

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: P547336

Luminaire Tested: **FMR-24-4-LD4-4HI-50-UNV-82-85-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: P547336
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-82-85-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

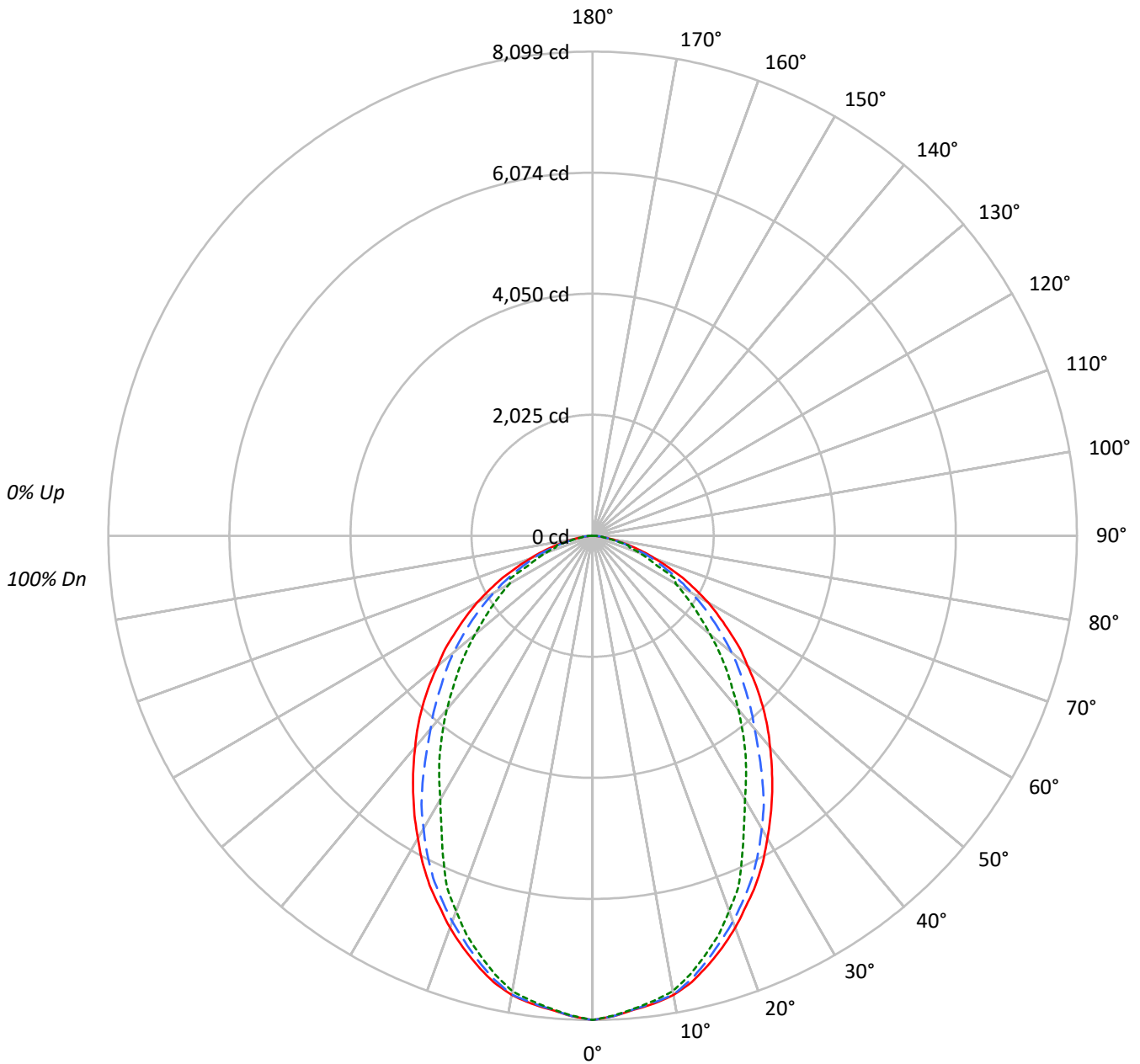
Lumens per Lamp: N/A
Luminaire Lumens: 15900.0 lumens
Efficiency: N/A
Efficacy: 92.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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: P547336

CATALOG NUMBER: FMR-24-4-LD4-4HI-50-UNV-82-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P547336

CATALOG NUMBER: FMR-24-4-LD4-4HI-50-UNV-82-85-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																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10897	10897	10897
5°	10749	10737	10724
10°	10656	10643	10567
15°	10369	10265	10121
20°	9988	9827	9559
25°	9577	9369	8785
30°	9077	8786	7914
35°	8597	8120	7321
40°	8108	7401	6660
45°	7643	6842	6022
50°	7075	6350	5370
55°	6545	5755	4810
60°	5997	5140	4309
65°	5276	4501	3816
70°	4347	3941	3242
75°	3456	3018	3164
80°	2321	2177	2032
85°	1445	1735	2024



TEST NUMBER: P547336

CATALOG NUMBER: FMR-24-4-LD4-4HI-50-UNV-82-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	753.9	4.7
10°-20°	2069.1	13.0
20°-30°	2864.5	18.0
30°-40°	3054.4	19.2
40°-50°	2786.5	17.5
50°-60°	2183.0	13.7
60°-70°	1422.8	8.9
70°-80°	630.4	4.0
80°-90°	135.3	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°	5687.6	35.8
0°-40°	8742.0	55.0
0°-60°	13711.5	86.2
0°-90°	15900.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15900.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8099	8099	8099	8099	8099	
5°	7959	7949	7949	7940	7940	755
15°	7444	7444	7369	7294	7266	2093
25°	6451	6414	6311	6086	5918	2962
35°	5234	5197	4944	4569	4457	3272
45°	4017	3933	3596	3296	3165	3094
55°	2790	2706	2453	2163	2051	2503
65°	1657	1564	1414	1442	1198	1633
75°	665	618	580	552	609	712
85°	94	103	112	122	131	130
90°	0	0	0	0	0	



TEST NUMBER: P547336

CATALOG NUMBER: FMR-24-4-LD4-4HI-50-UNV-82-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8099.2	8099.2	8099.2	8099.2	8099.2
2.5°	8043.1	8043.1	8043.1	8033.7	8033.7
5°	7958.8	7949.4	7949.4	7940.1	7940.1
7.5°	7893.3	7883.9	7874.5	7865.2	7846.4
10°	7799.6	7799.6	7790.3	7743.4	7734.1
12.5°	7649.8	7640.4	7603.0	7537.5	7518.7
15°	7443.8	7443.8	7368.9	7294.0	7265.9
17.5°	7219.1	7209.7	7116.1	7041.2	7003.7
20°	6975.7	6956.9	6863.3	6741.6	6676.0
22.5°	6704.1	6704.1	6591.8	6432.6	6367.0
25°	6451.3	6413.9	6310.9	6086.1	5917.6
27.5°	6161.0	6104.9	5992.5	5674.2	5477.5
30°	5842.7	5814.6	5655.4	5243.4	5093.6
32.5°	5543.1	5496.3	5327.7	4897.0	4775.3
35°	5234.1	5196.6	4943.8	4569.3	4456.9
37.5°	4925.1	4878.3	4559.9	4260.3	4119.8
40°	4616.1	4559.9	4213.5	3941.9	3792.1
42.5°	4325.8	4250.9	3913.9	3623.6	3455.1
45°	4016.9	3932.6	3595.5	3295.9	3164.8
47.5°	3707.9	3633.0	3324.0	3015.0	2865.2
50°	3380.1	3314.6	3033.7	2724.7	2565.5
52.5°	3108.6	3005.6	2734.1	2425.1	2294.0
55°	2790.3	2706.0	2453.2	2162.9	2050.6
57.5°	2500.0	2415.7	2181.6	1910.1	1816.5
60°	2228.5	2106.7	1910.1	1676.0	1601.1
62.5°	1928.8	1835.2	1666.7	1470.0	1563.7
65°	1657.3	1563.7	1413.9	1441.9	1198.5
67.5°	1357.7	1310.9	1179.8	1048.7	1011.2
70°	1104.9	1048.7	1001.9	861.4	824.0
72.5°	880.1	824.0	758.4	683.5	655.4
75°	664.8	618.0	580.5	552.4	608.6
77.5°	458.8	440.1	412.0	383.9	374.5
80°	299.6	290.3	280.9	271.5	262.2
82.5°	177.9	177.9	177.9	177.9	177.9
85°	93.6	103.0	112.4	121.7	131.1
87.5°	56.2	56.2	65.5	74.9	84.3
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)