

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: P430374

Luminaire Tested: **LAM4B312R209030DE01021MW**

Issue Date: 11/23/2020

Test Information

Test Method: LM-41-14
Report Number: P430374
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2007-857-3)
Test Lab: INNOVATION CENTER (G1)
Issue Date: 11/23/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LAM4B312R209030DE01021MW
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 20 DEG TIR OPTIC
Light Source: HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3552.0 lumens
Efficiency: N/A
Efficacy: 86.8 lumens/watt
Spacing Criteria (0/90/45): 0.34 / 0.34 / 0.33
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

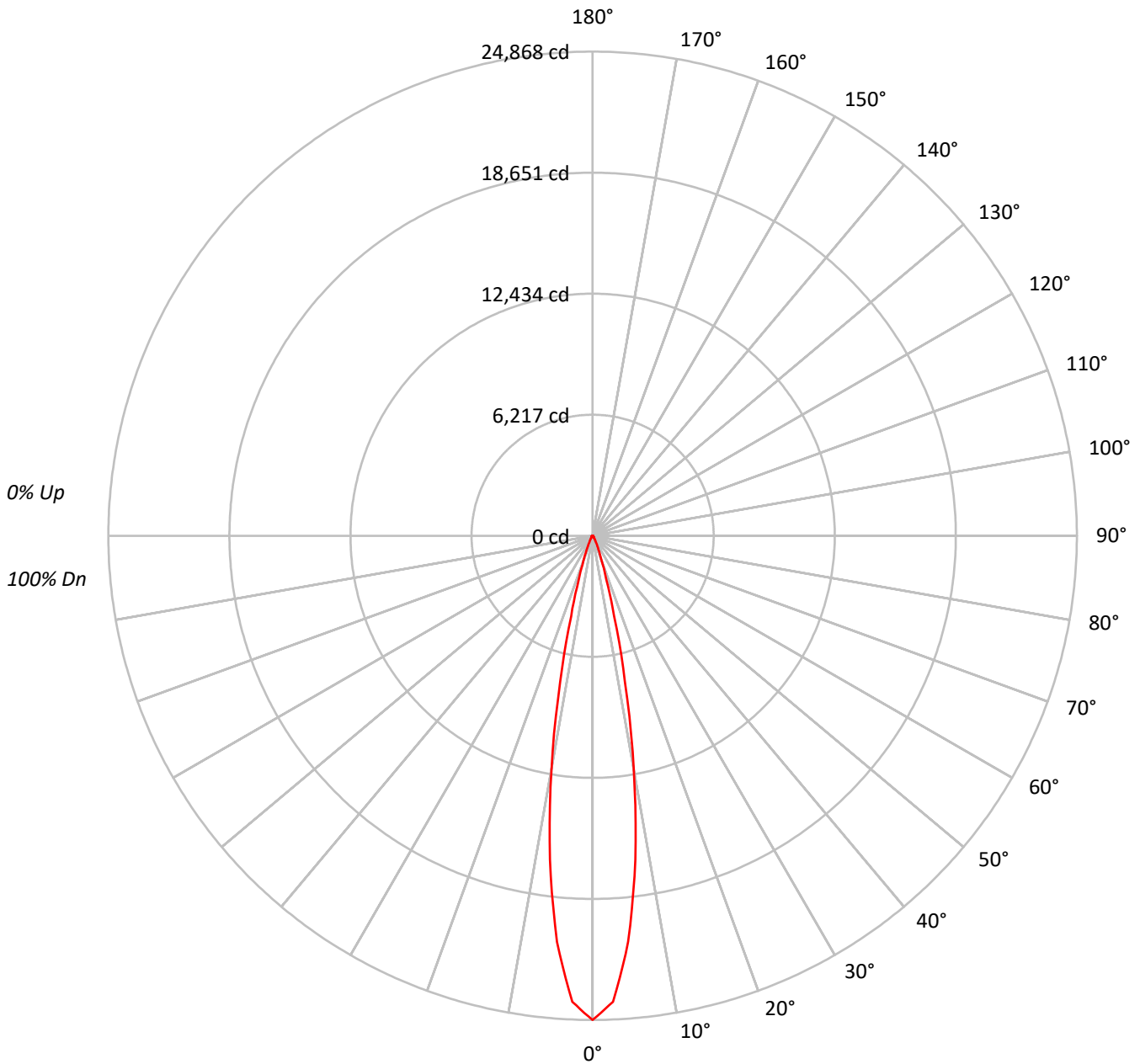
Input Watts (W): 40.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|-----|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | |
| RC | 80 | | | | | | | | | 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 | 110 | 113 | 111 | 109 | 108 | 107 | 106 | 105 | 103 | 102 | 101 | 100 | 99 | 99 | 97 | | | 97 | | | | | | | | | | | | | | | | |
| 2 | 112 | 108 | 105 | 103 | 110 | 106 | 104 | 102 | 103 | 101 | 100 | 101 | 99 | 97 | 98 | 97 | 95 | | | 94 | | | | | | | | | | | | | | | | | |
| 3 | 108 | 104 | 100 | 98 | 107 | 103 | 100 | 97 | 100 | 98 | 95 | 98 | 96 | 94 | 96 | 94 | 93 | | | 91 | | | | | | | | | | | | | | | | | |
| 4 | 105 | 100 | 97 | 94 | 104 | 99 | 96 | 93 | 97 | 94 | 92 | 95 | 93 | 91 | 94 | 92 | 90 | | | 89 | | | | | | | | | | | | | | | | | |
| 5 | 103 | 97 | 93 | 90 | 101 | 96 | 93 | 90 | 95 | 92 | 89 | 93 | 91 | 89 | 92 | 90 | 88 | | | 87 | | | | | | | | | | | | | | | | | |
| 6 | 100 | 94 | 90 | 88 | 99 | 94 | 90 | 87 | 92 | 89 | 87 | 91 | 88 | 86 | 90 | 88 | 86 | | | 85 | | | | | | | | | | | | | | | | | |
| 7 | 98 | 92 | 88 | 85 | 97 | 91 | 88 | 85 | 90 | 87 | 85 | 89 | 86 | 84 | 88 | 86 | 84 | | | 83 | | | | | | | | | | | | | | | | | |
| 8 | 96 | 90 | 86 | 83 | 95 | 89 | 86 | 83 | 88 | 85 | 83 | 87 | 85 | 82 | 87 | 84 | 82 | | | 81 | | | | | | | | | | | | | | | | | |
| 9 | 94 | 88 | 84 | 81 | 93 | 87 | 84 | 81 | 86 | 83 | 81 | 86 | 83 | 81 | 85 | 82 | 81 | | | 80 | | | | | | | | | | | | | | | | | |
| 10 | 92 | 86 | 82 | 80 | 91 | 85 | 82 | 80 | 85 | 82 | 79 | 84 | 81 | 79 | 83 | 81 | 79 | | | 78 | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|----------|
| | 0° |
| 0° | 12269412 |
| 5° | 10370832 |
| 10° | 6091446 |
| 15° | 2181099 |
| 20° | 721672 |
| 25° | 287271 |
| 30° | 137299 |
| 35° | 78480 |
| 40° | 56613 |
| 45° | 47726 |
| 50° | 55034 |
| 55° | 44815 |
| 60° | 22498 |
| 65° | 19029 |
| 70° | 23513 |
| 75° | 24782 |
| 80° | 18468 |
| 85° | 18681 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 1714.6 | 48.3 |
| 10°-20° | 1337.1 | 37.6 |
| 20°-30° | 277.5 | 7.8 |
| 30°-40° | 87.5 | 2.5 |
| 40°-50° | 56.3 | 1.6 |
| 50°-60° | 45.2 | 1.3 |
| 60°-70° | 17.7 | 0.5 |
| 70°-80° | 13.3 | 0.4 |
| 80°-90° | 2.7 | 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° | 3329.3 | 93.7 |
| 0°-40° | 3416.8 | 96.2 |
| 0°-60° | 3518.3 | 99.1 |
| 0°-90° | 3552.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3552.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-------|------|
| 0° | 24868 | |
| 5° | 20940 | ### |
| 15° | 4270 | 1337 |
| 25° | 528 | 278 |
| 35° | 130 | 87 |
| 45° | 68 | 56 |
| 55° | 52 | 45 |
| 65° | 16 | 18 |
| 75° | 13 | 13 |
| 85° | 3 | 3 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| 0° | |
|-------|---------|
| 0° | 24868.1 |
| 2.5° | 23956.1 |
| 5° | 20940.0 |
| 7.5° | 16777.4 |
| 10° | 12158.8 |
| 12.5° | 7670.5 |
| 15° | 4270.1 |
| 17.5° | 2348.4 |
| 20° | 1374.5 |
| 22.5° | 840.3 |
| 25° | 527.7 |
| 27.5° | 348.5 |
| 30° | 241.0 |
| 32.5° | 169.4 |
| 35° | 130.3 |
| 37.5° | 104.2 |
| 40° | 87.9 |
| 42.5° | 74.9 |
| 45° | 68.4 |
| 47.5° | 68.4 |
| 50° | 71.7 |
| 52.5° | 68.4 |
| 55° | 52.1 |
| 57.5° | 35.8 |
| 60° | 22.8 |
| 62.5° | 19.5 |
| 65° | 16.3 |
| 67.5° | 16.3 |
| 70° | 16.3 |
| 72.5° | 16.3 |
| 75° | 13.0 |
| 77.5° | 9.8 |
| 80° | 6.5 |
| 82.5° | 3.3 |
| 85° | 3.3 |
| 87.5° | 0.0 |
| 90° | 0.0 |



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— 0°-180°







(END OF REPORT)