

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: P545103

Luminaire Tested: **FMR-12-1-LD4-2LO-40-UNV-93-84-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: P545103
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-93-84-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

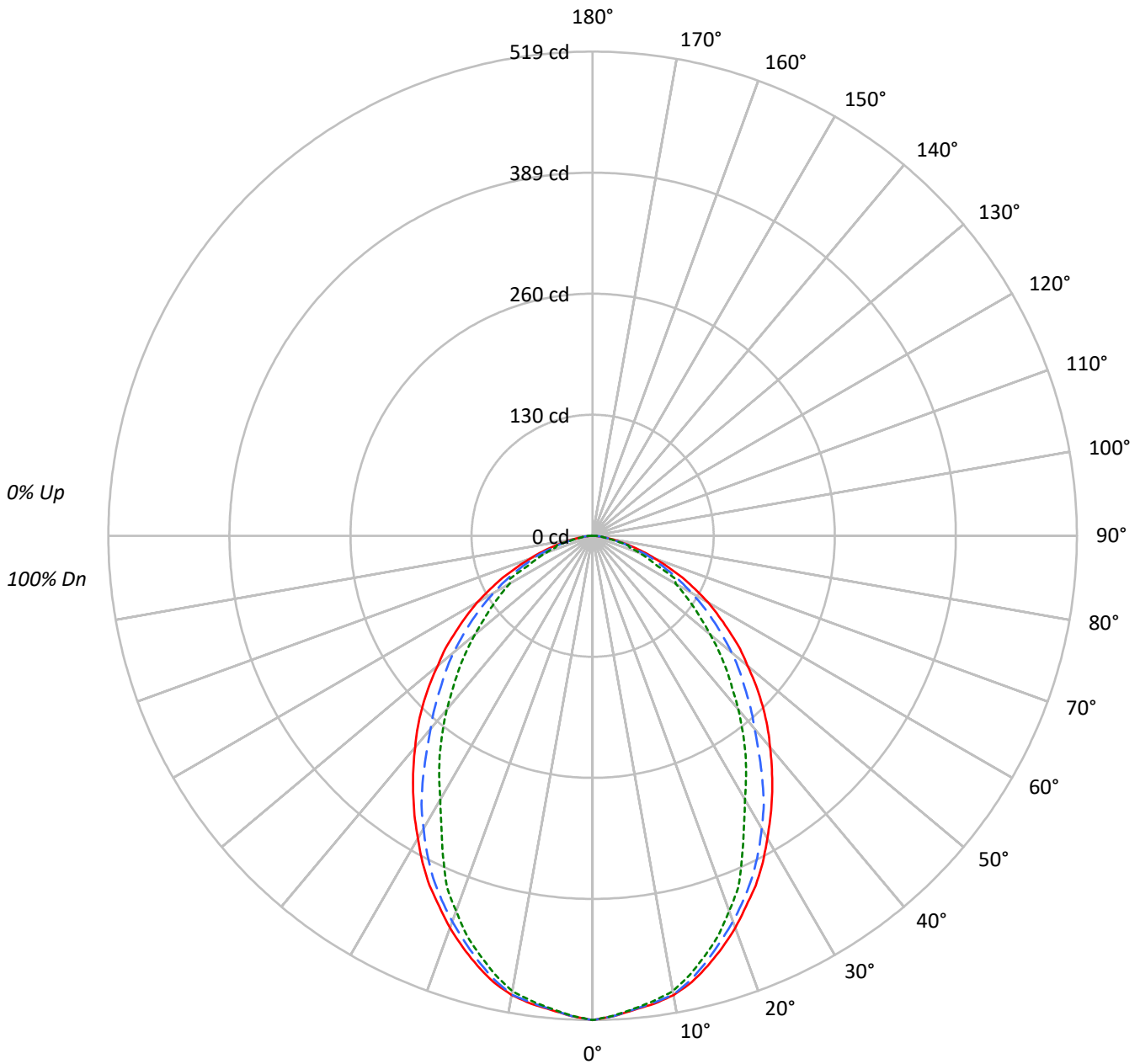
Lumens per Lamp: N/A
Luminaire Lumens: 1018.9 lumens
Efficiency: N/A
Efficacy: 87.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
Input Voltage (V): NR
Input Current (Ain): 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

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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	35	44	39	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°	5588	5588	5588
5°	5512	5505	5499
10°	5464	5457	5418
15°	5317	5263	5190
20°	5121	5039	4901
25°	4911	4804	4504
30°	4653	4504	4057
35°	4407	4163	3753
40°	4156	3794	3414
45°	3918	3507	3087
50°	3627	3255	2753
55°	3355	2950	2466
60°	3074	2635	2209
65°	2705	2308	1956
70°	2228	2020	1662
75°	1772	1547	1622
80°	1190	1116	1041
85°	741	889	1037



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.3	4.7
10°-20°	132.6	13.0
20°-30°	183.6	18.0
30°-40°	195.7	19.2
40°-50°	178.6	17.5
50°-60°	139.9	13.7
60°-70°	91.2	8.9
70°-80°	40.4	4.0
80°-90°	8.7	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°	364.5	35.8
0°-40°	560.2	55.0
0°-60°	878.7	86.2
0°-90°	1018.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1018.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	519	519	519	519	519	
5°	510	510	510	509	509	48
15°	477	477	472	468	466	134
25°	414	411	404	390	379	190
35°	335	333	317	293	286	210
45°	257	252	230	211	203	198
55°	179	173	157	139	131	160
65°	106	100	91	92	77	105
75°	43	40	37	35	39	46
85°	6	7	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°	519.1	519.1	519.1	519.1	519.1
2.5°	515.5	515.5	515.5	514.9	514.9
5°	510.1	509.5	509.5	508.9	508.9
7.5°	505.9	505.3	504.7	504.1	502.9
10°	499.9	499.9	499.3	496.3	495.7
12.5°	490.3	489.7	487.3	483.1	481.9
15°	477.1	477.1	472.3	467.5	465.7
17.5°	462.7	462.1	456.1	451.3	448.9
20°	447.1	445.9	439.9	432.1	427.9
22.5°	429.7	429.7	422.5	412.3	408.1
25°	413.5	411.1	404.5	390.0	379.2
27.5°	394.8	391.2	384.0	363.6	351.0
30°	374.4	372.6	362.4	336.0	326.4
32.5°	355.2	352.2	341.4	313.8	306.0
35°	335.4	333.0	316.8	292.8	285.6
37.5°	315.6	312.6	292.2	273.0	264.0
40°	295.8	292.2	270.0	252.6	243.0
42.5°	277.2	272.4	250.8	232.2	221.4
45°	257.4	252.0	230.4	211.2	202.8
47.5°	237.6	232.8	213.0	193.2	183.6
50°	216.6	212.4	194.4	174.6	164.4
52.5°	199.2	192.6	175.2	155.4	147.0
55°	178.8	173.4	157.2	138.6	131.4
57.5°	160.2	154.8	139.8	122.4	116.4
60°	142.8	135.0	122.4	107.4	102.6
62.5°	123.6	117.6	106.8	94.2	100.2
65°	106.2	100.2	90.6	92.4	76.8
67.5°	87.0	84.0	75.6	67.2	64.8
70°	70.8	67.2	64.2	55.2	52.8
72.5°	56.4	52.8	48.6	43.8	42.0
75°	42.6	39.6	37.2	35.4	39.0
77.5°	29.4	28.2	26.4	24.6	24.0
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)