

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: P545024

Luminaire Tested: **FMR-12-1-LD4-2HI-50-UNV-81-85-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: P545024
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-81-85-EDD
Description: 1X1 FMR TROFFER WITH .156 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

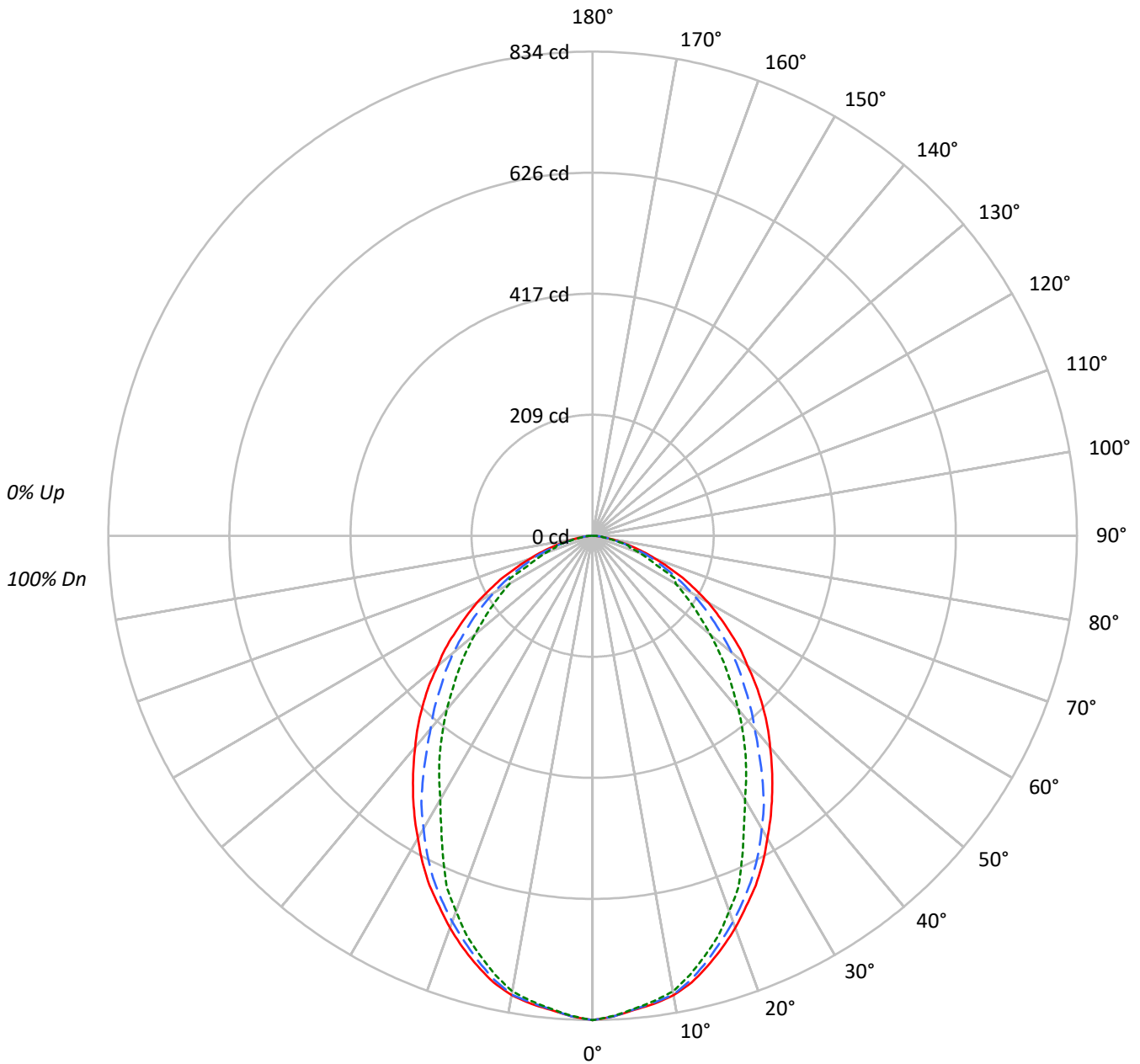
Lumens per Lamp: N/A
Luminaire Lumens: 1638.0 lumens
Efficiency: N/A
Efficacy: 75.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (A_{in}): 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				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
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°	8981	8981	8981
5°	8859	8848	8839
10°	8782	8771	8709
15°	8546	8459	8341
20°	8231	8098	7879
25°	7893	7721	7240
30°	7481	7241	6522
35°	7085	6692	6033
40°	6681	6100	5490
45°	6299	5638	4963
50°	5831	5233	4426
55°	5393	4742	3963
60°	4943	4237	3550
65°	4348	3711	3145
70°	3581	3248	2672
75°	2849	2487	2608
80°	1915	1791	1674
85°	1186	1433	1667



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.7	4.7
10°-20°	213.2	13.0
20°-30°	295.1	18.0
30°-40°	314.7	19.2
40°-50°	287.1	17.5
50°-60°	224.9	13.7
60°-70°	146.6	8.9
70°-80°	64.9	4.0
80°-90°	13.9	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°	585.9	35.8
0°-40°	900.6	55.0
0°-60°	1412.5	86.2
0°-90°	1638.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1638.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	834	834	834	834	834	
5°	820	819	819	818	818	78
15°	767	767	759	751	748	216
25°	665	661	650	627	610	305
35°	539	535	509	471	459	337
45°	414	405	370	340	326	319
55°	287	279	253	223	211	258
65°	171	161	146	148	124	168
75°	68	64	60	57	63	73
85°	10	11	12	12	14	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	834.4	834.4	834.4	834.4	834.4
2.5°	828.6	828.6	828.6	827.6	827.6
5°	819.9	818.9	818.9	818.0	818.0
7.5°	813.2	812.2	811.2	810.3	808.3
10°	803.5	803.5	802.5	797.7	796.8
12.5°	788.1	787.1	783.3	776.5	774.6
15°	766.9	766.9	759.1	751.4	748.5
17.5°	743.7	742.7	733.1	725.4	721.5
20°	718.6	716.7	707.0	694.5	687.8
22.5°	690.7	690.7	679.1	662.7	655.9
25°	664.6	660.7	650.1	627.0	609.6
27.5°	634.7	628.9	617.3	584.5	564.3
30°	601.9	599.0	582.6	540.2	524.7
32.5°	571.0	566.2	548.9	504.5	491.9
35°	539.2	535.4	509.3	470.7	459.1
37.5°	507.4	502.6	469.8	438.9	424.4
40°	475.5	469.8	434.1	406.1	390.7
42.5°	445.6	437.9	403.2	373.3	355.9
45°	413.8	405.1	370.4	339.5	326.0
47.5°	382.0	374.3	342.4	310.6	295.2
50°	348.2	341.5	312.5	280.7	264.3
52.5°	320.2	309.6	281.7	249.8	236.3
55°	287.4	278.8	252.7	222.8	211.2
57.5°	257.5	248.9	224.8	196.8	187.1
60°	229.6	217.0	196.8	172.7	164.9
62.5°	198.7	189.1	171.7	151.4	161.1
65°	170.7	161.1	145.7	148.5	123.5
67.5°	139.9	135.0	121.5	108.0	104.2
70°	113.8	108.0	103.2	88.7	84.9
72.5°	90.7	84.9	78.1	70.4	67.5
75°	68.5	63.7	59.8	56.9	62.7
77.5°	47.3	45.3	42.4	39.5	38.6
80°	30.9	29.9	28.9	28.0	27.0
82.5°	18.3	18.3	18.3	18.3	18.3
85°	9.6	10.6	11.6	12.5	13.5
87.5°	5.8	5.8	6.8	7.7	8.7
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)