

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: P545205

Luminaire Tested: **FMR-12-1-LD4-2STD-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: P545205
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-LD4-2STD-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

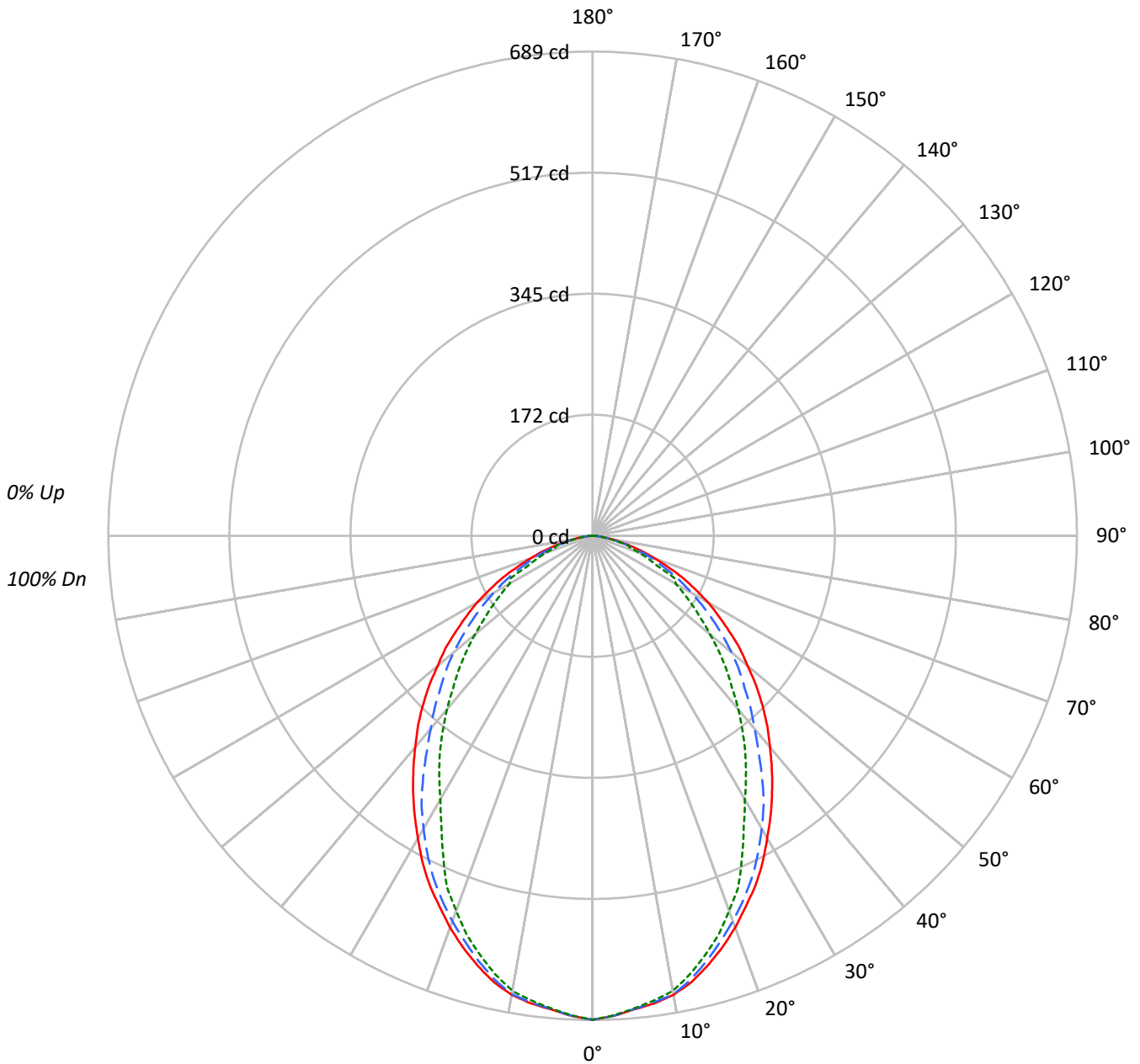
Lumens per Lamp: N/A
Luminaire Lumens: 1352.0 lumens
Efficiency: N/A
Efficacy: 81.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
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

TEST NUMBER: P545205

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

Luminous Intensity Polar Plot





TEST NUMBER: P545205

CATALOG NUMBER: FMR-12-1-LD4-2STD-40-UNV-93-96-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°	7413	7413	7413
5°	7312	7304	7296
10°	7249	7240	7188
15°	7054	6983	6885
20°	6794	6685	6503
25°	6516	6373	5976
30°	6175	5977	5383
35°	5849	5524	4980
40°	5515	5035	4532
45°	5200	4654	4096
50°	4813	4320	3654
55°	4453	3915	3273
60°	4080	3496	2930
65°	3589	3061	2595
70°	2955	2681	2206
75°	2350	2054	2154
80°	1581	1481	1382
85°	988	1186	1371



TEST NUMBER: P545205

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.1	4.7
10°-20°	175.9	13.0
20°-30°	243.6	18.0
30°-40°	259.7	19.2
40°-50°	236.9	17.5
50°-60°	185.6	13.7
60°-70°	121.0	8.9
70°-80°	53.6	4.0
80°-90°	11.5	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°	483.6	35.8
0°-40°	743.4	55.0
0°-60°	1165.9	86.2
0°-90°	1352.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1352.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	689	689	689	689	689	
5°	677	676	676	675	675	64
15°	633	633	627	620	618	178
25°	549	545	537	518	503	252
35°	445	442	420	388	379	278
45°	342	334	306	280	269	263
55°	237	230	209	184	174	213
65°	141	133	120	123	102	139
75°	56	52	49	47	52	61
85°	8	9	10	10	11	11
90°	0	0	0	0	0	



TEST NUMBER: P545205

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	688.7	688.7	688.7	688.7	688.7
2.5°	683.9	683.9	683.9	683.1	683.1
5°	676.7	676.0	676.0	675.2	675.2
7.5°	671.2	670.4	669.6	668.8	667.2
10°	663.2	663.2	662.4	658.4	657.6
12.5°	650.5	649.7	646.5	640.9	639.3
15°	633.0	633.0	626.6	620.2	617.8
17.5°	613.9	613.1	605.1	598.7	595.5
20°	593.1	591.6	583.6	573.2	567.7
22.5°	570.1	570.1	560.5	547.0	541.4
25°	548.6	545.4	536.6	517.5	503.2
27.5°	523.9	519.1	509.6	482.5	465.8
30°	496.8	494.4	480.9	445.9	433.1
32.5°	471.3	467.4	453.0	416.4	406.0
35°	445.1	441.9	420.4	388.5	379.0
37.5°	418.8	414.8	387.7	362.3	350.3
40°	392.5	387.7	358.3	335.2	322.5
42.5°	367.8	361.5	332.8	308.1	293.8
45°	341.6	334.4	305.7	280.3	269.1
47.5°	315.3	308.9	282.6	256.4	243.6
50°	287.4	281.8	258.0	231.7	218.2
52.5°	264.3	255.6	232.5	206.2	195.1
55°	237.3	230.1	208.6	183.9	174.4
57.5°	212.6	205.4	185.5	162.4	154.5
60°	189.5	179.1	162.4	142.5	136.1
62.5°	164.0	156.1	141.7	125.0	133.0
65°	140.9	133.0	120.2	122.6	101.9
67.5°	115.4	111.5	100.3	89.2	86.0
70°	93.9	89.2	85.2	73.2	70.1
72.5°	74.8	70.1	64.5	58.1	55.7
75°	56.5	52.5	49.4	47.0	51.8
77.5°	39.0	37.4	35.0	32.6	31.8
80°	25.5	24.7	23.9	23.1	22.3
82.5°	15.1	15.1	15.1	15.1	15.1
85°	8.0	8.8	9.6	10.4	11.1
87.5°	4.8	4.8	5.6	6.4	7.2
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)