

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: P170180

Luminaire Tested: **LDA4A09940D010TE LAR15SP 4LPIN**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P170180
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26150)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA4A09940D010TE LAR15SP 4LPIN
Description: PORTFOLIO 4" White Pinhole with Black Oculus, Self-flanged, 15° Spot
Optic, at 0° tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

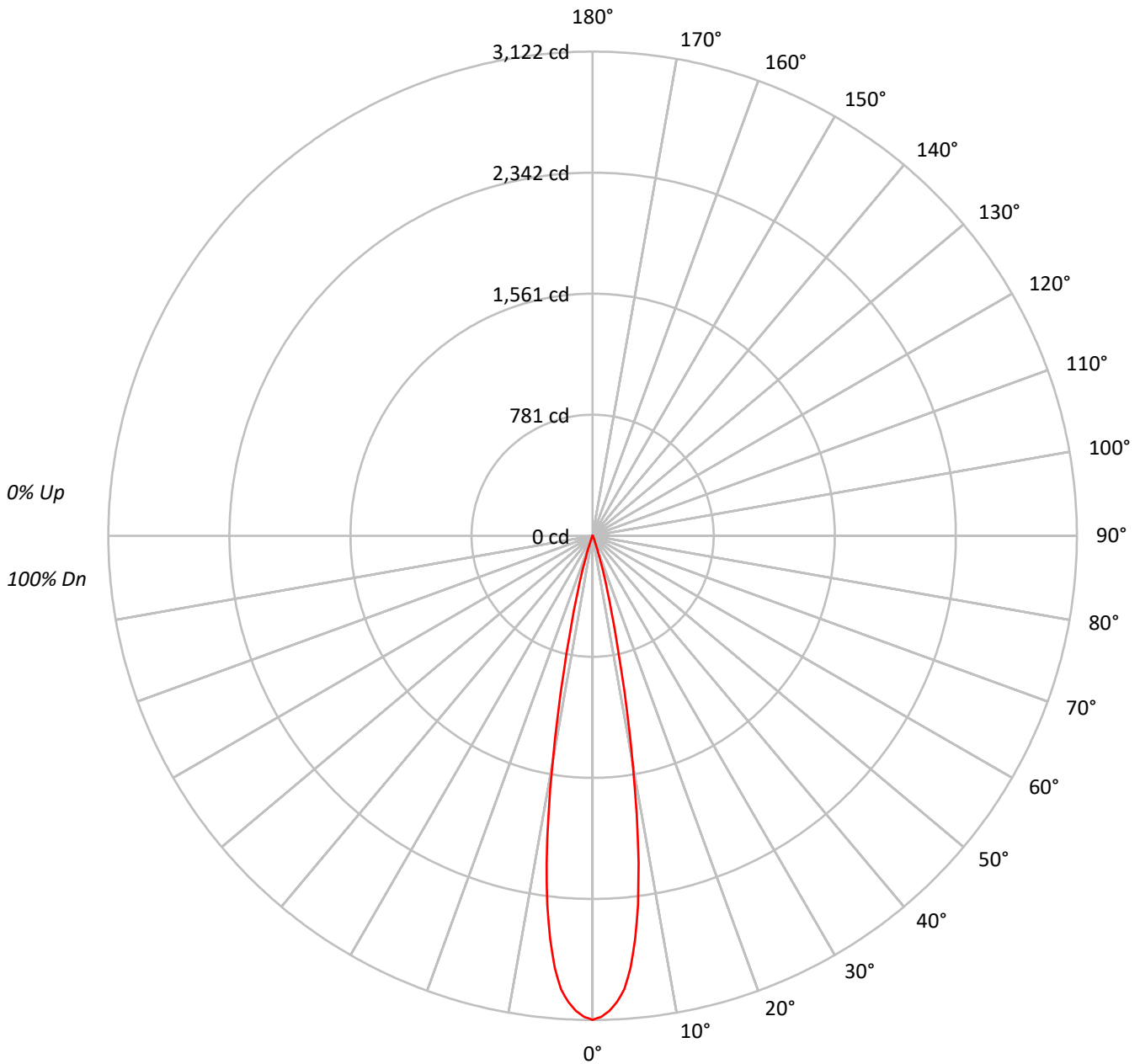
Lumens per Lamp: N/A
Luminaire Lumens: 353.3 lumens
Efficiency: N/A
Efficacy: 25.5 lumens/watt
Spacing Criteria (0/90/45): 0.34 / 0.34 / 0.31
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 13.84
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 | 116 | 114 | 113 | 111 | 114 | 112 | 111 | 109 | 108 | 107 | 106 | 105 | 104 | 103 | 101 | 101 | 100 | 98 | 98 | 98 | 98 |
| 2 | 113 | 110 | 108 | 106 | 111 | 109 | 107 | 105 | 106 | 104 | 103 | 103 | 102 | 100 | 100 | 99 | 98 | 97 | 97 | 97 | 97 |
| 3 | 111 | 107 | 104 | 102 | 109 | 106 | 103 | 101 | 103 | 101 | 100 | 101 | 100 | 98 | 99 | 98 | 97 | 96 | 96 | 96 | 96 |
| 4 | 109 | 104 | 101 | 99 | 107 | 103 | 101 | 99 | 102 | 99 | 97 | 100 | 98 | 96 | 98 | 97 | 95 | 94 | 94 | 94 | 94 |
| 5 | 107 | 102 | 99 | 97 | 105 | 101 | 98 | 96 | 100 | 97 | 96 | 98 | 96 | 95 | 97 | 95 | 94 | 93 | 93 | 93 | 93 |
| 6 | 105 | 100 | 97 | 95 | 104 | 99 | 97 | 94 | 98 | 96 | 94 | 97 | 95 | 93 | 96 | 94 | 93 | 92 | 92 | 92 | 92 |
| 7 | 103 | 98 | 95 | 93 | 102 | 98 | 95 | 93 | 97 | 94 | 92 | 96 | 94 | 92 | 95 | 93 | 92 | 91 | 91 | 91 | 91 |
| 8 | 101 | 97 | 94 | 92 | 101 | 96 | 93 | 91 | 95 | 93 | 91 | 95 | 92 | 91 | 94 | 92 | 91 | 90 | 90 | 90 | 90 |
| 9 | 100 | 95 | 92 | 90 | 99 | 95 | 92 | 90 | 94 | 92 | 90 | 93 | 91 | 90 | 93 | 91 | 89 | 89 | 89 | 89 | 89 |
| 10 | 98 | 94 | 91 | 89 | 98 | 93 | 91 | 89 | 93 | 90 | 89 | 92 | 90 | 89 | 92 | 90 | 88 | 88 | 88 | 88 | 88 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|--------|
| | 0° |
| 0° | 385036 |
| 5° | 346266 |
| 10° | 186194 |
| 15° | 46877 |
| 20° | 6287 |
| 25° | 1238 |
| 30° | 342 |
| 35° | 75 |
| 40° | 81 |
| 45° | 0 |
| 50° | 0 |
| 55° | 0 |
| 60° | 0 |
| 65° | 0 |
| 70° | 0 |
| 75° | 0 |
| 80° | 0 |
| 85° | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 224.7 | 63.6 |
| 10°-20° | 121.8 | 34.5 |
| 20°-30° | 6.2 | 1.8 |
| 30°-40° | 0.5 | 0.1 |
| 40°-50° | 0.0 | 0.0 |
| 50°-60° | 0.0 | 0.0 |
| 60°-70° | 0.0 | 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° | 352.7 | 99.8 |
| 0°-40° | 353.2 | 100.0 |
| 0°-60° | 353.3 | 100.0 |
| 0°-90° | 353.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 353.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 3122 | |
| 5° | 2797 | 225 |
| 15° | 367 | 122 |
| 25° | 9 | 6 |
| 35° | 0 | 1 |
| 45° | 0 | 0 |
| 55° | 0 | 0 |
| 65° | 0 | 0 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 3121.6 |
| 1° | 3102.5 |
| 2° | 3067.0 |
| 3° | 3010.1 |
| 4° | 2931.6 |
| 5° | 2796.6 |
| 6° | 2617.6 |
| 7° | 2396.5 |
| 8° | 2129.9 |
| 9° | 1816.4 |
| 10° | 1486.6 |
| 11° | 1168.8 |
| 12° | 889.8 |
| 13° | 668.6 |
| 14° | 503.0 |
| 15° | 367.1 |
| 17.5° | 135.0 |
| 20° | 47.9 |
| 22.5° | 19.6 |
| 25° | 9.1 |
| 27.5° | 4.3 |
| 30° | 2.4 |
| 32.5° | 1.0 |
| 35° | 0.5 |
| 37.5° | 0.5 |
| 40° | 0.5 |
| 42.5° | 0.0 |
| 45° | 0.0 |
| 47.5° | 0.0 |
| 50° | 0.0 |
| 52.5° | 0.0 |
| 55° | 0.0 |
| 57.5° | 0.0 |
| 60° | 0.0 |
| 62.5° | 0.0 |
| 65° | 0.0 |
| 67.5° | 0.0 |
| 70° | 0.0 |
| 72.5° | 0.0 |
| 75° | 0.0 |
| 77.5° | 0.0 |
| 80° | 0.0 |
| 82.5° | 0.0 |



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CANDELA DISTRIBUTION (continued):

0°
90° | 0.0



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— 0°-180°







| | | |
|-------|--|-----|
| 85° | | 0.0 |
| 87.5° | | 0.0 |



(END OF REPORT)