

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: P432355

Luminaire Tested: **LAM4B108R659730DE010x1MB**

Issue Date: 11/23/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P432355  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2008-908-22)  
Test Lab: INNOVATION CENTER (G2)  
Issue Date: 11/23/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LAM4B108R659730DE010x1MB  
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 65 DEG TIR OPTIC  
Light Source: HIGH LUMEN LED 97CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 699.4 lumens  
Efficiency: N/A  
Efficacy: 61.4 lumens/watt  
Spacing Criteria (0/90/45): 0.98 / 0.98 / 0.97  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

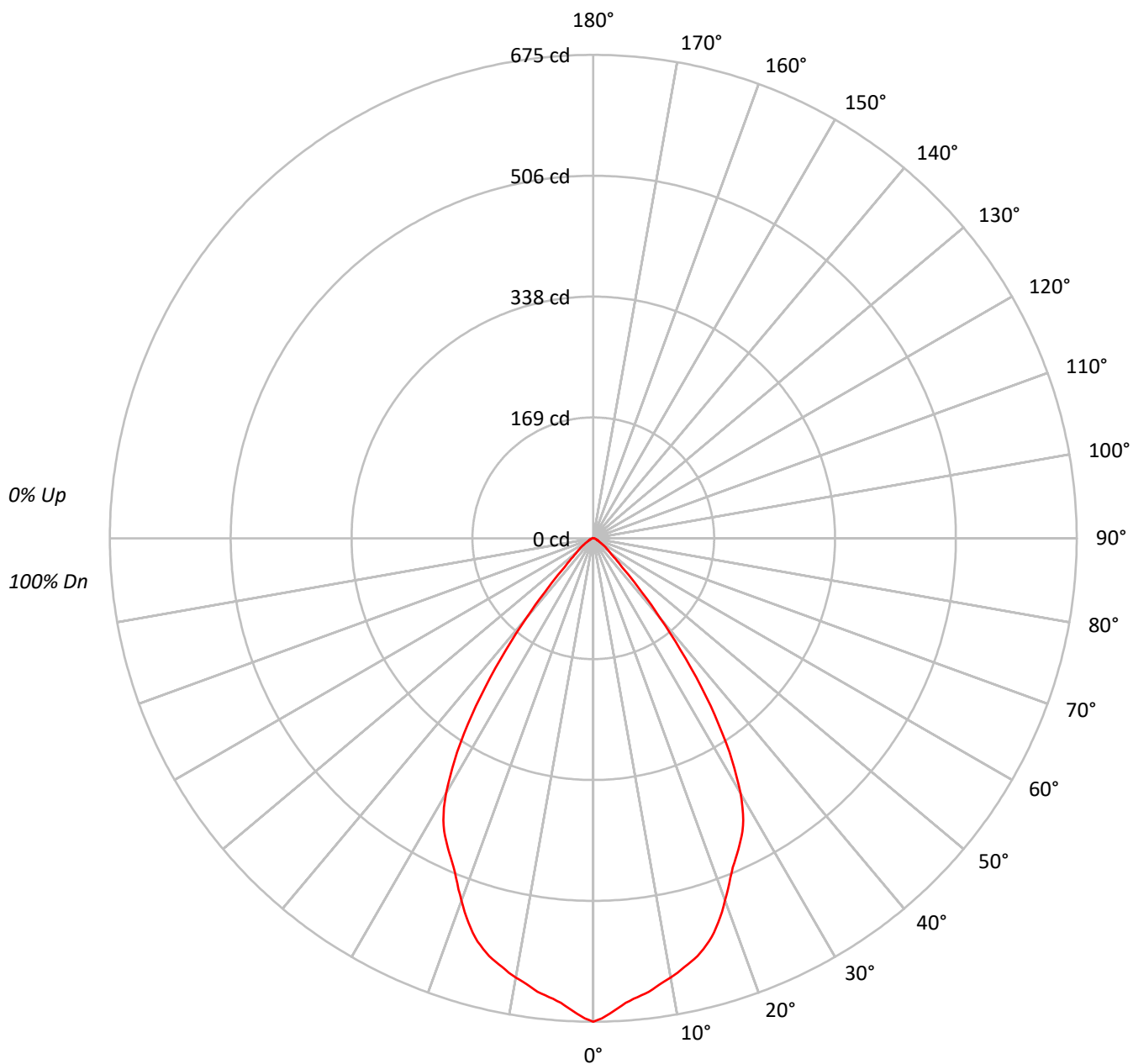
Input Watts (W): 11.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 113 | 110 | 107 | 105 | 111 | 108 | 106 | 103 | 104 | 102 | 100 |  | 100 | 99  | 97  |  | 97  |
| 2   | 107 | 102 | 98  | 94  | 105 | 100 | 96  | 93  | 97  | 94  | 91  |  | 94  | 91  | 89  |  | 91  |
| 3   | 101 | 94  | 89  | 85  | 99  | 93  | 88  | 84  | 90  | 86  | 83  |  | 88  | 84  | 81  |  | 86  |
| 4   | 96  | 88  | 82  | 77  | 94  | 86  | 81  | 77  | 84  | 80  | 76  |  | 82  | 78  | 75  |  | 80  |
| 5   | 90  | 81  | 75  | 71  | 89  | 81  | 75  | 70  | 79  | 74  | 70  |  | 77  | 73  | 69  |  | 75  |
| 6   | 85  | 76  | 70  | 65  | 84  | 75  | 69  | 65  | 74  | 68  | 64  |  | 72  | 68  | 64  |  | 71  |
| 7   | 81  | 71  | 65  | 60  | 80  | 70  | 64  | 60  | 69  | 64  | 60  |  | 68  | 63  | 59  |  | 67  |
| 8   | 77  | 67  | 60  | 56  | 75  | 66  | 60  | 56  | 65  | 59  | 56  |  | 64  | 59  | 55  |  | 63  |
| 9   | 73  | 63  | 56  | 52  | 72  | 62  | 56  | 52  | 61  | 56  | 52  |  | 60  | 55  | 52  |  | 59  |
| 10  | 69  | 59  | 53  | 49  | 68  | 58  | 53  | 49  | 58  | 52  | 48  |  | 57  | 52  | 48  |  | 56  |

**AVERAGE LUMINANCE (cd/sqm):**

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 333081 |
| 5°  | 319644 |
| 10° | 312067 |
| 15° | 303355 |
| 20° | 282473 |
| 25° | 260923 |
| 30° | 234206 |
| 35° | 172079 |
| 40° | 92938  |
| 45° | 39981  |
| 50° | 22259  |
| 55° | 15569  |
| 60° | 10065  |
| 65° | 7588   |
| 70° | 6347   |
| 75° | 5528   |
| 80° | 6251   |
| 85° | 3963   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 61.0   | 8.7       |
| 10°-20°   | 165.7  | 23.7      |
| 20°-30°   | 219.7  | 31.4      |
| 30°-40°   | 174.0  | 24.9      |
| 40°-50°   | 51.8   | 7.4       |
| 50°-60°   | 16.6   | 2.4       |
| 60°-70°   | 6.6    | 0.9       |
| 70°-80°   | 3.2    | 0.5       |
| 80°-90°   | 0.9    | 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°    | 446.4  | 63.8      |
| 0°-40°    | 620.3  | 88.7      |
| 0°-60°    | 688.7  | 98.5      |
| 0°-90°    | 699.4  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 699.4  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | Flux |
|-----|-----|------|
| 0°  | 675 |      |
| 5°  | 645 | 61   |
| 15° | 594 | 166  |
| 25° | 479 | 220  |
| 35° | 286 | 174  |
| 45° | 57  | 52   |
| 55° | 18  | 17   |
| 65° | 6   | 7    |
| 75° | 3   | 3    |
| 85° | 1   | 1    |
| 90° | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |       |
|-------|-------|
| 0°    | 675.1 |
| 1°    | 670.7 |
| 2°    | 664.2 |
| 3°    | 657.0 |
| 4°    | 650.4 |
| 5°    | 645.4 |
| 6°    | 641.7 |
| 7°    | 638.1 |
| 8°    | 632.3 |
| 9°    | 627.2 |
| 10°   | 622.9 |
| 11°   | 617.8 |
| 12°   | 612.0 |
| 13°   | 606.9 |
| 14°   | 601.1 |
| 15°   | 593.9 |
| 16°   | 585.9 |
| 17°   | 575.7 |
| 18°   | 564.1 |
| 19°   | 551.8 |
| 20°   | 538.0 |
| 21°   | 525.0 |
| 22°   | 511.2 |
| 23°   | 498.9 |
| 24°   | 488.7 |
| 25°   | 479.3 |
| 26°   | 469.2 |
| 27°   | 459.0 |
| 28°   | 445.9 |
| 29°   | 430.0 |
| 30°   | 411.1 |
| 32.5° | 353.9 |
| 35°   | 285.7 |
| 37.5° | 211.7 |
| 40°   | 144.3 |
| 42.5° | 91.4  |
| 45°   | 57.3  |
| 47.5° | 38.4  |
| 50°   | 29.0  |
| 52.5° | 23.2  |
| 55°   | 18.1  |
| 57.5° | 13.8  |
| 60°   | 10.2  |



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CANDELA DISTRIBUTION (continued):

|       | 0°  |
|-------|-----|
| 67.5° | 5.1 |
| 70°   | 4.4 |
| 72.5° | 3.6 |
| 75°   | 2.9 |
| 77.5° | 2.2 |
| 80°   | 2.2 |
| 82.5° | 1.5 |
| 85°   | 0.7 |
| 87.5° | 0.0 |
| 90°   | 0.0 |



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— 0°-180°







|       |     |
|-------|-----|
| 62.5° | 8.0 |
| 65°   | 6.5 |



(END OF REPORT)