

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P547338

Luminaire Tested: **FMR-24-4-LD4-4HI-50-UNV-82-87-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P547338
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 6/15/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-4-LD4-4HI-50-UNV-82-87-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

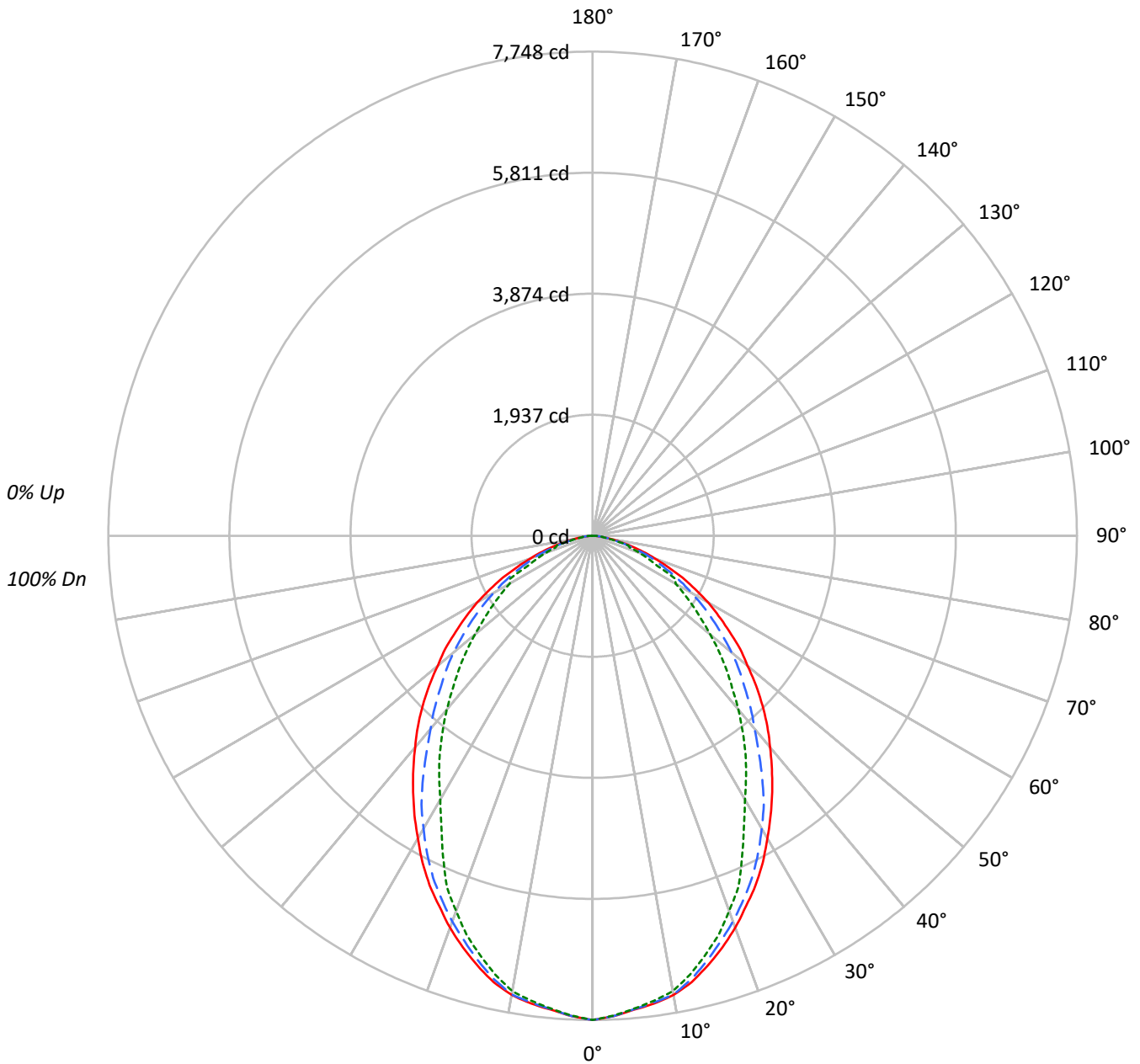
Lumens per Lamp: N/A
Luminaire Lumens: 15211.0 lumens
Efficiency: N/A
Efficacy: 88.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
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: P547338

CATALOG NUMBER: FMR-24-4-LD4-4HI-50-UNV-82-87-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P547338

CATALOG NUMBER: FMR-24-4-LD4-4HI-50-UNV-82-87-EDD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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															
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87															
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75															
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65															
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56															
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50															
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44															
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40															
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36															
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33															
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10425	10425	10425
5°	10284	10272	10259
10°	10194	10182	10109
15°	9920	9820	9683
20°	9555	9401	9145
25°	9163	8963	8405
30°	8684	8406	7571
35°	8225	7769	7003
40°	7756	7080	6372
45°	7312	6545	5761
50°	6769	6075	5138
55°	6262	5505	4602
60°	5737	4917	4122
65°	5048	4306	3650
70°	4158	3771	3101
75°	3306	2887	3027
80°	2221	2082	1943
85°	1383	1660	1936



TEST NUMBER: P547338

CATALOG NUMBER: FMR-24-4-LD4-4HI-50-UNV-82-87-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	721.3	4.7
10°-20°	1979.4	13.0
20°-30°	2740.4	18.0
30°-40°	2922.1	19.2
40°-50°	2665.8	17.5
50°-60°	2088.4	13.7
60°-70°	1361.1	8.9
70°-80°	603.0	4.0
80°-90°	129.5	0.9
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°	5441.1	35.8
0°-40°	8363.2	55.0
0°-60°	13117.3	86.2
0°-90°	15211.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15211.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7748	7748	7748	7748	7748	
5°	7614	7605	7605	7596	7596	723
15°	7121	7121	7050	6978	6951	2002
25°	6172	6136	6037	5822	5661	2833
35°	5007	4971	4730	4371	4264	3130
45°	3843	3762	3440	3153	3028	2960
55°	2669	2589	2347	2069	1962	2394
65°	1586	1496	1353	1380	1147	1563
75°	636	591	555	528	582	682
85°	90	98	108	116	125	124
90°	0	0	0	0	0	



TEST NUMBER: P547338

CATALOG NUMBER: FMR-24-4-LD4-4HI-50-UNV-82-87-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7748.3	7748.3	7748.3	7748.3	7748.3
2.5°	7694.5	7694.5	7694.5	7685.6	7685.6
5°	7613.9	7605.0	7605.0	7596.0	7596.0
7.5°	7551.2	7542.3	7533.3	7524.3	7506.4
10°	7461.6	7461.6	7452.7	7407.9	7398.9
12.5°	7318.3	7309.4	7273.5	7210.8	7192.9
15°	7121.3	7121.3	7049.6	6977.9	6951.1
17.5°	6906.3	6897.3	6807.7	6736.1	6700.2
20°	6673.4	6655.5	6565.9	6449.4	6386.7
22.5°	6413.6	6413.6	6306.1	6153.8	6091.1
25°	6171.8	6135.9	6037.4	5822.4	5661.2
27.5°	5894.1	5840.3	5732.8	5428.3	5240.2
30°	5589.5	5562.6	5410.4	5016.2	4872.9
32.5°	5302.9	5258.1	5096.8	4684.8	4568.4
35°	5007.3	4971.4	4729.6	4371.3	4263.8
37.5°	4711.7	4666.9	4362.3	4075.7	3941.3
40°	4416.1	4362.3	4030.9	3771.1	3627.8
42.5°	4138.4	4066.7	3744.3	3466.6	3305.3
45°	3842.8	3762.2	3439.7	3153.1	3027.7
47.5°	3547.2	3475.5	3179.9	2884.3	2741.0
50°	3233.7	3171.0	2902.2	2606.6	2454.4
52.5°	2973.9	2875.4	2615.6	2320.0	2194.6
55°	2669.3	2588.7	2346.9	2069.2	1961.7
57.5°	2391.7	2311.0	2087.1	1827.3	1737.8
60°	2131.9	2015.4	1827.3	1603.4	1531.7
62.5°	1845.3	1755.7	1594.4	1406.3	1495.9
65°	1585.5	1495.9	1352.6	1379.5	1146.6
67.5°	1298.8	1254.1	1128.7	1003.2	967.4
70°	1057.0	1003.2	958.5	824.1	788.3
72.5°	842.0	788.3	725.6	653.9	627.0
75°	636.0	591.2	555.4	528.5	582.2
77.5°	438.9	421.0	394.1	367.3	358.3
80°	286.6	277.7	268.7	259.8	250.8
82.5°	170.2	170.2	170.2	170.2	170.2
85°	89.6	98.5	107.5	116.4	125.4
87.5°	53.7	53.7	62.7	71.7	80.6
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







(END OF REPORT)