

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:

Luminaire Tested: **301-50MR16-NFL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-46-04
Report Number:
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMIERE
Catalog Number: 301-50MR16-NFL
Description:
Light Source: Q50MR16/C/NFL30°-EXK
BARE LAMP DATA FOR 301
Ballast/Driver: -

Summary

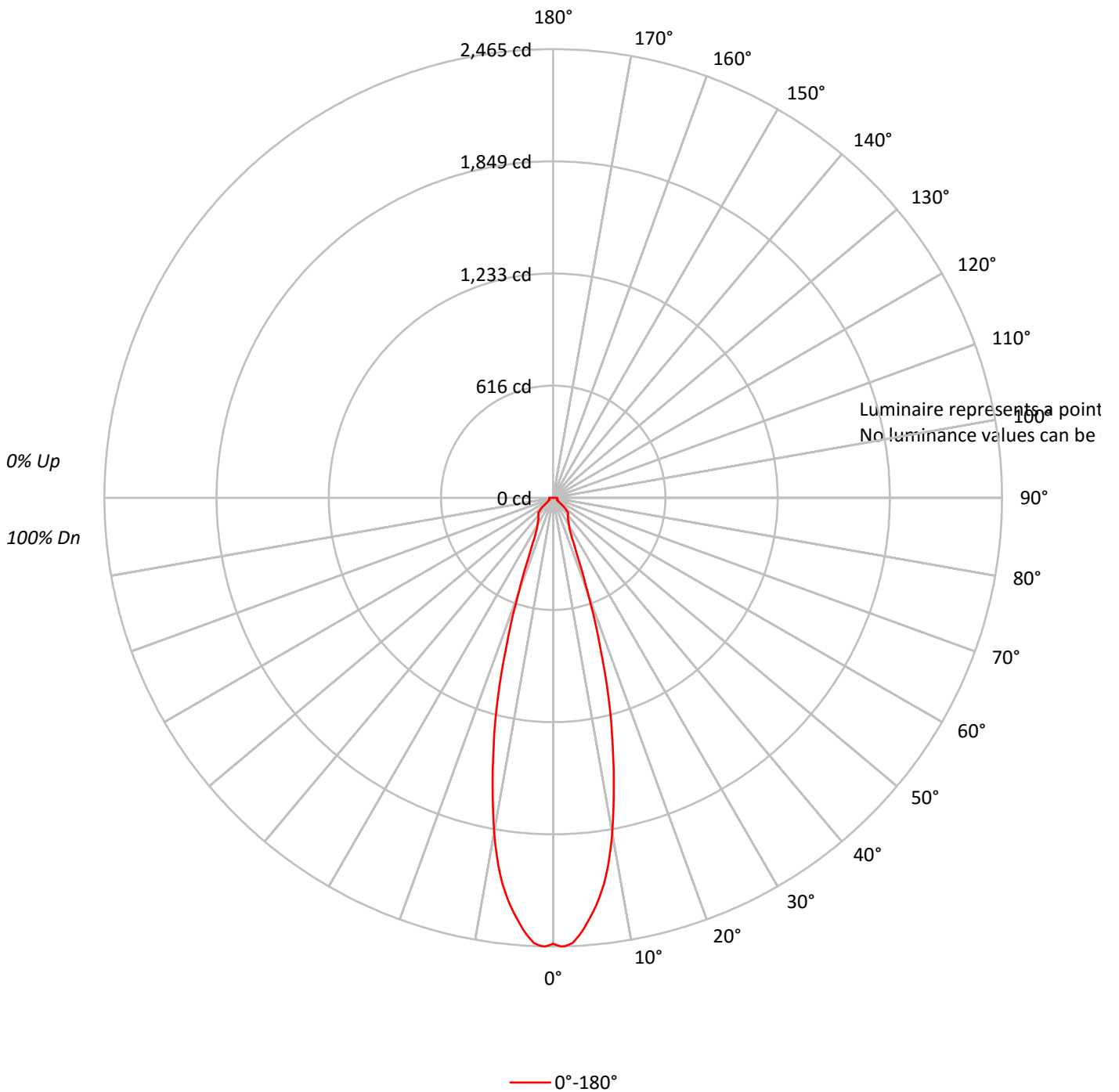
Lumens per Lamp: 955 (1 lamp)
Luminaire Lumens: 939.1 lumens
Efficiency: 98.3%
Efficacy: -
Spacing Criteria (0/90/45): 0.5 / 0.5 / 0.48
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Direct

Input Watts (W): 0
Input Voltage (V): NR
Input Current (A_{in}): 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 | 117 | 117 | 117 | 117 | 114 | 114 | 114 | 114 | 109 | 109 | 109 | 105 | 105 | 105 | 100 | 100 | 100 | 98 |
| 1 | 110 | 107 | 104 | 102 | 108 | 105 | 102 | 100 | 101 | 99 | 97 | 97 | 95 | 94 | 94 | 92 | 91 | 89 |
| 2 | 105 | 99 | 95 | 91 | 102 | 98 | 93 | 90 | 94 | 91 | 88 | 91 | 89 | 86 | 89 | 86 | 84 | 83 |
| 3 | 99 | 93 | 87 | 83 | 97 | 91 | 86 | 83 | 89 | 85 | 81 | 86 | 83 | 80 | 84 | 81 | 79 | 77 |
| 4 | 95 | 87 | 81 | 77 | 93 | 86 | 81 | 77 | 84 | 79 | 76 | 82 | 78 | 75 | 80 | 77 | 74 | 72 |
| 5 | 91 | 82 | 76 | 72 | 89 | 81 | 76 | 72 | 80 | 75 | 71 | 78 | 74 | 71 | 76 | 73 | 70 | 68 |
| 6 | 87 | 78 | 72 | 68 | 85 | 77 | 72 | 68 | 76 | 71 | 67 | 74 | 70 | 67 | 73 | 69 | 66 | 65 |
| 7 | 83 | 74 | 68 | 64 | 82 | 74 | 68 | 64 | 72 | 67 | 64 | 71 | 67 | 64 | 70 | 66 | 63 | 62 |
| 8 | 80 | 71 | 65 | 61 | 79 | 70 | 65 | 61 | 69 | 64 | 61 | 68 | 64 | 61 | 67 | 63 | 60 | 59 |
| 9 | 77 | 68 | 62 | 59 | 76 | 67 | 62 | 59 | 66 | 62 | 58 | 66 | 61 | 58 | 65 | 61 | 58 | 57 |
| 10 | 74 | 65 | 60 | 56 | 73 | 65 | 60 | 56 | 64 | 59 | 56 | 63 | 59 | 56 | 62 | 59 | 56 | 54 |

AVERAGE LUMINANCE (cd/sqm):





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ZONAL LUMENS:

| Zone | Lumens | % Fixture | % Lamp |
|-----------|--------|-----------|--------|
| 0°-10° | 207.5 | 22.1 | 21.7 |
| 10°-20° | 321.2 | 34.2 | 33.6 |
| 20°-30° | 128.2 | 13.7 | 13.4 |
| 30°-40° | 90.6 | 9.7 | 9.5 |
| 40°-50° | 82.4 | 8.8 | 8.6 |
| 50°-60° | 37.8 | 4.0 | 4.0 |
| 60°-70° | 23.8 | 2.5 | 2.5 |
| 70°-80° | 23.0 | 2.4 | 2.4 |
| 80°-90° | 24.6 | 2.6 | 2.6 |
| 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° | 656.9 | 69.9 | 68.8 |
| 0°-40° | 747.5 | 79.6 | 78.3 |
| 0°-60° | 867.8 | 92.4 | 90.9 |
| 0°-90° | 939.1 | 100.0 | 98.3 |
| 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° | 939.1 | 100.0 | 98.3 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 2450 | |
| 5° | 2317 | 208 |
| 15° | 1206 | 321 |
| 25° | 247 | 128 |
| 35° | 141 | 91 |
| 45° | 115 | 82 |
| 55° | 35 | 38 |
| 65° | 23 | 24 |
| 75° | 22 | 23 |
| 85° | 23 | 25 |
| 90° | 23 | |



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CATALOG NUMBER: 301-50MR16-NFL

CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|------|
| 0° | 2450 |
| 1.25° | 2469 |
| 2.5° | 2448 |
| 3.75° | 2392 |
| 5° | 2317 |
| 6.25° | 2236 |
| 7.5° | 2140 |
| 8.75° | 2016 |
| 10° | 1867 |
| 12.5° | 1533 |
| 15° | 1206 |
| 17.5° | 855 |
| 20° | 552 |
| 22.5° | 346 |
| 25° | 247 |
| 27.5° | 194 |
| 30° | 172 |
| 35° | 141 |
| 40° | 126 |
| 45° | 115 |
| 50° | 72 |
| 55° | 35 |
| 60° | 28 |
| 65° | 23 |
| 70° | 22 |
| 75° | 22 |
| 80° | 21 |
| 85° | 23 |
| 90° | 23 |

(END OF REPORT)