

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: P545045

Luminaire Tested: **FMR-12-1-LD4-2HI-50-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: P545045
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-LD4-2HI-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

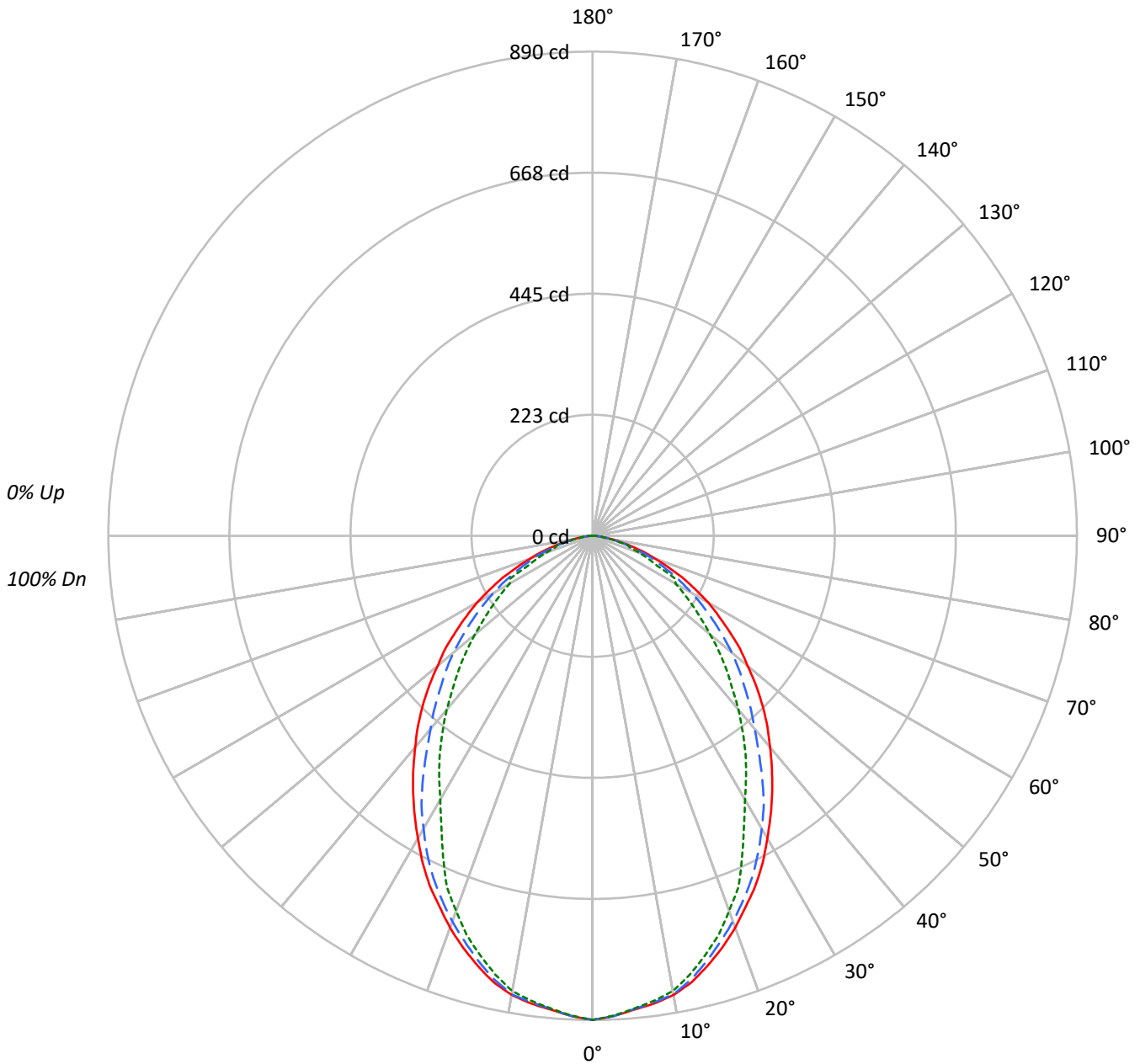
Lumens per Lamp: N/A
Luminaire Lumens: 1747.0 lumens
Efficiency: N/A
Efficacy: 80.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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: P545045

CATALOG NUMBER: FMR-12-1-LD4-2HI-50-UNV-93-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545045

CATALOG NUMBER: FMR-12-1-LD4-2HI-50-UNV-93-96-EDD

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								
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°	9579	9579	9579
5°	9449	9437	9426
10°	9367	9355	9288
15°	9114	9023	8896
20°	8779	8638	8402
25°	8418	8235	7722
30°	7979	7723	6957
35°	7557	7138	6435
40°	7127	6506	5855
45°	6718	6014	5293
50°	6219	5581	4721
55°	5754	5058	4228
60°	5272	4519	3787
65°	4638	3955	3354
70°	3821	3465	2848
75°	3036	2653	2782
80°	2039	1915	1785
85°	1272	1519	1778



TEST NUMBER: P545045

CATALOG NUMBER: FMR-12-1-LD4-2HI-50-UNV-93-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.8	4.7
10°-20°	227.3	13.0
20°-30°	314.7	18.0
30°-40°	335.6	19.2
40°-50°	306.2	17.5
50°-60°	239.9	13.7
60°-70°	156.3	8.9
70°-80°	69.3	4.0
80°-90°	14.9	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°	624.9	35.8
0°-40°	960.5	55.0
0°-60°	1506.5	86.2
0°-90°	1747.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1747.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	890	890	890	890	890	
5°	874	873	873	872	872	83
15°	818	818	810	801	798	230
25°	709	705	693	669	650	325
35°	575	571	543	502	490	360
45°	441	432	395	362	348	340
55°	307	297	270	238	225	275
65°	182	172	155	158	132	179
75°	73	68	64	61	67	78
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



TEST NUMBER: P545045

CATALOG NUMBER: FMR-12-1-LD4-2HI-50-UNV-93-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	889.9	889.9	889.9	889.9	889.9
2.5°	883.7	883.7	883.7	882.7	882.7
5°	874.5	873.4	873.4	872.4	872.4
7.5°	867.3	866.2	865.2	864.2	862.1
10°	857.0	857.0	855.9	850.8	849.8
12.5°	840.5	839.5	835.4	828.2	826.1
15°	817.9	817.9	809.7	801.4	798.3
17.5°	793.2	792.2	781.9	773.6	769.5
20°	766.4	764.4	754.1	740.7	733.5
22.5°	736.6	736.6	724.3	706.8	699.6
25°	708.8	704.7	693.4	668.7	650.2
27.5°	676.9	670.8	658.4	623.4	601.8
30°	642.0	638.9	621.4	576.1	559.7
32.5°	609.0	603.9	585.4	538.1	524.7
35°	575.1	571.0	543.2	502.0	489.7
37.5°	541.1	536.0	501.0	468.1	452.7
40°	507.2	501.0	463.0	433.1	416.7
42.5°	475.3	467.1	430.0	398.1	379.6
45°	441.3	432.1	395.1	362.1	347.7
47.5°	407.4	399.2	365.2	331.3	314.8
50°	371.4	364.2	333.3	299.4	281.9
52.5°	341.6	330.2	300.4	266.5	252.1
55°	306.6	297.3	269.5	237.6	225.3
57.5°	274.7	265.4	239.7	209.9	199.6
60°	244.9	231.5	209.9	184.2	175.9
62.5°	211.9	201.6	183.1	161.5	171.8
65°	182.1	171.8	155.3	158.4	131.7
67.5°	149.2	144.0	129.6	115.2	111.1
70°	121.4	115.2	110.1	94.6	90.5
72.5°	96.7	90.5	83.3	75.1	72.0
75°	73.0	67.9	63.8	60.7	66.9
77.5°	50.4	48.4	45.3	42.2	41.2
80°	32.9	31.9	30.9	29.8	28.8
82.5°	19.5	19.5	19.5	19.5	19.5
85°	10.3	11.3	12.3	13.4	14.4
87.5°	6.2	6.2	7.2	8.2	9.3
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)