

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: P401970

Luminaire Tested: **LA1MR102D010 EA1M102309040MW1MW**

Issue Date: 6/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: P401970  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2005-766-2)  
Test Lab: INNOVATION CENTER (G2)  
Issue Date: 6/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LA1MR102D010 EA1M102309040MW1MW  
Description: 1 INCH 30° OPTIC WITH MATTE WHITE BAFFLE  
Light Source: HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

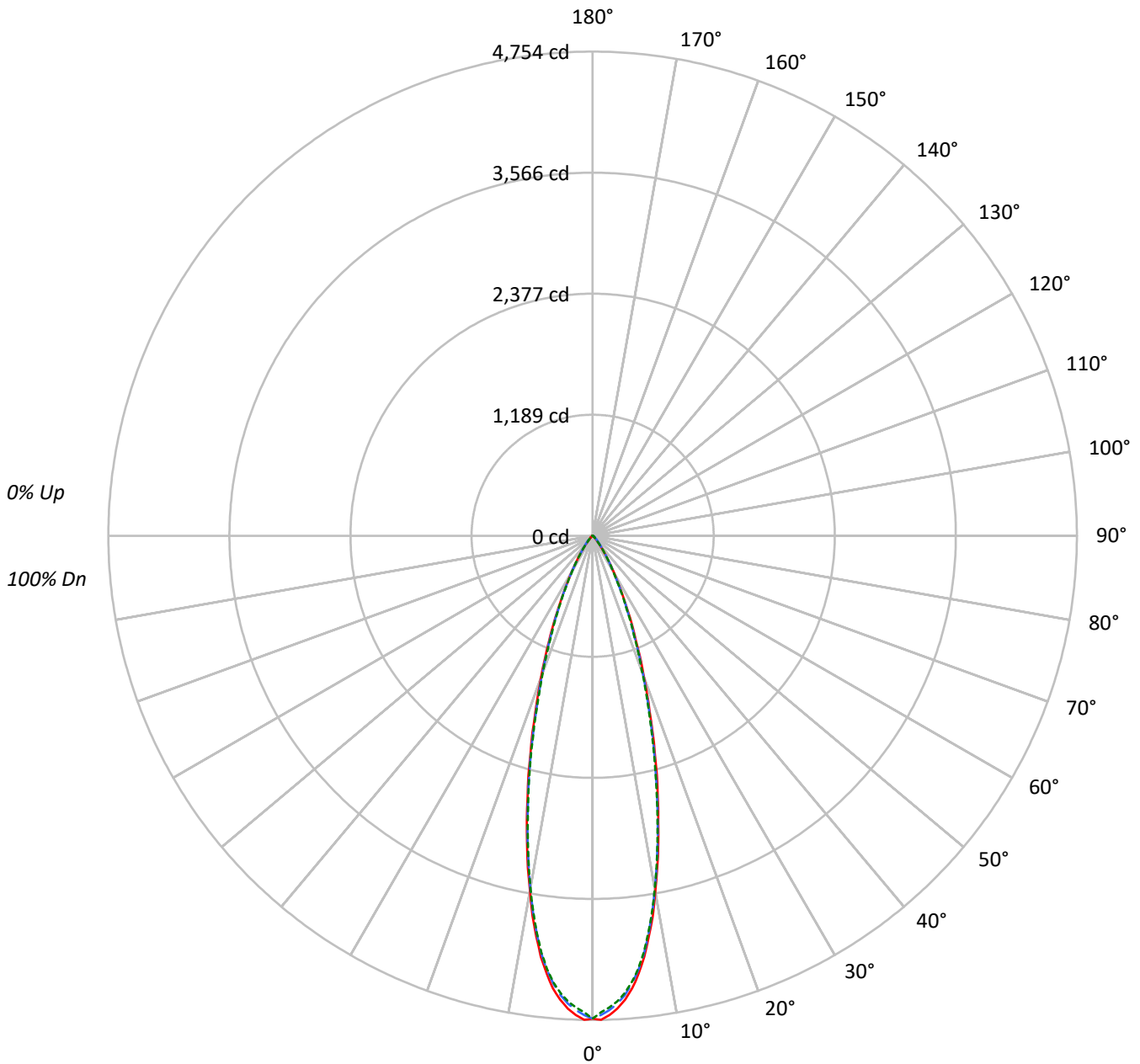
Lumens per Lamp: N/A  
Luminaire Lumens: 1616.0 lumens  
Efficiency: N/A  
Efficacy: 68.8 lumens/watt  
Spacing Criteria (0/90/45): 0.51 / 0.5 / 0.52  
Luminous Opening: Rectangular (W 0.08' x L: 0.42' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.5  
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	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			
1	114	112	110	108	112	110	108	106	106	105	103	102	101	100	99	98	97	95					95			
2	110	106	103	100	108	104	101	99	101	99	97	98	96	95	96	94	93	91					91			
3	106	101	96	93	104	99	95	92	97	94	91	94	92	90	92	90	88	87					87			
4	102	96	91	88	100	95	90	87	93	89	86	91	88	85	89	86	84	83					83			
5	98	91	87	83	97	90	86	83	89	85	82	87	84	81	86	83	81	79					79			
6	94	87	82	79	93	87	82	79	85	81	78	84	80	78	83	80	77	76					76			
7	91	84	79	75	90	83	78	75	82	78	75	81	77	74	80	77	74	73					73			
8	88	80	76	72	87	80	75	72	79	75	72	78	74	72	77	74	71	70					70			
9	85	77	73	69	84	77	72	69	76	72	69	75	71	69	74	71	69	67					67			
10	82	74	70	67	81	74	70	67	73	69	66	73	69	66	72	69	66	65					65			

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

	0°	45°	90°
0°	1469749	1469749	1469749
5°	1388574	1374415	1369934
10°	1116539	1108103	1106781
15°	781001	767747	764441
20°	487291	475019	469575
25°	281951	273468	269911
30°	150128	145689	142718
35°	71942	74288	72699
40°	30108	40953	30917
45°	15388	25340	16309
50°	9983	14951	10948
55°	6702	10053	7837
60°	3844	6386	5146
65°	1540	4548	1540
70°	0	1903	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	393.7	24.4
10°-20°	657.1	40.7
20°-30°	378.0	23.4
30°-40°	131.5	8.1
40°-50°	37.3	2.3
50°-60°	14.3	0.9
60°-70°	3.9	0.2
70°-80°	0.1	0.0
80°-90°	0.0	0.0
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°	1428.9	88.4
0°-40°	1560.4	96.6
0°-60°	1612.0	99.8
0°-90°	1616.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1616.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4741	4741	4741	4741	4741	
5°	4462	4435	4417	4425	4402	396
15°	2434	2423	2392	2386	2382	664
25°	824	814	800	795	789	387
35°	190	198	196	196	192	128
45°	35	41	58	41	37	30
55°	12	14	19	14	14	12
65°	2	4	6	4	2	2
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4741.1	4741.1	4741.1	4741.1	4741.1
1°	4753.5	4730.7	4706.0	4706.0	4681.2
2°	4708.0	4687.4	4660.5	4662.6	4635.7
3°	4648.1	4627.5	4600.6	4604.7	4579.9
4°	4565.5	4538.6	4520.0	4526.2	4503.5
5°	4462.2	4435.3	4416.7	4425.0	4402.3
6°	4321.7	4303.1	4286.6	4296.9	4276.3
7°	4164.7	4144.1	4131.7	4139.9	4123.4
8°	3972.6	3958.1	3943.7	3951.9	3935.4
9°	3776.3	3753.6	3739.1	3745.3	3733.0
10°	3547.0	3536.7	3520.2	3526.4	3516.0
11°	3326.0	3326.0	3295.0	3284.7	3290.9
12°	3098.7	3096.7	3067.8	3055.4	3059.5
13°	2869.4	2867.4	2838.4	2828.1	2830.2
14°	2642.2	2644.3	2613.3	2605.0	2602.9
15°	2433.5	2423.2	2392.2	2386.0	2381.9
16°	2214.6	2212.5	2181.5	2173.3	2169.1
17°	2018.3	2008.0	1977.0	1968.7	1962.5
18°	1813.8	1815.9	1784.9	1778.7	1768.3
19°	1640.3	1636.1	1607.2	1601.0	1590.7
20°	1477.1	1458.5	1439.9	1433.7	1423.4
22.5°	1113.5	1103.2	1078.4	1072.2	1070.1
25°	824.3	813.9	799.5	795.3	789.1
26°	721.0	723.0	704.4	700.3	696.2
27°	638.3	634.2	617.7	615.6	609.4
28°	549.5	553.6	535.0	533.0	528.9
29°	479.3	479.3	468.9	462.7	458.6
30°	419.4	417.3	407.0	402.8	398.7
32.5°	289.2	287.2	283.0	281.0	276.8
35°	190.1	198.3	196.3	196.3	192.1
37.5°	117.8	134.3	140.5	138.4	126.0
40°	74.4	86.8	101.2	93.0	76.4
42.5°	49.6	59.9	74.4	62.0	49.6
45°	35.1	41.3	57.8	41.3	37.2
47.5°	26.9	31.0	43.4	31.0	26.9
50°	20.7	24.8	31.0	24.8	22.7
52.5°	16.5	18.6	24.8	18.6	16.5
55°	12.4	14.5	18.6	14.5	14.5
57.5°	10.3	12.4	14.5	12.4	10.3
60°	6.2	8.3	10.3	8.3	8.3
62.5°	4.1	6.2	8.3	6.2	4.1
65°	2.1	4.1	6.2	4.1	2.1
67.5°	0.0	2.1	2.1	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
75°	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0



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— 0°-180°    - - 45°-225°    - - - - 90°-270°







70°	0.0	0.0	2.1	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0



(END OF REPORT)