

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: P544944

Luminaire Tested: **FMR-12-1-LD4-1STD-50-UNV-93-85-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: P544944
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-LD4-1STD-50-UNV-93-85-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

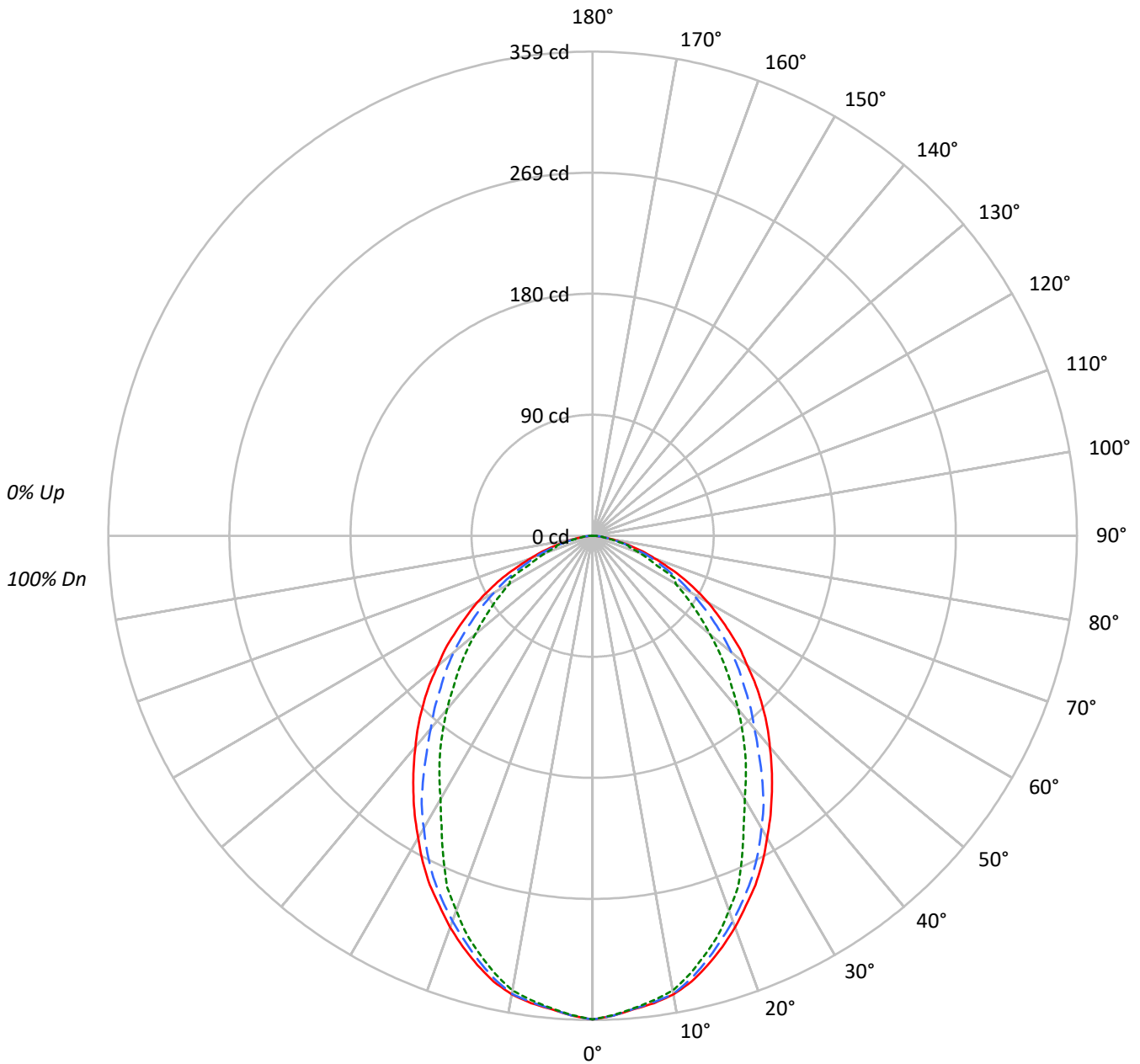
Lumens per Lamp: N/A
Luminaire Lumens: 704.0 lumens
Efficiency: N/A
Efficacy: 84.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 8.3
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: P544944

CATALOG NUMBER: FMR-12-1-LD4-1STD-50-UNV-93-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P544944

CATALOG NUMBER: FMR-12-1-LD4-1STD-50-UNV-93-85-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																			
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°	3860	3860	3860
5°	3808	3803	3799
10°	3774	3770	3742
15°	3673	3636	3585
20°	3538	3481	3386
25°	3392	3318	3112
30°	3215	3112	2803
35°	3045	2876	2593
40°	2872	2622	2359
45°	2708	2423	2133
50°	2507	2249	1902
55°	2318	2038	1704
60°	2125	1821	1526
65°	1869	1594	1352
70°	1539	1397	1149
75°	1223	1069	1119
80°	824	769	719
85°	506	618	716



TEST NUMBER: P544944

CATALOG NUMBER: FMR-12-1-LD4-1STD-50-UNV-93-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.4	4.7
10°-20°	91.6	13.0
20°-30°	126.8	18.0
30°-40°	135.2	19.2
40°-50°	123.4	17.5
50°-60°	96.7	13.7
60°-70°	63.0	8.9
70°-80°	27.9	4.0
80°-90°	6.0	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°	251.8	35.8
0°-40°	387.1	55.0
0°-60°	607.1	86.2
0°-90°	704.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	704.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	359	359	359	359	359	
5°	352	352	352	352	352	33
15°	330	330	326	323	322	93
25°	286	284	279	270	262	131
35°	232	230	219	202	197	145
45°	178	174	159	146	140	137
55°	124	120	109	96	91	111
65°	73	69	63	64	53	72
75°	29	27	26	24	27	32
85°	4	5	5	5	6	6
90°	0	0	0	0	0	



TEST NUMBER: P544944

CATALOG NUMBER: FMR-12-1-LD4-1STD-50-UNV-93-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	358.6	358.6	358.6	358.6	358.6
2.5°	356.1	356.1	356.1	355.7	355.7
5°	352.4	352.0	352.0	351.6	351.6
7.5°	349.5	349.1	348.7	348.2	347.4
10°	345.3	345.3	344.9	342.9	342.4
12.5°	338.7	338.3	336.6	333.7	332.9
15°	329.6	329.6	326.3	323.0	321.7
17.5°	319.6	319.2	315.1	311.8	310.1
20°	308.9	308.0	303.9	298.5	295.6
22.5°	296.8	296.8	291.9	284.8	281.9
25°	285.6	284.0	279.4	269.5	262.0
27.5°	272.8	270.3	265.3	251.2	242.5
30°	258.7	257.5	250.4	232.2	225.5
32.5°	245.4	243.4	235.9	216.8	211.4
35°	231.7	230.1	218.9	202.3	197.3
37.5°	218.1	216.0	201.9	188.6	182.4
40°	204.4	201.9	186.6	174.5	167.9
42.5°	191.5	188.2	173.3	160.4	153.0
45°	177.9	174.1	159.2	145.9	140.1
47.5°	164.2	160.9	147.2	133.5	126.9
50°	149.7	146.8	134.3	120.6	113.6
52.5°	137.6	133.1	121.1	107.4	101.6
55°	123.5	119.8	108.6	95.8	90.8
57.5°	110.7	107.0	96.6	84.6	80.4
60°	98.7	93.3	84.6	74.2	70.9
62.5°	85.4	81.3	73.8	65.1	69.2
65°	73.4	69.2	62.6	63.8	53.1
67.5°	60.1	58.0	52.2	46.4	44.8
70°	48.9	46.4	44.4	38.1	36.5
72.5°	39.0	36.5	33.6	30.3	29.0
75°	29.4	27.4	25.7	24.5	26.9
77.5°	20.3	19.5	18.2	17.0	16.6
80°	13.3	12.9	12.4	12.0	11.6
82.5°	7.9	7.9	7.9	7.9	7.9
85°	4.1	4.6	5.0	5.4	5.8
87.5°	2.5	2.5	2.9	3.3	3.7
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)