

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: P545092

Luminaire Tested: **FMR-12-1-LD4-2LO-40-UNV-81-94-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: P545092
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-81-94-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC 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

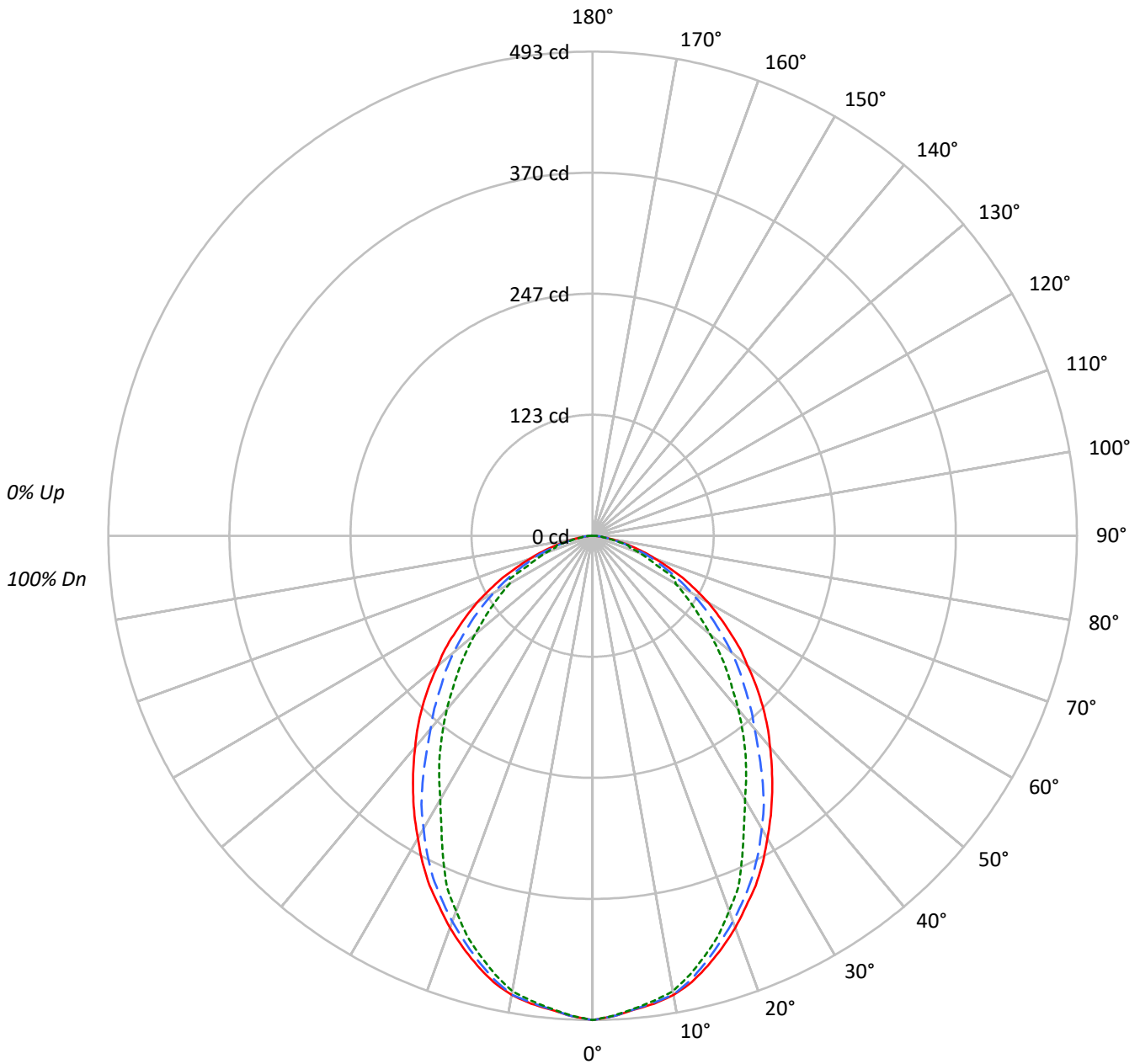
Lumens per Lamp: N/A
Luminaire Lumens: 968.0 lumens
Efficiency: N/A
Efficacy: 82.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P545092

CATALOG NUMBER: FMR-12-1-LD4-2LO-40-UNV-81-94-EDD

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	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°	5308	5308	5308
5°	5235	5230	5223
10°	5190	5184	5147
15°	5050	4999	4930
20°	4865	4786	4655
25°	4665	4563	4279
30°	4421	4279	3854
35°	4188	3955	3565
40°	3948	3604	3244
45°	3722	3332	2933
50°	3446	3093	2616
55°	3188	2804	2342
60°	2921	2504	2099
65°	2570	2193	1859
70°	2118	1920	1580
75°	1684	1468	1543
80°	1128	1060	992
85°	704	840	988



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.9	4.7
10°-20°	126.0	13.0
20°-30°	174.4	18.0
30°-40°	186.0	19.2
40°-50°	169.7	17.5
50°-60°	132.9	13.7
60°-70°	86.6	8.9
70°-80°	38.4	4.0
80°-90°	8.2	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°	346.3	35.8
0°-40°	532.2	55.0
0°-60°	834.8	86.2
0°-90°	968.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	968.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	493	493	493	493	493	
5°	484	484	484	483	483	46
15°	453	453	449	444	442	127
25°	393	390	384	370	360	180
35°	319	316	301	278	271	199
45°	244	239	219	201	193	188
55°	170	165	149	132	125	152
65°	101	95	86	88	73	99
75°	40	38	35	34	37	43
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	493.1	493.1	493.1	493.1	493.1
2.5°	489.7	489.7	489.7	489.1	489.1
5°	484.5	484.0	484.0	483.4	483.4
7.5°	480.5	480.0	479.4	478.8	477.7
10°	474.8	474.8	474.3	471.4	470.9
12.5°	465.7	465.2	462.9	458.9	457.7
15°	453.2	453.2	448.6	444.1	442.4
17.5°	439.5	438.9	433.2	428.7	426.4
20°	424.7	423.5	417.8	410.4	406.4
22.5°	408.2	408.2	401.3	391.6	387.6
25°	392.8	390.5	384.2	370.5	360.3
27.5°	375.1	371.7	364.8	345.4	333.5
30°	355.7	354.0	344.3	319.2	310.1
32.5°	337.5	334.6	324.4	298.1	290.7
35°	318.7	316.4	301.0	278.2	271.3
37.5°	299.8	297.0	277.6	259.4	250.8
40°	281.0	277.6	256.5	240.0	230.9
42.5°	263.4	258.8	238.3	220.6	210.3
45°	244.5	239.4	218.9	200.7	192.7
47.5°	225.7	221.2	202.4	183.6	174.4
50°	205.8	201.8	184.7	165.9	156.2
52.5°	189.3	183.0	166.5	147.6	139.7
55°	169.9	164.7	149.4	131.7	124.8
57.5°	152.2	147.1	132.8	116.3	110.6
60°	135.7	128.3	116.3	102.0	97.5
62.5°	117.4	111.7	101.5	89.5	95.2
65°	100.9	95.2	86.1	87.8	73.0
67.5°	82.7	79.8	71.8	63.8	61.6
70°	67.3	63.8	61.0	52.4	50.2
72.5°	53.6	50.2	46.2	41.6	39.9
75°	40.5	37.6	35.3	33.6	37.1
77.5°	27.9	26.8	25.1	23.4	22.8
80°	18.2	17.7	17.1	16.5	16.0
82.5°	10.8	10.8	10.8	10.8	10.8
85°	5.7	6.3	6.8	7.4	8.0
87.5°	3.4	3.4	4.0	4.6	5.1
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)