

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: P545131

Luminaire Tested: **FMR-12-1-LD4-2LO-50-UNV-82-88-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: P545131
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-LD4-2LO-50-UNV-82-88-EDD
Description: 1X1 FMR TROFFER WITH .187 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

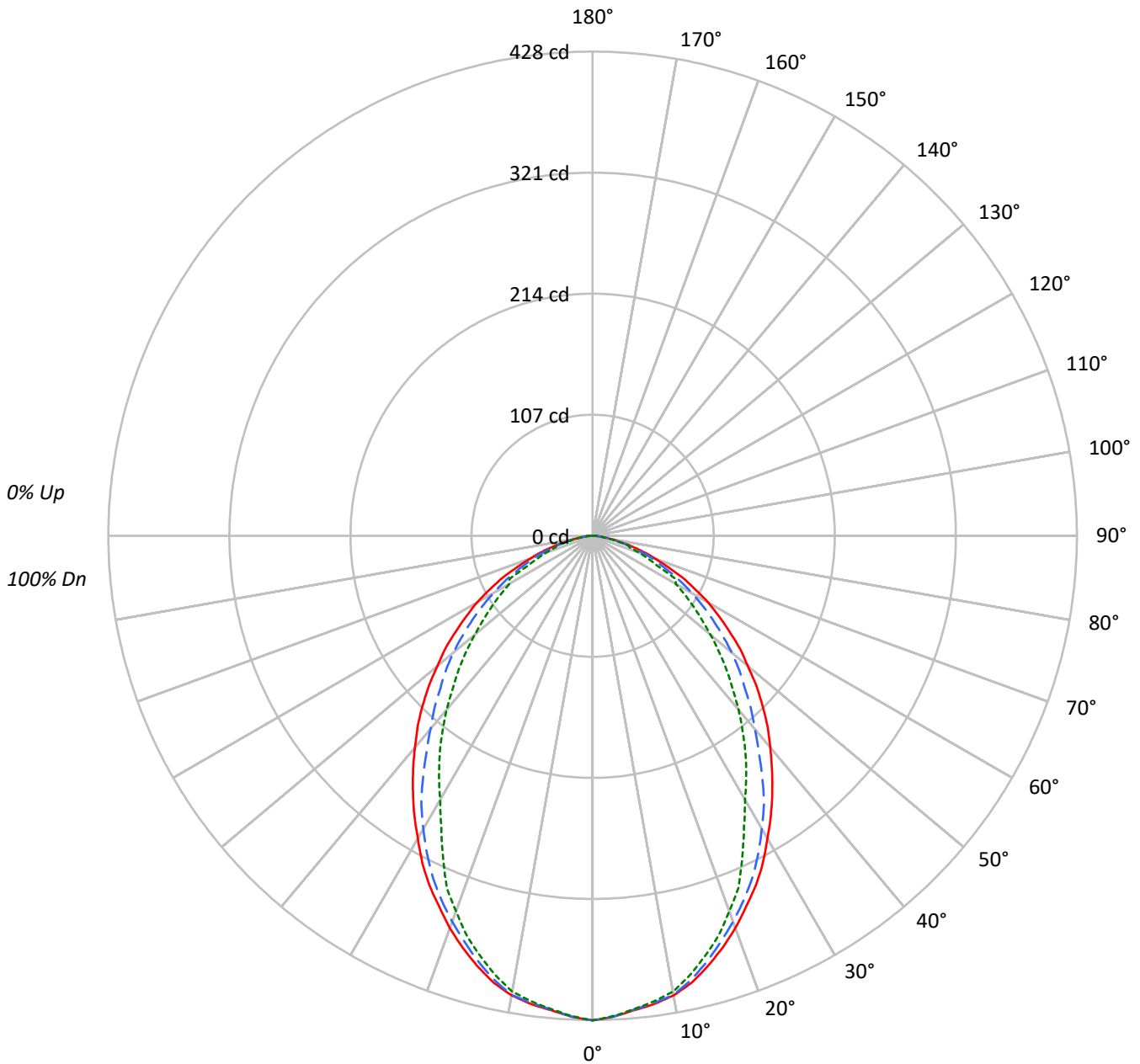
Lumens per Lamp: N/A
Luminaire Lumens: 841.0 lumens
Efficiency: N/A
Efficacy: 71.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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				
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	100	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50
6	74	62	53	47	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4611	4611	4611
5°	4549	4544	4538
10°	4509	4504	4471
15°	4387	4344	4282
20°	4227	4158	4045
25°	4052	3964	3717
30°	3841	3718	3348
35°	3637	3436	3097
40°	3431	3132	2819
45°	3235	2895	2548
50°	2994	2688	2272
55°	2770	2436	2036
60°	2538	2174	1823
65°	2234	1905	1615
70°	1838	1668	1372
75°	1464	1277	1339
80°	979	924	862
85°	618	729	852



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.9	4.7
10°-20°	109.4	13.0
20°-30°	151.5	18.0
30°-40°	161.6	19.2
40°-50°	147.4	17.5
50°-60°	115.5	13.7
60°-70°	75.3	8.9
70°-80°	33.4	4.0
80°-90°	7.2	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°	300.8	35.8
0°-40°	462.4	55.0
0°-60°	725.2	86.2
0°-90°	841.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	841.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	428	428	428	428	428	
5°	421	420	420	420	420	40
15°	394	394	390	386	384	111
25°	341	339	334	322	313	157
35°	277	275	262	242	236	173
45°	212	208	190	174	167	164
55°	148	143	130	114	108	132
65°	88	83	75	76	63	86
75°	35	33	31	29	32	38
85°	5	5	6	6	7	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	428.4	428.4	428.4	428.4	428.4
2.5°	425.4	425.4	425.4	424.9	424.9
5°	421.0	420.5	420.5	420.0	420.0
7.5°	417.5	417.0	416.5	416.0	415.0
10°	412.5	412.5	412.1	409.6	409.1
12.5°	404.6	404.1	402.1	398.7	397.7
15°	393.7	393.7	389.8	385.8	384.3
17.5°	381.8	381.3	376.4	372.4	370.4
20°	369.0	368.0	363.0	356.6	353.1
22.5°	354.6	354.6	348.7	340.2	336.8
25°	341.2	339.2	333.8	321.9	313.0
27.5°	325.9	322.9	317.0	300.1	289.7
30°	309.0	307.6	299.1	277.3	269.4
32.5°	293.2	290.7	281.8	259.0	252.6
35°	276.8	274.9	261.5	241.7	235.7
37.5°	260.5	258.0	241.2	225.3	217.9
40°	244.2	241.2	222.9	208.5	200.6
42.5°	228.8	224.8	207.0	191.7	182.7
45°	212.5	208.0	190.2	174.3	167.4
47.5°	196.1	192.2	175.8	159.5	151.5
50°	178.8	175.3	160.5	144.1	135.7
52.5°	164.4	159.0	144.6	128.3	121.3
55°	147.6	143.1	129.8	114.4	108.5
57.5°	132.2	127.8	115.4	101.0	96.1
60°	117.9	111.4	101.0	88.7	84.7
62.5°	102.0	97.1	88.2	77.8	82.7
65°	87.7	82.7	74.8	76.3	63.4
67.5°	71.8	69.3	62.4	55.5	53.5
70°	58.4	55.5	53.0	45.6	43.6
72.5°	46.6	43.6	40.1	36.2	34.7
75°	35.2	32.7	30.7	29.2	32.2
77.5°	24.3	23.3	21.8	20.3	19.8
80°	15.8	15.4	14.9	14.4	13.9
82.5°	9.4	9.4	9.4	9.4	9.4
85°	5.0	5.4	5.9	6.4	6.9
87.5°	3.0	3.0	3.5	4.0	4.5
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)