

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: P431573

Luminaire Tested: **LAMR4B312R309030DE01021MMS**

Issue Date: 11/23/2020

Test Information

Test Method: LM-41-14
Report Number: P431573
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2007-857-8)
Test Lab: INNOVATION CENTER (G1)
Issue Date: 11/23/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LAMR4B312R309030DE01021MMS
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 30 DEG TIR OPTIC
Light Source: HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3580.8 lumens
Efficiency: N/A
Efficacy: 87.6 lumens/watt
Spacing Criteria (0/90/45): 0.51 / 0.51 / 0.46
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

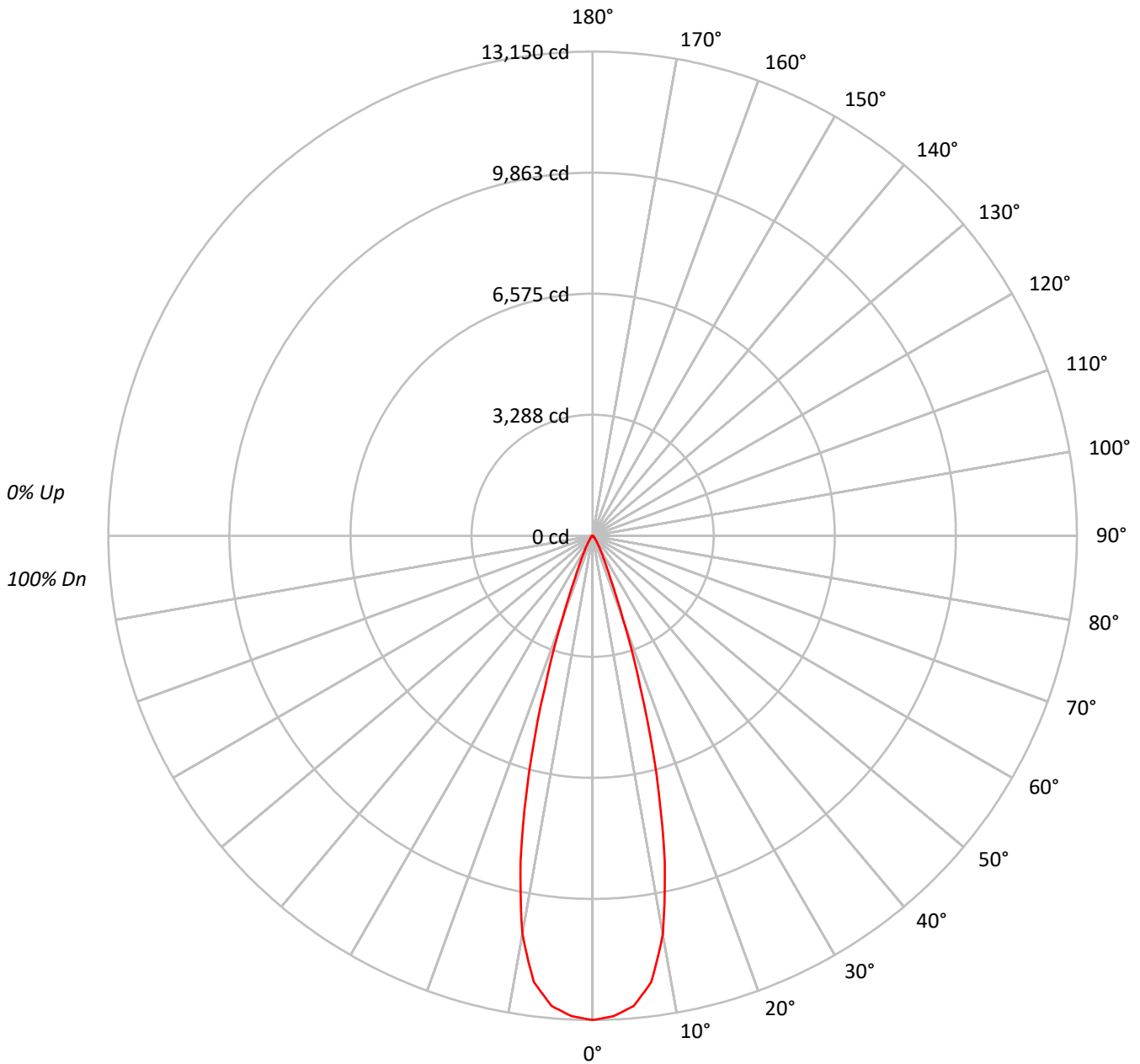
Input Watts (W): 40.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P431573

CATALOG NUMBER: LAMR4B312R309030DE01021MMS

Luminous Intensity Polar Plot





TEST NUMBER: P431573

CATALOG NUMBER: LAMR4B312R309030DE01021MMS

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 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 115 | 113 | 111 | 109 | 112 | 111 | 109 | 107 | 107 | 105 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 96 |
| 2 | 111 | 107 | 104 | 102 | 109 | 106 | 103 | 100 | 102 | 100 | 98 | 100 | 98 | 96 | 97 | 95 | 94 | 93 |
| 3 | 107 | 103 | 99 | 96 | 105 | 101 | 98 | 95 | 99 | 96 | 94 | 96 | 94 | 92 | 94 | 92 | 91 | 90 |
| 4 | 104 | 98 | 94 | 91 | 102 | 97 | 94 | 91 | 95 | 92 | 90 | 93 | 91 | 89 | 92 | 90 | 88 | 87 |
| 5 | 101 | 95 | 91 | 87 | 99 | 94 | 90 | 87 | 92 | 89 | 86 | 91 | 88 | 86 | 89 | 87 | 85 | 84 |
| 6 | 98 | 91 | 87 | 84 | 97 | 91 | 87 | 84 | 89 | 86 | 83 | 88 | 85 | 83 | 87 | 84 | 82 | 81 |
| 7 | 95 | 88 | 84 | 81 | 94 | 88 | 84 | 81 | 87 | 83 | 81 | 86 | 83 | 80 | 85 | 82 | 80 | 79 |
| 8 | 92 | 86 | 81 | 79 | 91 | 85 | 81 | 78 | 84 | 81 | 78 | 83 | 80 | 78 | 83 | 80 | 78 | 77 |
| 9 | 90 | 83 | 79 | 76 | 89 | 83 | 79 | 76 | 82 | 78 | 76 | 81 | 78 | 76 | 80 | 78 | 75 | 74 |
| 10 | 88 | 81 | 77 | 74 | 87 | 80 | 77 | 74 | 80 | 76 | 74 | 79 | 76 | 74 | 78 | 76 | 73 | 72 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|---------|
| | 0° |
| 0° | 6487892 |
| 5° | 6346167 |
| 10° | 5502431 |
| 15° | 3410403 |
| 20° | 1249971 |
| 25° | 417815 |
| 30° | 205094 |
| 35° | 102271 |
| 40° | 63440 |
| 45° | 40260 |
| 50° | 28707 |
| 55° | 23397 |
| 60° | 20130 |
| 65° | 15877 |
| 70° | 19619 |
| 75° | 19444 |
| 80° | 19321 |
| 85° | 19247 |



TEST NUMBER: P431573

CATALOG NUMBER: LAMR4B312R309030DE01021MMS

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 1167.8 | 32.6 |
| 10°-20° | 1763.1 | 49.2 |
| 20°-30° | 429.9 | 12.0 |
| 30°-40° | 117.7 | 3.3 |
| 40°-50° | 47.4 | 1.3 |
| 50°-60° | 25.4 | 0.7 |
| 60°-70° | 15.1 | 0.4 |
| 70°-80° | 11.7 | 0.3 |
| 80°-90° | 2.8 | 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° | 3360.8 | 93.9 |
| 0°-40° | 3478.5 | 97.1 |
| 0°-60° | 3551.2 | 99.2 |
| 0°-90° | 3580.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3580.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-------|------|
| 0° | 13150 | |
| 5° | 12814 | ### |
| 15° | 6677 | 1763 |
| 25° | 768 | 430 |
| 35° | 170 | 118 |
| 45° | 58 | 47 |
| 55° | 27 | 25 |
| 65° | 14 | 15 |
| 75° | 10 | 12 |
| 85° | 3 | 3 |
| 90° | 0 | |



TEST NUMBER: P431573

CATALOG NUMBER: LAMR4B312R309030DE01021MMS

CANDELA DISTRIBUTION (FULL):

| 0° | |
|-------|---------|
| 0° | 13149.9 |
| 2.5° | 13061.6 |
| 5° | 12813.7 |
| 7.5° | 12222.7 |
| 10° | 10983.1 |
| 12.5° | 9040.5 |
| 15° | 6676.8 |
| 17.5° | 4302.9 |
| 20° | 2380.7 |
| 22.5° | 1270.2 |
| 25° | 767.5 |
| 27.5° | 519.6 |
| 30° | 360.0 |
| 32.5° | 244.5 |
| 35° | 169.8 |
| 37.5° | 125.7 |
| 40° | 98.5 |
| 42.5° | 74.7 |
| 45° | 57.7 |
| 47.5° | 47.5 |
| 50° | 37.4 |
| 52.5° | 34.0 |
| 55° | 27.2 |
| 57.5° | 23.8 |
| 60° | 20.4 |
| 62.5° | 17.0 |
| 65° | 13.6 |
| 67.5° | 13.6 |
| 70° | 13.6 |
| 72.5° | 13.6 |
| 75° | 10.2 |
| 77.5° | 10.2 |
| 80° | 6.8 |
| 82.5° | 3.4 |
| 85° | 3.4 |
| 87.5° | 0.0 |
| 90° | 0.0 |



Report Generated By E9808895 / USPTCWHP6082093





— 0°-180°







(END OF REPORT)