

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: P545027

Luminaire Tested: **FMR-12-1-LD4-2HI-50-UNV-81-88-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: P545027
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-12-1-LD4-2HI-50-UNV-81-88-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

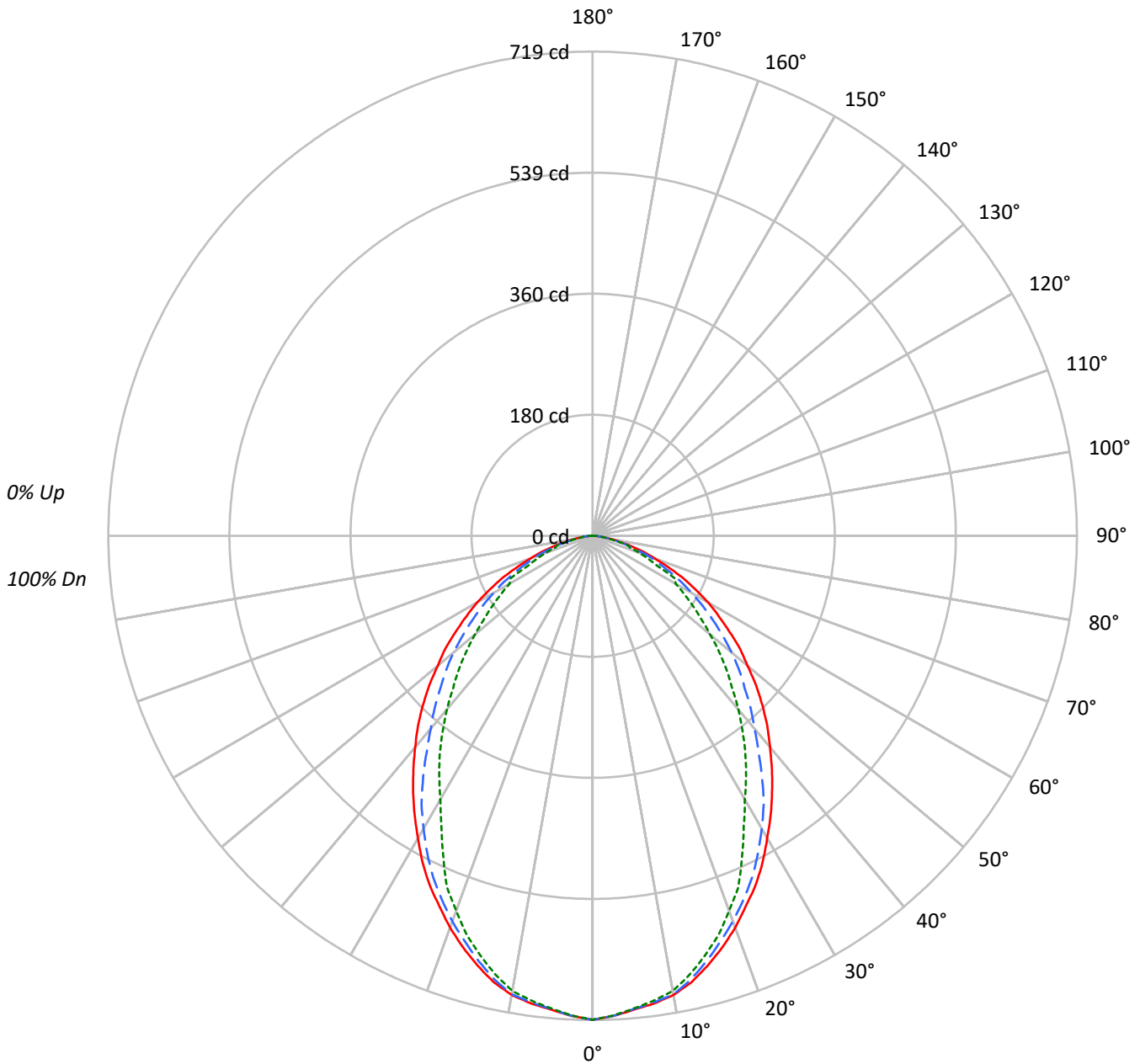
Lumens per Lamp: N/A
Luminaire Lumens: 1411.0 lumens
Efficiency: N/A
Efficacy: 65.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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: P545027

CATALOG NUMBER: FMR-12-1-LD4-2HI-50-UNV-81-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545027

CATALOG NUMBER: FMR-12-1-LD4-2HI-50-UNV-81-88-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°	7736	7736	7736
5°	7632	7622	7613
10°	7566	7556	7501
15°	7361	7287	7185
20°	7090	6977	6786
25°	6799	6651	6236
30°	6444	6238	5618
35°	6104	5765	5197
40°	5755	5254	4728
45°	5427	4857	4276
50°	5024	4508	3813
55°	4647	4085	3415
60°	4258	3649	3059
65°	3747	3196	2710
70°	3084	2798	2301
75°	2454	2142	2246
80°	1649	1543	1444
85°	1025	1235	1433



TEST NUMBER: P545027

CATALOG NUMBER: FMR-12-1-LD4-2HI-50-UNV-81-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.9	4.7
10°-20°	183.6	13.0
20°-30°	254.2	18.0
30°-40°	271.1	19.2
40°-50°	247.3	17.5
50°-60°	193.7	13.7
60°-70°	126.3	8.9
70°-80°	55.9	4.0
80°-90°	12.0	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°	504.7	35.8
0°-40°	775.8	55.0
0°-60°	1216.8	86.2
0°-90°	1411.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1411.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	719	719	719	719	719	
5°	706	705	705	705	705	67
15°	661	661	654	647	645	186
25°	572	569	560	540	525	263
35°	464	461	439	406	396	290
45°	356	349	319	292	281	275
55°	248	240	218	192	182	222
65°	147	139	126	128	106	145
75°	59	55	52	49	54	63
85°	8	9	10	11	12	12
90°	0	0	0	0	0	



TEST NUMBER: P545027

CATALOG NUMBER: FMR-12-1-LD4-2HI-50-UNV-81-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	718.7	718.7	718.7	718.7	718.7
2.5°	713.8	713.8	713.8	712.9	712.9
5°	706.3	705.4	705.4	704.6	704.6
7.5°	700.5	699.6	698.8	698.0	696.3
10°	692.2	692.2	691.3	687.2	686.3
12.5°	678.9	678.0	674.7	668.9	667.2
15°	660.6	660.6	653.9	647.3	644.8
17.5°	640.6	639.8	631.5	624.9	621.5
20°	619.0	617.4	609.1	598.3	592.4
22.5°	594.9	594.9	585.0	570.8	565.0
25°	572.5	569.2	560.0	540.1	525.1
27.5°	546.7	541.8	531.8	503.5	486.1
30°	518.5	516.0	501.9	465.3	452.0
32.5°	491.9	487.7	472.8	434.6	423.8
35°	464.5	461.2	438.7	405.5	395.5
37.5°	437.1	432.9	404.7	378.1	365.6
40°	409.6	404.7	373.9	349.8	336.5
42.5°	383.9	377.2	347.3	321.6	306.6
45°	356.5	349.0	319.1	292.5	280.9
47.5°	329.0	322.4	295.0	267.6	254.3
50°	300.0	294.1	269.2	241.8	227.7
52.5°	275.9	266.7	242.6	215.2	203.6
55°	247.6	240.1	217.7	191.9	182.0
57.5°	221.9	214.4	193.6	169.5	161.2
60°	197.8	187.0	169.5	148.7	142.1
62.5°	171.2	162.9	147.9	130.5	138.8
65°	147.1	138.8	125.5	128.0	106.4
67.5°	120.5	116.3	104.7	93.1	89.7
70°	98.0	93.1	88.9	76.4	73.1
72.5°	78.1	73.1	67.3	60.7	58.2
75°	59.0	54.8	51.5	49.0	54.0
77.5°	40.7	39.1	36.6	34.1	33.2
80°	26.6	25.8	24.9	24.1	23.3
82.5°	15.8	15.8	15.8	15.8	15.8
85°	8.3	9.1	10.0	10.8	11.6
87.5°	5.0	5.0	5.8	6.6	7.5
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)