

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: P430474

Luminaire Tested: **LAM4B312R409040DE01021MB**

Issue Date: 11/23/2020

Test Information

Test Method: LM-41-14
Report Number: P430474
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1911-585-7)
Test Lab: INNOVATION CENTER (G1)
Issue Date: 11/23/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LAM4B312R409040DE01021MB
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 40 DEG TIR OPTIC
Light Source: HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

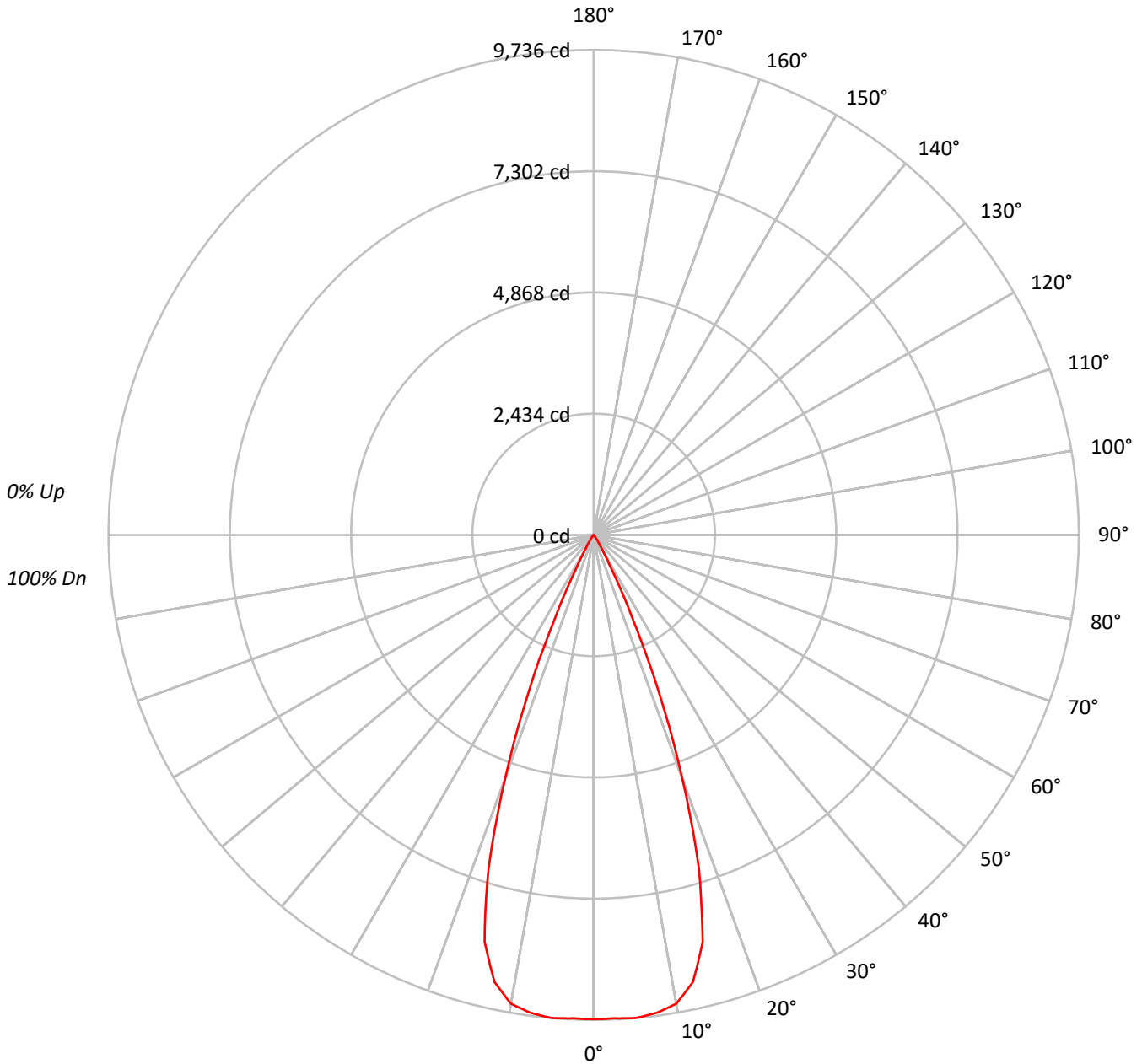
Lumens per Lamp: N/A
Luminaire Lumens: 4155.2 lumens
Efficiency: N/A
Efficacy: 101.6 lumens/watt
Spacing Criteria (0/90/45): 0.7 / 0.7 / 0.6
Luminous Opening: Circular (Dia: 0.29' x H: 0')
CIE Type: Direct

Input Watts (W): 40.9
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 | 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 | 109 | 112 | 110 | 109 | 107 | 106 | 105 | 104 | 103 | 102 | 101 | 99 | 99 | 98 | 96 | | | 96 |
| 2 | 111 | 107 | 104 | 101 | 109 | 105 | 102 | 100 | 102 | 100 | 98 | 99 | 97 | 96 | 97 | 95 | 94 | 92 | | | 92 |
| 3 | 107 | 102 | 98 | 95 | 105 | 101 | 97 | 94 | 98 | 95 | 93 | 96 | 94 | 92 | 94 | 92 | 90 | 89 | | | 89 |
| 4 | 103 | 98 | 93 | 90 | 102 | 97 | 93 | 90 | 95 | 91 | 89 | 93 | 90 | 88 | 91 | 89 | 87 | 86 | | | 86 |
| 5 | 100 | 94 | 89 | 86 | 98 | 93 | 89 | 86 | 91 | 88 | 85 | 90 | 87 | 84 | 88 | 86 | 84 | 82 | | | 82 |
| 6 | 97 | 90 | 85 | 82 | 95 | 89 | 85 | 82 | 88 | 84 | 82 | 87 | 83 | 81 | 85 | 83 | 80 | 79 | | | 79 |
| 7 | 93 | 87 | 82 | 79 | 92 | 86 | 82 | 79 | 85 | 81 | 78 | 84 | 80 | 78 | 83 | 80 | 78 | 77 | | | 77 |
| 8 | 91 | 83 | 79 | 76 | 90 | 83 | 79 | 76 | 82 | 78 | 75 | 81 | 78 | 75 | 80 | 77 | 75 | 74 | | | 74 |
| 9 | 88 | 81 | 76 | 73 | 87 | 80 | 76 | 73 | 79 | 75 | 73 | 79 | 75 | 73 | 78 | 75 | 72 | 71 | | | 71 |
| 10 | 85 | 78 | 73 | 71 | 84 | 77 | 73 | 70 | 77 | 73 | 70 | 76 | 73 | 70 | 75 | 72 | 70 | 69 | | | 69 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|---------|
| | 0° |
| 0° | 1566493 |
| 5° | 1574466 |
| 10° | 1563290 |
| 15° | 1410334 |
| 20° | 889807 |
| 25° | 320463 |
| 30° | 67137 |
| 35° | 20434 |
| 40° | 4080 |
| 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° | 923.2 | 22.2 |
| 10°-20° | 2207.6 | 53.1 |
| 20°-30° | 941.3 | 22.7 |
| 30°-40° | 80.7 | 1.9 |
| 40°-50° | 2.4 | 0.1 |
| 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° | 4072.1 | 98.0 |
| 0°-40° | 4152.8 | 99.9 |
| 0°-60° | 4155.2 | 100.0 |
| 0°-90° | 4155.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4155.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 9724 | |
| 5° | 9736 | 923 |
| 15° | 8456 | 2208 |
| 25° | 1803 | 941 |
| 35° | 104 | 81 |
| 45° | 0 | 2 |
| 55° | 0 | 0 |
| 65° | 0 | 0 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 9723.5 |
| 2.5° | 9714.7 |
| 5° | 9735.8 |
| 7.5° | 9677.7 |
| 10° | 9556.2 |
| 12.5° | 9193.5 |
| 15° | 8455.9 |
| 17.5° | 7015.8 |
| 20° | 5190.1 |
| 22.5° | 3417.2 |
| 25° | 1802.8 |
| 27.5° | 730.6 |
| 30° | 360.9 |
| 32.5° | 191.9 |
| 35° | 103.9 |
| 37.5° | 52.8 |
| 40° | 19.4 |
| 42.5° | 3.5 |
| 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 |
| 85° | 0.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |



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— 0°-180°







(END OF REPORT)