

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: P432666

Luminaire Tested: **LAM4B208R659727DE010x1MW**

Issue Date: 11/23/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P432666  
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: LAM4B208R659727DE010x1MW  
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 65 DEG TIR OPTIC  
Light Source: HIGH LUMEN LED 97CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1311.8 lumens  
Efficiency: N/A  
Efficacy: 63.7 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

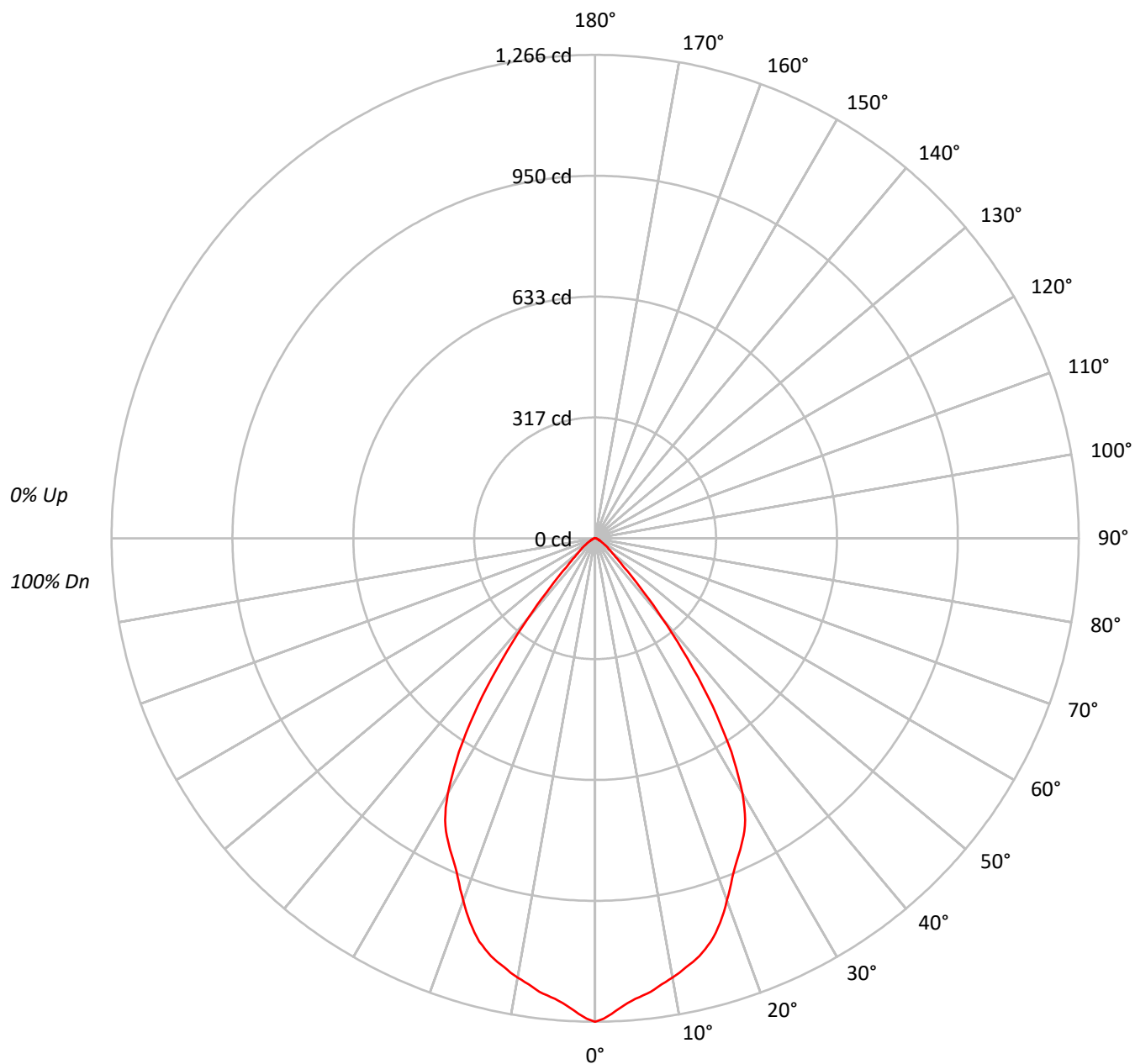
Input Watts (W): 20.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 82  | 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°  | 624767 |
| 5°  | 599517 |
| 10° | 585307 |
| 15° | 568962 |
| 20° | 529874 |
| 25° | 489401 |
| 30° | 439357 |
| 35° | 322775 |
| 40° | 174347 |
| 45° | 74938  |
| 50° | 41755  |
| 55° | 29246  |
| 60° | 18748  |
| 65° | 14243  |
| 70° | 11829  |
| 75° | 10294  |
| 80° | 11649  |
| 85° | 7925   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 114.4  | 8.7       |
| 10°-20°   | 310.8  | 23.7      |
| 20°-30°   | 412.0  | 31.4      |
| 30°-40°   | 326.3  | 24.9      |
| 40°-50°   | 97.2   | 7.4       |
| 50°-60°   | 31.1   | 2.4       |
| 60°-70°   | 12.4   | 0.9       |
| 70°-80°   | 5.9    | 0.5       |
| 80°-90°   | 1.7    | 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°    | 837.2  | 63.8      |
| 0°-40°    | 1163.6 | 88.7      |
| 0°-60°    | 1291.8 | 98.5      |
| 0°-90°    | 1311.8 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1311.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1266 |      |
| 5°  | 1210 | 114  |
| 15° | 1114 | 311  |
| 25° | 899  | 412  |
| 35° | 536  | 326  |
| 45° | 107  | 97   |
| 55° | 34   | 31   |
| 65° | 12   | 12   |
| 75° | 5    | 6    |
| 85° | 1    | 2    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 1266.3 |
| 1°    | 1258.1 |
| 2°    | 1245.9 |
| 3°    | 1232.3 |
| 4°    | 1220.0 |
| 5°    | 1210.5 |
| 6°    | 1203.7 |
| 7°    | 1196.9 |
| 8°    | 1186.0 |
| 9°    | 1176.5 |
| 10°   | 1168.3 |
| 11°   | 1158.8 |
| 12°   | 1147.9 |
| 13°   | 1138.4 |
| 14°   | 1127.5 |
| 15°   | 1113.9 |
| 16°   | 1099.0 |
| 17°   | 1079.9 |
| 18°   | 1058.2 |
| 19°   | 1035.0 |
| 20°   | 1009.2 |
| 21°   | 984.7  |
| 22°   | 958.9  |
| 23°   | 935.8  |
| 24°   | 916.7  |
| 25°   | 899.0  |
| 26°   | 880.0  |
| 27°   | 860.9  |
| 28°   | 836.5  |
| 29°   | 806.5  |
| 30°   | 771.2  |
| 32.5° | 663.7  |
| 35°   | 535.9  |
| 37.5° | 397.2  |
| 40°   | 270.7  |
| 42.5° | 171.4  |
| 45°   | 107.4  |
| 47.5° | 72.1   |
| 50°   | 54.4   |
| 52.5° | 43.5   |
| 55°   | 34.0   |
| 57.5° | 25.8   |
| 60°   | 19.0   |



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CANDELA DISTRIBUTION (continued):

|       | 0°  |
|-------|-----|
| 67.5° | 9.5 |
| 70°   | 8.2 |
| 72.5° | 6.8 |
| 75°   | 5.4 |
| 77.5° | 4.1 |
| 80°   | 4.1 |
| 82.5° | 2.7 |
| 85°   | 1.4 |
| 87.5° | 0.0 |
| 90°   | 0.0 |



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— 0°-180°







|       |  |      |
|-------|--|------|
| 62.5° |  | 15.0 |
| 65°   |  | 12.2 |



(END OF REPORT)