

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: PORTFOLIO

Report Number: P430220

Luminaire Tested: **LAM4B212R459730DE010x1MMS**

Issue Date: 11/23/2020

Test Information

Test Method: LM-41-14
Report Number: P430220
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2008-908-8)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 11/23/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LAM4B212R459730DE010x1MMS
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 45 DEG TIR OPTIC
Light Source: HIGH LUMEN LED 97CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2200.7 lumens
Efficiency: N/A
Efficacy: 77.5 lumens/watt
Spacing Criteria (0/90/45): 0.73 / 0.73 / 0.66
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

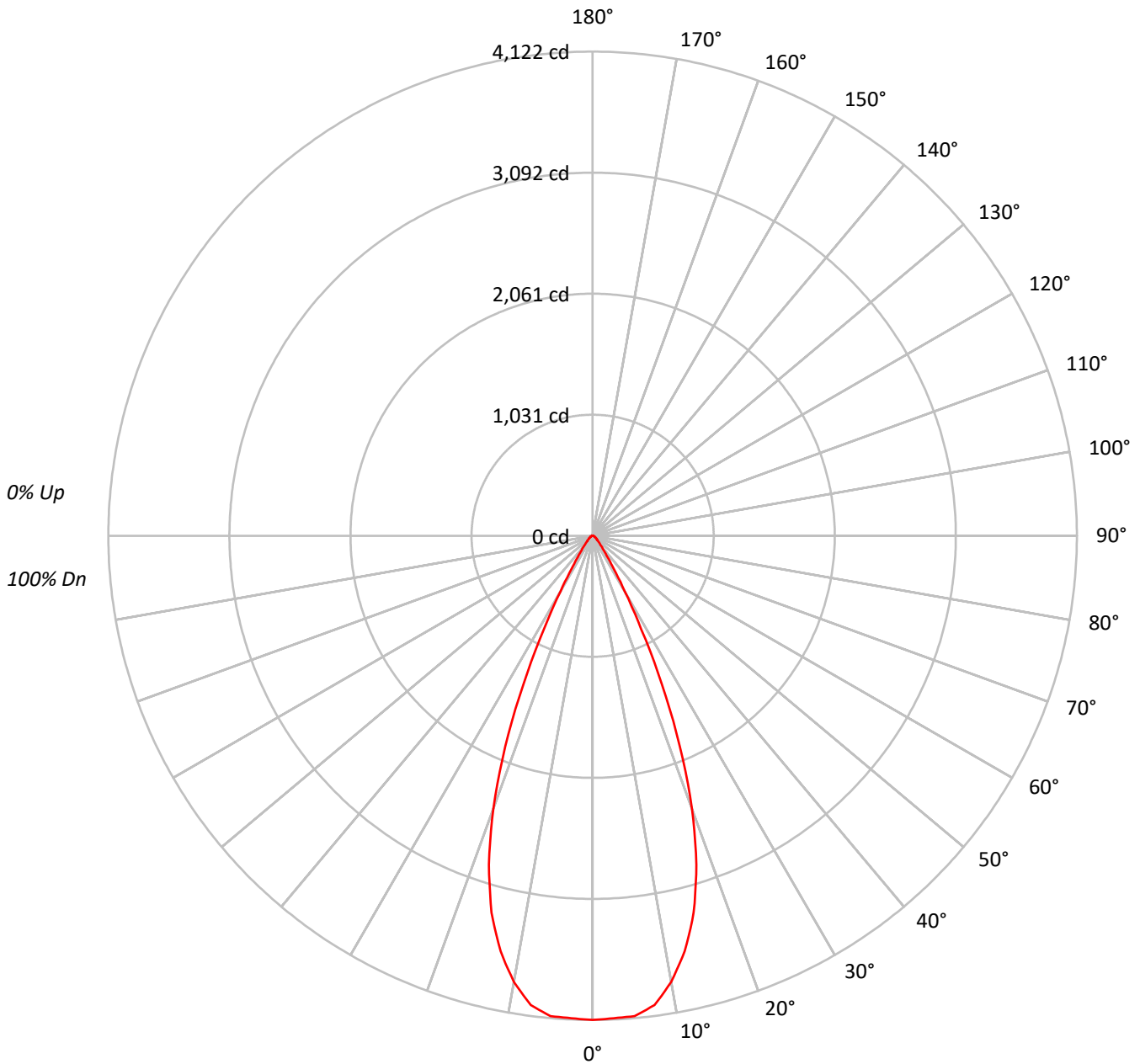
Input Watts (W): 28.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 |
| RCR | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | |
| 1 | 114 | 112 | 109 | 107 | 112 | 109 | 107 | 105 | 105 | 104 | 102 | 102 | 100 | 99 | 98 | 97 | 96 | 95 | | |
| 2 | 109 | 105 | 101 | 98 | 107 | 103 | 100 | 97 | 100 | 97 | 95 | 97 | 95 | 93 | 94 | 93 | 91 | 89 | | |
| 3 | 105 | 99 | 94 | 91 | 103 | 98 | 93 | 90 | 95 | 92 | 89 | 93 | 90 | 87 | 90 | 88 | 86 | 85 | | |
| 4 | 100 | 94 | 89 | 85 | 99 | 93 | 88 | 85 | 90 | 87 | 84 | 89 | 85 | 83 | 87 | 84 | 82 | 80 | | |
| 5 | 96 | 89 | 84 | 80 | 95 | 88 | 83 | 80 | 86 | 82 | 79 | 85 | 81 | 78 | 83 | 80 | 78 | 76 | | |
| 6 | 92 | 85 | 79 | 76 | 91 | 84 | 79 | 75 | 82 | 78 | 75 | 81 | 77 | 74 | 80 | 77 | 74 | 73 | | |
| 7 | 89 | 81 | 75 | 72 | 87 | 80 | 75 | 72 | 79 | 74 | 71 | 78 | 74 | 71 | 77 | 73 | 71 | 69 | | |
| 8 | 85 | 77 | 72 | 68 | 84 | 77 | 72 | 68 | 76 | 71 | 68 | 75 | 71 | 68 | 74 | 70 | 67 | 66 | | |
| 9 | 82 | 74 | 69 | 65 | 81 | 73 | 68 | 65 | 72 | 68 | 65 | 72 | 68 | 65 | 71 | 67 | 65 | 63 | | |
| 10 | 79 | 71 | 66 | 62 | 78 | 70 | 66 | 62 | 70 | 65 | 62 | 69 | 65 | 62 | 68 | 65 | 62 | 61 | | |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|---------|
| | 0° |
| 0° | 2033661 |
| 5° | 2032960 |
| 10° | 1932321 |
| 15° | 1697387 |
| 20° | 1298485 |
| 25° | 758055 |
| 30° | 310262 |
| 35° | 131182 |
| 40° | 71555 |
| 45° | 46191 |
| 50° | 36075 |
| 55° | 31225 |
| 60° | 25261 |
| 65° | 19963 |
| 70° | 18465 |
| 75° | 16203 |
| 80° | 18184 |
| 85° | 11888 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 384.1 | 17.5 |
| 10°-20° | 904.7 | 41.1 |
| 20°-30° | 637.4 | 29.0 |
| 30°-40° | 156.9 | 7.1 |
| 40°-50° | 54.7 | 2.5 |
| 50°-60° | 32.4 | 1.5 |
| 60°-70° | 17.9 | 0.8 |
| 70°-80° | 9.8 | 0.4 |
| 80°-90° | 2.6 | 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° | 1926.3 | 87.5 |
| 0°-40° | 2083.1 | 94.7 |
| 0°-60° | 2170.3 | 98.6 |
| 0°-90° | 2200.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2200.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 4122 | |
| 5° | 4105 | 384 |
| 15° | 3323 | 905 |
| 25° | 1392 | 637 |
| 35° | 218 | 157 |
| 45° | 66 | 55 |
| 55° | 36 | 32 |
| 65° | 17 | 18 |
| 75° | 8 | 10 |
| 85° | 2 | 3 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 4121.9 |
| 2.5° | 4111.2 |
| 5° | 4104.8 |
| 7.5° | 4030.0 |
| 10° | 3857.0 |
| 12.5° | 3622.1 |
| 15° | 3323.1 |
| 17.5° | 2936.6 |
| 20° | 2473.1 |
| 22.5° | 1941.3 |
| 25° | 1392.5 |
| 27.5° | 899.1 |
| 30° | 544.6 |
| 32.5° | 331.0 |
| 35° | 217.8 |
| 37.5° | 153.8 |
| 40° | 111.1 |
| 42.5° | 85.4 |
| 45° | 66.2 |
| 47.5° | 55.5 |
| 50° | 47.0 |
| 52.5° | 40.6 |
| 55° | 36.3 |
| 57.5° | 32.0 |
| 60° | 25.6 |
| 62.5° | 21.4 |
| 65° | 17.1 |
| 67.5° | 14.9 |
| 70° | 12.8 |
| 72.5° | 10.7 |
| 75° | 8.5 |
| 77.5° | 8.5 |
| 80° | 6.4 |
| 82.5° | 4.3 |
| 85° | 2.1 |
| 87.5° | 0.0 |
| 90° | 0.0 |



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— 0°-180°







(END OF REPORT)