

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: P431740

Luminaire Tested: **LAMR4B312R659030DE01021MB**

Issue Date: 11/23/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P431740  
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: LAMR4B312R659030DE01021MB  
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 65 DEG TIR OPTIC  
Light Source: HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3416.4 lumens  
Efficiency: N/A  
Efficacy: 83.5 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

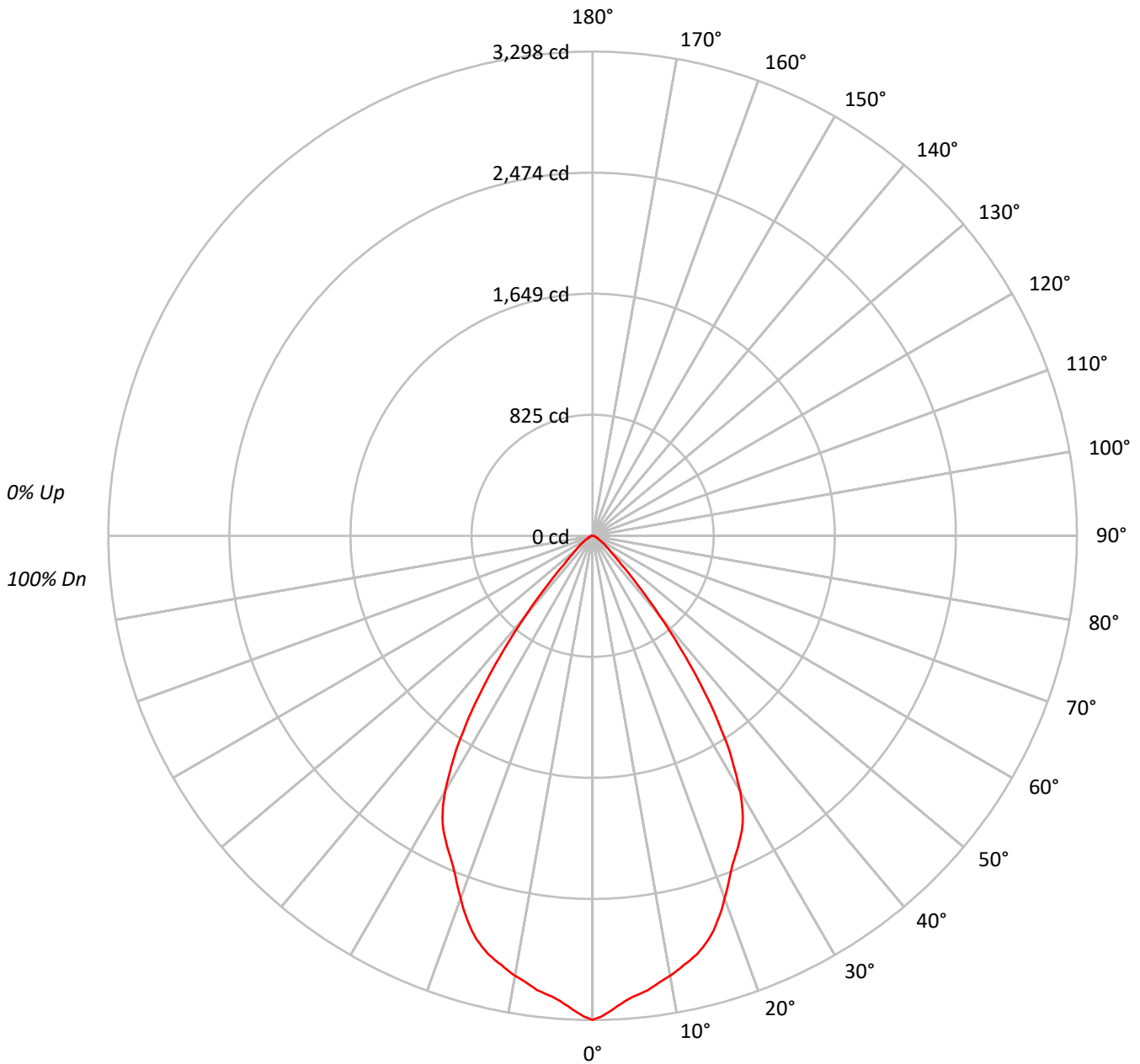
Input Watts (W): 40.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P431740

CATALOG NUMBER: LAMR4B312R659030DE01021MB

### Luminous Intensity Polar Plot





TEST NUMBER: P431740

CATALOG NUMBER: LAMR4B312R659030DE01021MB

**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	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	113	110	107	105	111	108	106	103	104	102	100	100	99	97	97	96	94	93	93	93	93
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	85	85	85	85
3	101	94	89	85	99	93	88	84	90	86	83	88	84	81	86	83	80	79	79	79	79
4	96	88	82	77	94	86	81	77	84	80	76	82	78	75	80	77	74	72	72	72	72
5	90	82	75	71	89	81	75	70	79	74	70	77	73	69	75	72	68	67	67	67	67
6	85	76	70	65	84	75	69	65	74	68	64	72	68	64	71	67	64	62	62	62	62
7	81	71	65	60	80	70	64	60	69	64	60	68	63	59	67	62	59	58	58	58	58
8	77	67	60	56	75	66	60	56	65	59	56	64	59	55	63	58	55	54	54	54	54
9	73	63	56	52	72	62	56	52	61	56	52	60	55	52	59	55	51	50	50	50	50
10	69	59	53	49	68	58	53	49	58	52	48	57	52	48	56	51	48	47	47	47	47

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

	0°
0°	1627018
5°	1561271
10°	1524314
15°	1481785
20°	1379919
25°	1274566
30°	1144197
35°	840577
40°	453999
45°	195229
50°	108764
55°	76212
60°	48943
65°	37241
70°	30726
75°	27069
80°	30117
85°	19813



TEST NUMBER: P431740

CATALOG NUMBER: LAMR4B312R659030DE01021MB

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	297.9	8.7
10°-20°	809.5	23.7
20°-30°	1073.0	31.4
30°-40°	849.8	24.9
40°-50°	253.1	7.4
50°-60°	81.0	2.4
60°-70°	32.4	0.9
70°-80°	15.4	0.5
80°-90°	4.3	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°	2180.4	63.8
0°-40°	3030.2	88.7
0°-60°	3364.3	98.5
0°-90°	3416.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3416.4	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	3298	
5°	3152	298
15°	2901	809
25°	2341	1073
35°	1396	850
45°	280	253
55°	89	81
65°	32	32
75°	14	15
85°	4	4
90°	0	



TEST NUMBER: P431740

CATALOG NUMBER: LAMR4B312R659030DE01021MB

**CANDELA DISTRIBUTION (FULL):**

	0°
0°	3297.7
1°	3276.4
2°	3244.5
3°	3209.1
4°	3177.2
5°	3152.4
6°	3134.7
7°	3117.0
8°	3088.7
9°	3063.9
10°	3042.6
11°	3017.8
12°	2989.5
13°	2964.7
14°	2936.4
15°	2901.0
16°	2862.0
17°	2812.4
18°	2755.7
19°	2695.5
20°	2628.2
21°	2564.5
22°	2497.2
23°	2436.9
24°	2387.4
25°	2341.3
26°	2291.7
27°	2242.1
28°	2178.4
29°	2100.4
30°	2008.4
32.5°	1728.5
35°	1395.6
37.5°	1034.3
40°	704.9
42.5°	446.3
45°	279.8
47.5°	187.7
50°	141.7
52.5°	113.3
55°	88.6
57.5°	67.3
60°	49.6



TEST NUMBER: P431740

CATALOG NUMBER: LAMR4B312R659030DE01021MB

**CANDELA DISTRIBUTION (continued):**

	0°
67.5°	24.8
70°	21.3
72.5°	17.7
75°	14.2
77.5°	10.6
80°	10.6
82.5°	7.1
85°	3.5
87.5°	0.0
90°	0.0



Report Generated By E9808895 / USPTCWHP6082093







— 0°-180°







62.5°		39.0
65°		31.9



(END OF REPORT)