

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: P430786

Luminaire Tested: **LAM4B412R459040DE01021MB**

Issue Date: 11/23/2020

Test Information

Test Method: LM-41-14
Report Number: P430786
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: LAM4B412R459040DE01021MB
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 45 DEG TIR OPTIC
Light Source: HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6031.6 lumens
Efficiency: N/A
Efficacy: 111.5 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

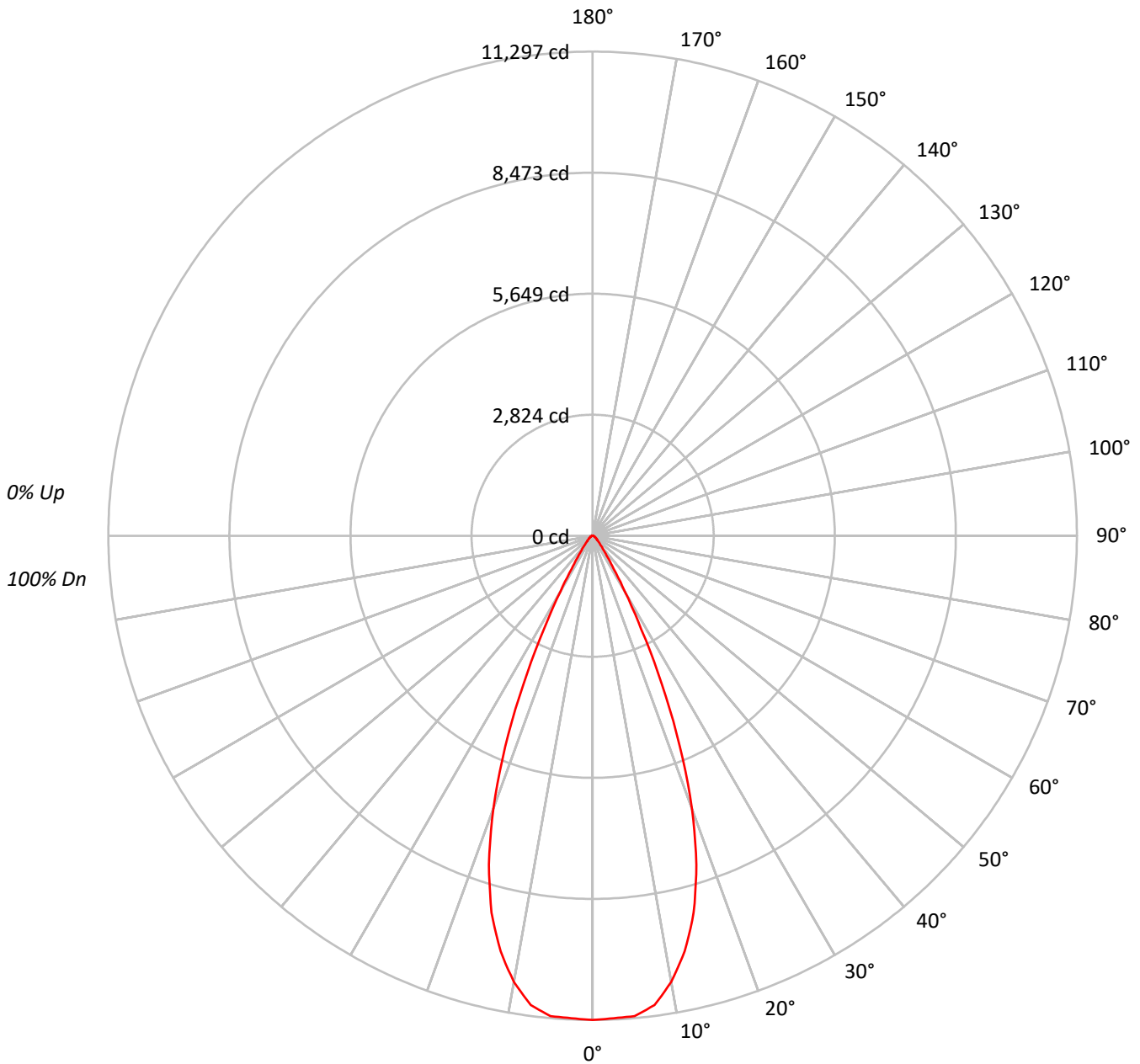
Input Watts (W): 54.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | | | |
| 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° | 5573709 |
| 5° | 5571772 |
| 10° | 5296073 |
| 15° | 4652119 |
| 20° | 3558850 |
| 25° | 2077587 |
| 30° | 850343 |
| 35° | 359576 |
| 40° | 196052 |
| 45° | 126641 |
| 50° | 98862 |
| 55° | 85588 |
| 60° | 69270 |
| 65° | 54636 |
| 70° | 50633 |
| 75° | 44607 |
| 80° | 50006 |
| 85° | 33399 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 1052.8 | 17.5 |
| 10°-20° | 2479.6 | 41.1 |
| 20°-30° | 1747.1 | 29.0 |
| 30°-40° | 430.0 | 7.1 |
| 40°-50° | 150.1 | 2.5 |
| 50°-60° | 88.8 | 1.5 |
| 60°-70° | 49.1 | 0.8 |
| 70°-80° | 27.0 | 0.4 |
| 80°-90° | 7.2 | 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° | 5279.4 | 87.5 |
| 0°-40° | 5709.4 | 94.7 |
| 0°-60° | 5948.3 | 98.6 |
| 0°-90° | 6031.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 6031.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-------|------|
| 0° | 11297 | |
| 5° | 11250 | ### |
| 15° | 9108 | 2480 |
| 25° | 3816 | 1747 |
| 35° | 597 | 430 |
| 45° | 182 | 150 |
| 55° | 100 | 89 |
| 65° | 47 | 49 |
| 75° | 23 | 27 |
| 85° | 6 | 7 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|---------|
| 0° | 11297.0 |
| 2.5° | 11267.7 |
| 5° | 11250.1 |
| 7.5° | 11045.3 |
| 10° | 10571.2 |
| 12.5° | 9927.3 |
| 15° | 9107.8 |
| 17.5° | 8048.4 |
| 20° | 6778.2 |
| 22.5° | 5320.7 |
| 25° | 3816.4 |
| 27.5° | 2464.3 |
| 30° | 1492.6 |
| 32.5° | 907.3 |
| 35° | 597.0 |
| 37.5° | 421.4 |
| 40° | 304.4 |
| 42.5° | 234.1 |
| 45° | 181.5 |
| 47.5° | 152.2 |
| 50° | 128.8 |
| 52.5° | 111.2 |
| 55° | 99.5 |
| 57.5° | 87.8 |
| 60° | 70.2 |
| 62.5° | 58.5 |
| 65° | 46.8 |
| 67.5° | 41.0 |
| 70° | 35.1 |
| 72.5° | 29.3 |
| 75° | 23.4 |
| 77.5° | 23.4 |
| 80° | 17.6 |
| 82.5° | 11.7 |
| 85° | 5.9 |
| 87.5° | 0.0 |
| 90° | 0.0 |



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— 0°-180°







(END OF REPORT)