

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: P545109

Luminaire Tested: **FMR-12-1-LD4-2LO-40-UNV-93-96-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: P545109
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-40-UNV-93-96-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

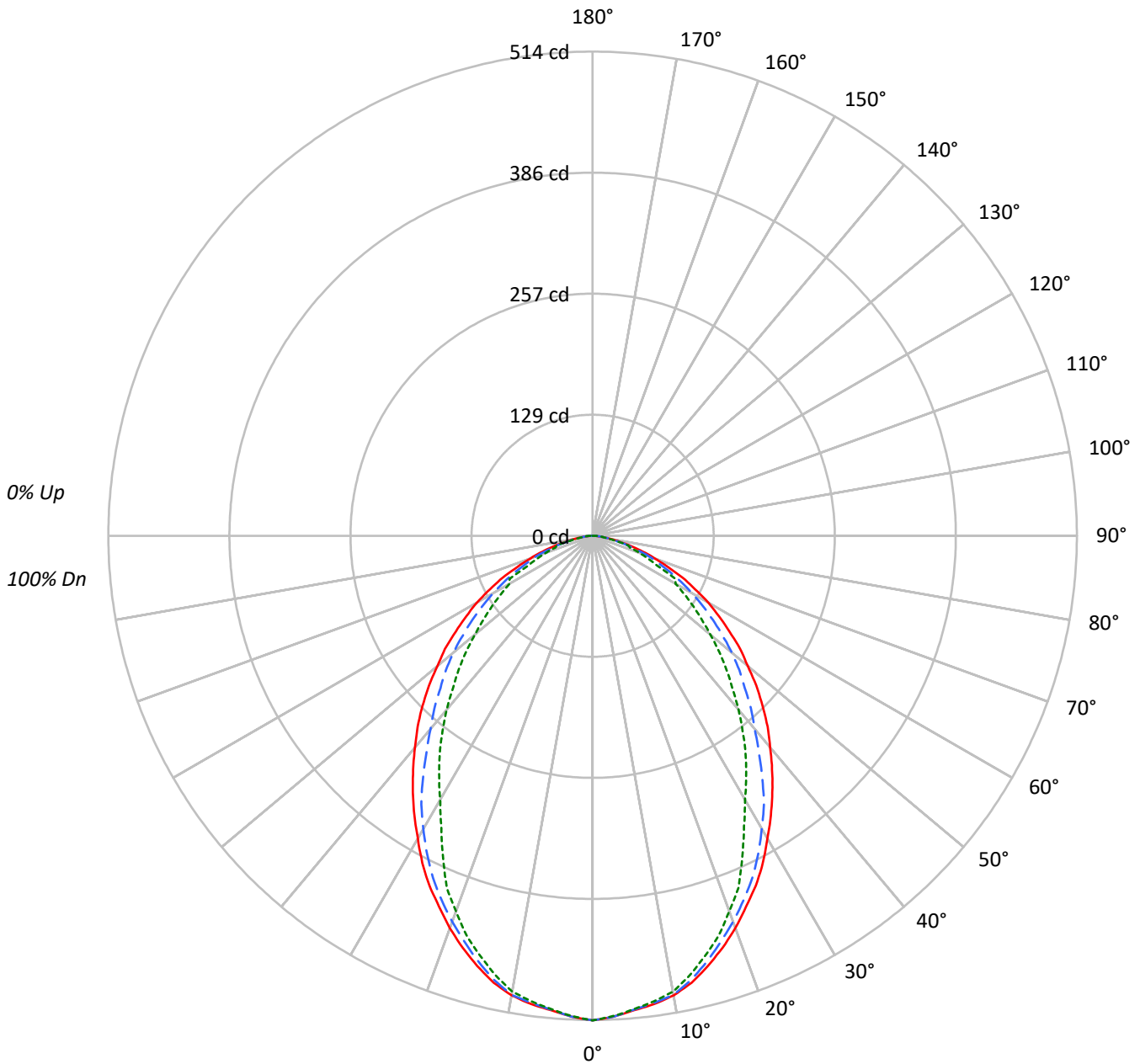
Lumens per Lamp: N/A
Luminaire Lumens: 1010.0 lumens
Efficiency: N/A
Efficacy: 86.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 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

TEST NUMBER: P545109

CATALOG NUMBER: FMR-12-1-LD4-2LO-40-UNV-93-96-EDD

Luminous Intensity Polar Plot





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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°	5538	5538	5538
5°	5463	5457	5450
10°	5415	5409	5370
15°	5269	5216	5143
20°	5076	4994	4858
25°	4867	4761	4464
30°	4612	4465	4022
35°	4369	4126	3720
40°	4120	3760	3385
45°	3885	3477	3060
50°	3595	3227	2730
55°	3325	2924	2445
60°	3048	2611	2189
65°	2682	2287	1938
70°	2209	2002	1646
75°	1755	1535	1609
80°	1178	1103	1035
85°	729	877	1025



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.9	4.7
10°-20°	131.4	13.0
20°-30°	182.0	18.0
30°-40°	194.0	19.2
40°-50°	177.0	17.5
50°-60°	138.7	13.7
60°-70°	90.4	8.9
70°-80°	40.0	4.0
80°-90°	8.6	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°	361.3	35.8
0°-40°	555.3	55.0
0°-60°	871.0	86.2
0°-90°	1010.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1010.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	514	514	514	514	514	
5°	506	505	505	504	504	48
15°	473	473	468	463	462	133
25°	410	407	401	387	376	188
35°	332	330	314	290	283	208
45°	255	250	228	209	201	197
55°	177	172	156	137	130	159
65°	105	99	90	92	76	104
75°	42	39	37	35	39	45
85°	6	6	7	8	8	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	514.5	514.5	514.5	514.5	514.5
2.5°	510.9	510.9	510.9	510.3	510.3
5°	505.6	505.0	505.0	504.4	504.4
7.5°	501.4	500.8	500.2	499.6	498.4
10°	495.4	495.4	494.9	491.9	491.3
12.5°	485.9	485.3	483.0	478.8	477.6
15°	472.8	472.8	468.1	463.3	461.5
17.5°	458.6	458.0	452.0	447.3	444.9
20°	443.1	441.9	436.0	428.2	424.1
22.5°	425.9	425.9	418.7	408.6	404.4
25°	409.8	407.4	400.9	386.6	375.9
27.5°	391.4	387.8	380.7	360.4	347.9
30°	371.1	369.4	359.2	333.1	323.6
32.5°	352.1	349.1	338.4	311.1	303.3
35°	332.5	330.1	314.0	290.3	283.1
37.5°	312.9	309.9	289.7	270.6	261.7
40°	293.2	289.7	267.6	250.4	240.9
42.5°	274.8	270.0	248.6	230.2	219.5
45°	255.2	249.8	228.4	209.4	201.0
47.5°	235.5	230.8	211.1	191.5	182.0
50°	214.7	210.6	192.7	173.1	163.0
52.5°	197.5	190.9	173.7	154.0	145.7
55°	177.2	171.9	155.8	137.4	130.3
57.5°	158.8	153.5	138.6	121.3	115.4
60°	141.6	133.8	121.3	106.5	101.7
62.5°	122.5	116.6	105.9	93.4	99.3
65°	105.3	99.3	89.8	91.6	76.1
67.5°	86.2	83.3	74.9	66.6	64.2
70°	70.2	66.6	63.6	54.7	52.3
72.5°	55.9	52.3	48.2	43.4	41.6
75°	42.2	39.3	36.9	35.1	38.7
77.5°	29.1	28.0	26.2	24.4	23.8
80°	19.0	18.4	17.8	17.2	16.7
82.5°	11.3	11.3	11.3	11.3	11.3
85°	5.9	6.5	7.1	7.7	8.3
87.5°	3.6	3.6	4.2	4.8	5.4
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)