

Scaled data based on original data using  
LM-46-04 Photometric Testing of Indoor Luminaires Using High Intensity Discharge or  
Incandescent Filament Lamps (Reaffirmed 2012)

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: LUMIERE

Report Number: Test Report: SOMK990310050 LAB: CCSL

Luminaire Tested: **716-2-MH100PAR38-FL**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-46-04  
Report Number: Test Report: SOMK990310050 LAB: CCSL  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMIERE  
Catalog Number: 716-2-MH100PAR38-FL  
Description:  
Light Source: CDM100/PAR38/FL/3K  
Bare lamp data for 716-2  
Ballast/Driver: -

**Summary**

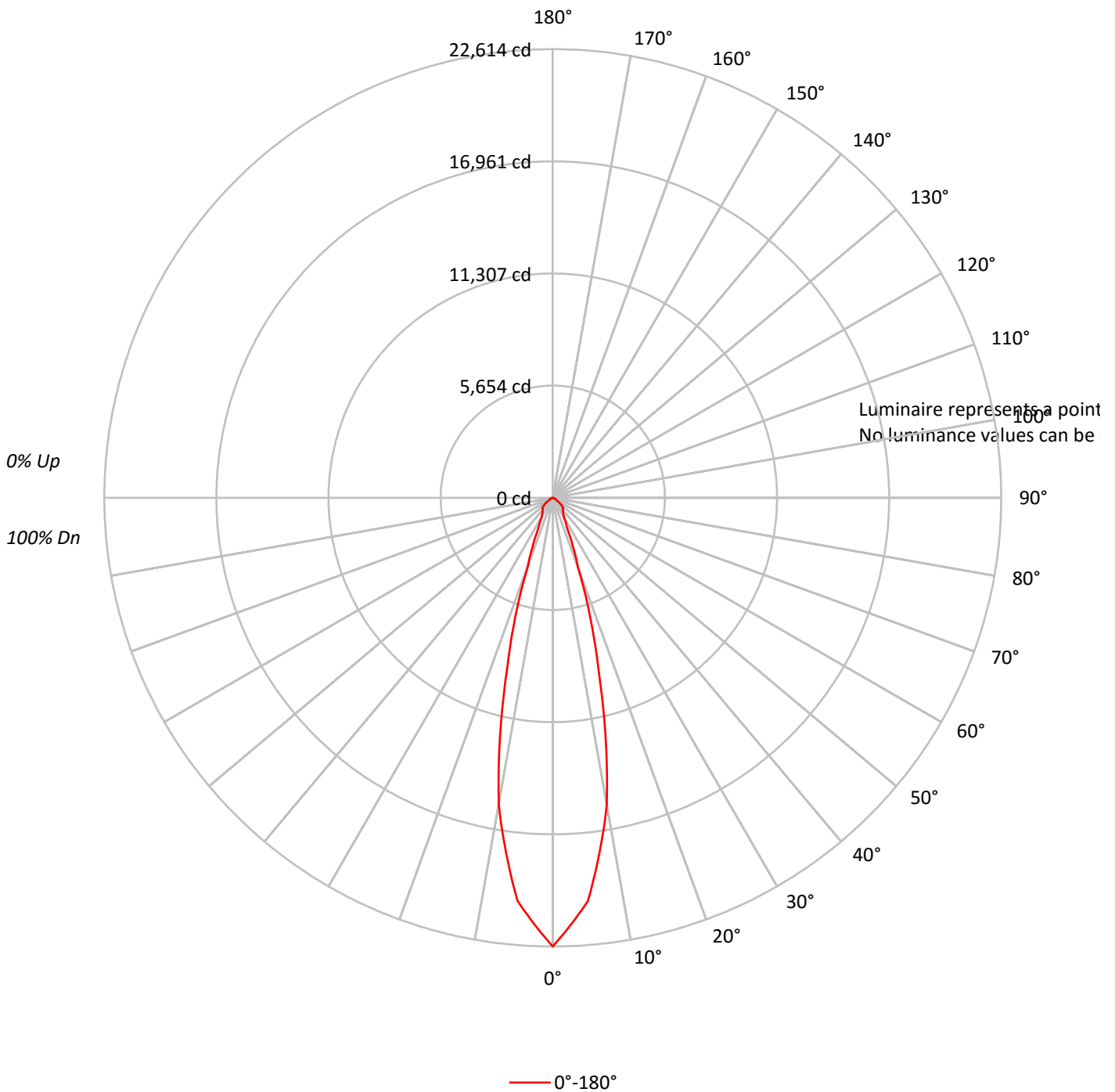
Lumens per Lamp: 6800 (1 lamp)  
Luminaire Lumens: 6929.2 lumens  
Efficiency: 101.9%  
Efficacy: 69.3 lumens/watt  
Spacing Criteria (0/90/45): 0.45 / 0.45 / 0.44  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Direct

Input Watts (W): 100  
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  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 121 | 121 | 121 | 121 | 118 | 118 | 118 | 118 | 113 | 113 | 113 | 108 | 108 | 108 | 104 | 104 | 104 | 102 |
| 1   | 116 | 113 | 110 | 108 | 113 | 111 | 108 | 106 | 106 | 105 | 103 | 103 | 101 | 100 | 99  | 98  | 97  | 95  |
| 2   | 110 | 105 | 101 | 98  | 108 | 104 | 100 | 97  | 100 | 97  | 95  | 97  | 95  | 93  | 94  | 93  | 91  | 89  |
| 3   | 105 | 99  | 94  | 90  | 103 | 98  | 93  | 89  | 95  | 91  | 88  | 92  | 89  | 87  | 90  | 88  | 85  | 84  |
| 4   | 101 | 93  | 88  | 84  | 99  | 92  | 87  | 84  | 90  | 86  | 83  | 88  | 84  | 82  | 86  | 83  | 81  | 79  |
| 5   | 96  | 89  | 83  | 79  | 95  | 88  | 82  | 79  | 86  | 81  | 78  | 84  | 80  | 77  | 83  | 79  | 77  | 75  |
| 6   | 93  | 84  | 79  | 75  | 91  | 83  | 78  | 74  | 82  | 77  | 74  | 81  | 77  | 73  | 79  | 76  | 73  | 72  |
| 7   | 89  | 80  | 75  | 71  | 88  | 80  | 75  | 71  | 79  | 74  | 71  | 77  | 73  | 70  | 76  | 73  | 70  | 69  |
| 8   | 86  | 77  | 72  | 68  | 85  | 77  | 71  | 68  | 76  | 71  | 68  | 75  | 70  | 67  | 74  | 70  | 67  | 66  |
| 9   | 83  | 74  | 69  | 65  | 82  | 74  | 69  | 65  | 73  | 68  | 65  | 72  | 68  | 65  | 71  | 67  | 64  | 63  |
| 10  | 80  | 71  | 66  | 63  | 79  | 71  | 66  | 63  | 70  | 66  | 63  | 69  | 65  | 62  | 69  | 65  | 62  | 61  |

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





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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture | % Lamp |
|-----------|--------|-----------|--------|
| 0°-10°    | 1804.8 | 26.0      | 26.5   |
| 10°-20°   | 2486.7 | 35.9      | 36.6   |
| 20°-30°   | 926.8  | 13.4      | 13.6   |
| 30°-40°   | 579.3  | 8.4       | 8.5    |
| 40°-50°   | 547.5  | 7.9       | 8.1    |
| 50°-60°   | 324.8  | 4.7       | 4.8    |
| 60°-70°   | 131.0  | 1.9       | 1.9    |
| 70°-80°   | 79.0   | 1.1       | 1.2    |
| 80°-90°   | 49.4   | 0.7       | 0.7    |
| 90°-100°  | 0.0    | 0.0       | 0.0    |
| 100°-110° | 0.0    | 0.0       | 0.0    |
| 110°-120° | 0.0    | 0.0       | 0.0    |
| 120°-130° | 0.0    | 0.0       | 0.0    |
| 130°-140° | 0.0    | 0.0       | 0.0    |
| 140°-150° | 0.0    | 0.0       | 0.0    |
| 150°-160° | 0.0    | 0.0       | 0.0    |
| 160°-170° | 0.0    | 0.0       | 0.0    |
| 170°-180° | 0.0    | 0.0       | 0.0    |
| 0°-30°    | 5218.3 | 75.3      | 76.7   |
| 0°-40°    | 5797.6 | 83.7      | 85.3   |
| 0°-60°    | 6669.9 | 96.3      | 98.1   |
| 0°-90°    | 6929.2 | 100.0     | 101.9  |
| 90°-120°  | 0.0    | 0.0       | 0.0    |
| 90°-150°  | 0.0    | 0.0       | 0.0    |
| 90°-180°  | 0.0    | 0.0       | 0.0    |
| 0°-180°   | 6929.2 | 100.0     | 101.9  |

**CANDELA DISTRIBUTION:**

|     | 0°    | Flux |
|-----|-------|------|
| 0°  | 22614 |      |
| 5°  | 20388 | ###  |
| 15° | 8846  | 2487 |
| 25° | 1734  | 927  |
| 35° | 905   | 579  |
| 45° | 736   | 548  |
| 55° | 343   | 325  |
| 65° | 122   | 131  |
| 75° | 77    | 79   |
| 85° | 44    | 49   |
| 90° | 40    |      |



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**CANDELA DISTRIBUTION (FULL):**

|     | 0°    |
|-----|-------|
| 0°  | 22614 |
| 5°  | 20388 |
| 10° | 15692 |
| 15° | 8846  |
| 20° | 3666  |
| 25° | 1734  |
| 30° | 1114  |
| 35° | 905   |
| 40° | 785   |
| 45° | 736   |
| 50° | 580   |
| 55° | 343   |
| 60° | 194   |
| 65° | 122   |
| 70° | 92    |
| 75° | 77    |
| 80° | 53    |
| 85° | 44    |
| 90° | 40    |

(END OF REPORT)