | | | | | | |
| 6 | 99 | 93 | 89 | 86 | 98 | 93 | 89 | 86 | 91 | 88 | 85 | 90 | 87 | 85 | 89 | 86 | 84 | 83 | 81 | 80 | 78 | 77 | 76 | 75 | 74 | 73 | 72 | | | | | | | | | | | | | | | | | | | |
| 7 | 97 | 90 | 86 | 83 | 95 | 90 | 86 | 83 | 89 | 85 | 83 | 88 | 85 | 83 | 87 | 84 | 82 | 81 | 80 | 78 | 77 | 76 | 75 | 74 | 73 | 72 | 71 | | | | | | | | | | | | | | | | | | | |
| 8 | 94 | 88 | 84 | 81 | 93 | 87 | 83 | 81 | 86 | 83 | 81 | 85 | 82 | 80 | 85 | 82 | 80 | 79 | 78 | 77 | 76 | 75 | 74 | 73 | 72 | 71 | 70 | | | | | | | | | | | | | | | | | | | |
| 9 | 92 | 85 | 81 | 79 | 91 | 85 | 81 | 79 | 84 | 81 | 78 | 83 | 80 | 78 | 83 | 80 | 78 | 77 | 76 | 75 | 74 | 73 | 72 | 71 | 70 | 69 | 68 | | | | | | | | | | | | | | | | | | | |
| 10 | 89 | 83 | 79 | 76 | 89 | 83 | 79 | 76 | 82 | 79 | 76 | 81 | 78 | 76 | 81 | 78 | 76 | 75 | 74 | 73 | 72 | 71 | 70 | 69 | 68 | 67 | 66 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|--------|
| | 0° |
| 0° | 685617 |
| 5° | 600994 |
| 10° | 448264 |
| 15° | 285160 |
| 20° | 151213 |
| 25° | 34119 |
| 30° | 8190 |
| 35° | 2349 |
| 40° | 805 |
| 45° | 244 |
| 50° | 134 |
| 55° | 151 |
| 60° | 173 |
| 65° | 0 |
| 70° | 0 |
| 75° | 0 |
| 80° | 0 |
| 85° | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 424.6 | 34.5 |
| 10°-20° | 610.1 | 49.6 |
| 20°-30° | 180.4 | 14.7 |
| 30°-40° | 12.8 | 1.0 |
| 40°-50° | 1.5 | 0.1 |
| 50°-60° | 0.6 | 0.1 |
| 60°-70° | 0.4 | 0.0 |
| 70°-80° | 0.0 | 0.0 |
| 80°-90° | 0.0 | 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° | 1215.1 | 98.8 |
| 0°-40° | 1227.9 | 99.8 |
| 0°-60° | 1230.0 | 100.0 |
| 0°-90° | 1230.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1230.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 5558 | |
| 5° | 4854 | 425 |
| 15° | 2233 | 610 |
| 25° | 251 | 180 |
| 35° | 16 | 13 |
| 45° | 1 | 1 |
| 55° | 1 | 1 |
| 65° | 0 | 0 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 5558.5 |
| 2.5° | 5266.6 |
| 5° | 4853.9 |
| 7.5° | 4317.7 |
| 10° | 3579.0 |
| 12.5° | 2884.4 |
| 15° | 2233.1 |
| 17.5° | 1627.2 |
| 20° | 1152.0 |
| 22.5° | 729.4 |
| 25° | 250.7 |
| 27.5° | 109.4 |
| 30° | 57.5 |
| 32.5° | 29.1 |
| 35° | 15.6 |
| 37.5° | 9.2 |
| 40° | 5.0 |
| 42.5° | 2.8 |
| 45° | 1.4 |
| 47.5° | 0.7 |
| 50° | 0.7 |
| 52.5° | 0.7 |
| 55° | 0.7 |
| 57.5° | 0.7 |
| 60° | 0.7 |
| 62.5° | 0.7 |
| 65° | 0.0 |
| 67.5° | 0.7 |
| 70° | 0.0 |
| 72.5° | 0.0 |
| 75° | 0.0 |
| 77.5° | 0.0 |
| 80° | 0.0 |
| 82.5° | 0.0 |
| 85° | 0.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |



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— 0°-180°







(END OF REPORT)