

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: P431771

Luminaire Tested: **LAMR4B312R709040DE01021MMS**

Issue Date: 11/23/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P431771  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2007-857-14)  
Test Lab: INNOVATION CENTER (G1)  
Issue Date: 11/23/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LAMR4B312R709040DE01021MMS  
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 70 DEG TIR OPTIC  
Light Source: HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3756.9 lumens  
Efficiency: N/A  
Efficacy: 91.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1.1 / 1.09  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

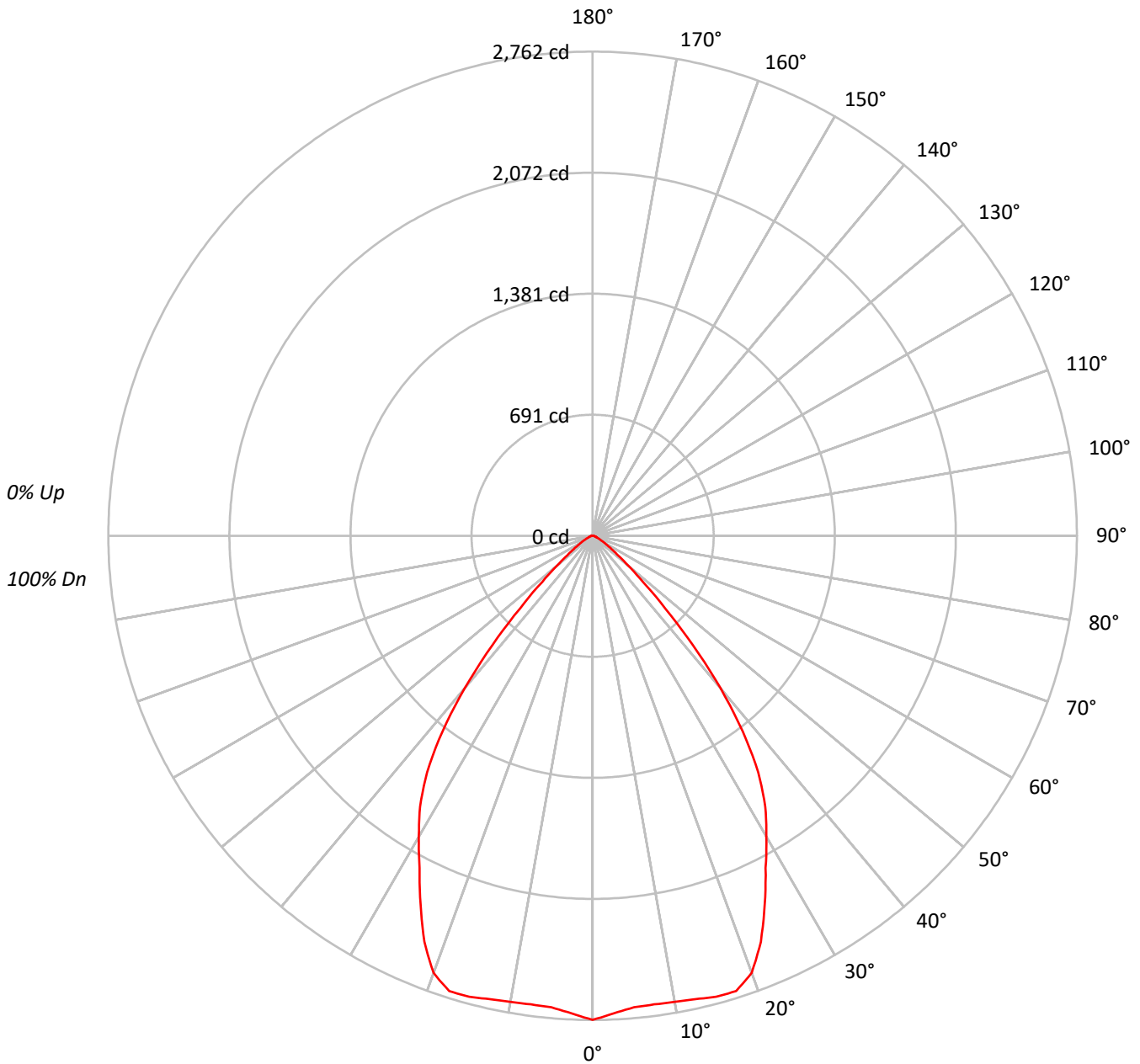
Input Watts (W): 40.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92	92	92	92
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	88	86	84	84	84	84
3	100	93	87	83	98	91	86	82	89	84	81	86	82	79	84	81	78	76	76	76	76
4	94	85	79	74	92	84	78	74	82	77	73	80	76	72	78	74	71	70	70	70	70
5	88	79	72	68	87	78	72	67	76	71	67	74	70	66	73	69	65	64	64	64	64
6	83	73	66	62	82	72	66	61	71	65	61	69	64	60	68	64	60	58	58	58	58
7	78	68	61	56	77	67	61	56	66	60	56	65	59	56	63	59	55	54	54	54	54
8	74	63	57	52	73	63	56	52	62	56	52	60	55	51	59	55	51	50	50	50	50
9	70	59	53	48	69	59	52	48	58	52	48	57	51	48	56	51	47	46	46	46	46
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	48	44	43	43	43	43

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

	0°
0°	1362468
5°	1337114
10°	1352575
15°	1390865
20°	1393203
25°	1264005
30°	1129384
35°	991936
40°	730301
45°	409018
50°	201332
55°	112770
60°	68481
65°	45063
70°	33323
75°	29357
80°	21878
85°	22077



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	258.1	6.9
10°-20°	767.3	20.4
20°-30°	1064.8	28.3
30°-40°	1001.8	26.7
40°-50°	478.2	12.7
50°-60°	126.4	3.4
60°-70°	39.9	1.1
70°-80°	16.3	0.4
80°-90°	4.2	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°	2090.2	55.6
0°-40°	3091.9	82.3
0°-60°	3696.6	98.4
0°-90°	3756.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3756.9	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2762	
5°	2700	258
15°	2723	767
25°	2322	1065
35°	1647	1002
45°	586	478
55°	131	126
65°	39	40
75°	15	16
85°	4	4
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2761.5
2.5°	2726.8
5°	2699.8
7.5°	2696.0
10°	2699.8
12.5°	2707.5
15°	2723.0
17.5°	2723.0
20°	2653.5
22.5°	2507.0
25°	2321.9
27.5°	2136.7
30°	1982.4
32.5°	1832.0
35°	1646.9
37.5°	1407.8
40°	1133.9
42.5°	844.7
45°	586.2
47.5°	389.5
50°	262.3
52.5°	181.3
55°	131.1
57.5°	92.6
60°	69.4
62.5°	50.1
65°	38.6
67.5°	27.0
70°	23.1
72.5°	19.3
75°	15.4
77.5°	11.6
80°	7.7
82.5°	7.7
85°	3.9
87.5°	0.0
90°	0.0



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— 0°-180°







(END OF REPORT)