

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: P545108

Luminaire Tested: **FMR-12-1-LD4-2LO-40-UNV-93-94-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: P545108
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-93-94-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

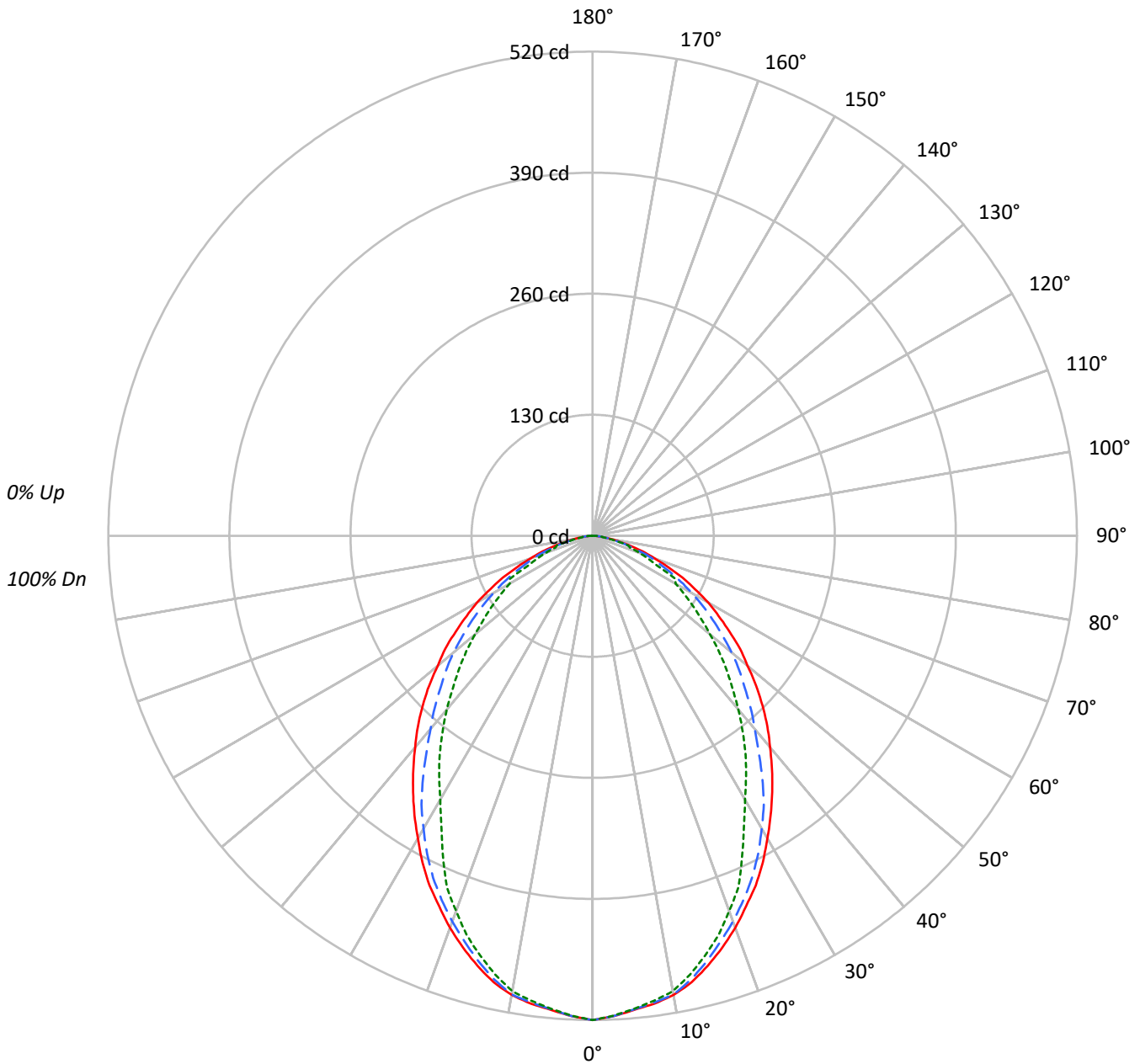
Lumens per Lamp: N/A
Luminaire Lumens: 1021.0 lumens
Efficiency: N/A
Efficacy: 87.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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: P545108

CATALOG NUMBER: FMR-12-1-LD4-2LO-40-UNV-93-94-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545108

CATALOG NUMBER: FMR-12-1-LD4-2LO-40-UNV-93-94-EDD

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°	5598	5598	5598
5°	5522	5516	5509
10°	5474	5467	5428
15°	5327	5273	5200
20°	5131	5048	4911
25°	4921	4812	4513
30°	4663	4514	4066
35°	4416	4172	3761
40°	4165	3802	3421
45°	3926	3515	3093
50°	3635	3262	2758
55°	3363	2956	2472
60°	3081	2641	2213
65°	2710	2313	1961
70°	2231	2024	1665
75°	1776	1551	1626
80°	1190	1116	1041
85°	741	889	1037



TEST NUMBER: P545108

CATALOG NUMBER: FMR-12-1-LD4-2LO-40-UNV-93-94-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.4	4.7
10°-20°	132.9	13.0
20°-30°	183.9	18.0
30°-40°	196.1	19.2
40°-50°	178.9	17.5
50°-60°	140.2	13.7
60°-70°	91.4	8.9
70°-80°	40.5	4.0
80°-90°	8.7	0.8
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°	365.2	35.8
0°-40°	561.4	55.0
0°-60°	880.5	86.2
0°-90°	1021.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1021.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	520	520	520	520	520	
5°	511	510	510	510	510	49
15°	478	478	473	468	467	134
25°	414	412	405	391	380	190
35°	336	334	318	293	286	210
45°	258	252	231	212	203	199
55°	179	174	158	139	132	161
65°	106	100	91	93	77	105
75°	43	40	37	36	39	46
85°	6	7	7	8	8	8
90°	0	0	0	0	0	



TEST NUMBER: P545108

CATALOG NUMBER: FMR-12-1-LD4-2LO-40-UNV-93-94-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	520.1	520.1	520.1	520.1	520.1
2.5°	516.5	516.5	516.5	515.9	515.9
5°	511.1	510.5	510.5	509.9	509.9
7.5°	506.9	506.3	505.7	505.1	503.8
10°	500.8	500.8	500.2	497.2	496.6
12.5°	491.2	490.6	488.2	484.0	482.8
15°	478.0	478.0	473.2	468.4	466.6
17.5°	463.6	463.0	457.0	452.1	449.7
20°	447.9	446.7	440.7	432.9	428.7
22.5°	430.5	430.5	423.3	413.1	408.9
25°	414.3	411.9	405.2	390.8	380.0
27.5°	395.6	392.0	384.8	364.4	351.7
30°	375.2	373.4	363.2	336.7	327.1
32.5°	355.9	352.9	342.1	314.5	306.6
35°	336.1	333.7	317.5	293.4	286.2
37.5°	316.3	313.3	292.8	273.6	264.6
40°	296.4	292.8	270.6	253.1	243.5
42.5°	277.8	273.0	251.3	232.7	221.9
45°	257.9	252.5	230.9	211.6	203.2
47.5°	238.1	233.3	213.4	193.6	184.0
50°	217.1	212.8	194.8	175.0	164.7
52.5°	199.6	193.0	175.6	155.7	147.3
55°	179.2	173.8	157.5	138.9	131.7
57.5°	160.5	155.1	140.1	122.7	116.6
60°	143.1	135.3	122.7	107.6	102.8
62.5°	123.9	117.8	107.0	94.4	100.4
65°	106.4	100.4	90.8	92.6	77.0
67.5°	87.2	84.2	75.8	67.3	64.9
70°	70.9	67.3	64.3	55.3	52.9
72.5°	56.5	52.9	48.7	43.9	42.1
75°	42.7	39.7	37.3	35.5	39.1
77.5°	29.5	28.3	26.5	24.7	24.1
80°	19.2	18.6	18.0	17.4	16.8
82.5°	11.4	11.4	11.4	11.4	11.4
85°	6.0	6.6	7.2	7.8	8.4
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)