

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: P545392

Luminaire Tested: **FMR-12-2-LD4-1LO-40-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: P545392
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-12-2-LD4-1LO-40-UNV-93-85-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

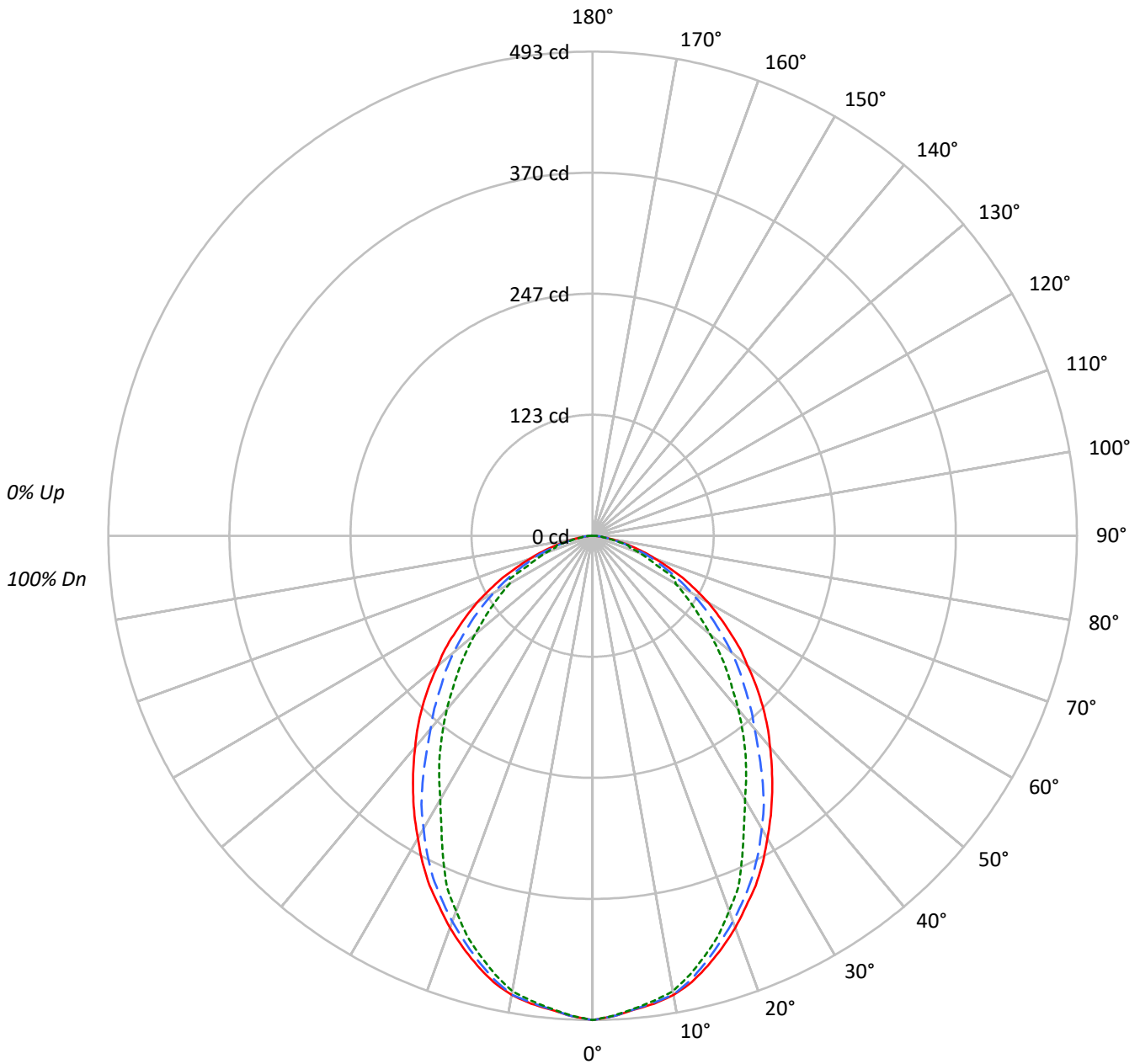
Lumens per Lamp: N/A
Luminaire Lumens: 968.0 lumens
Efficiency: N/A
Efficacy: 82.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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	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°	2654	2654	2654
5°	2618	2615	2612
10°	2595	2592	2573
15°	2525	2500	2465
20°	2432	2393	2328
25°	2333	2282	2140
30°	2211	2140	1927
35°	2094	1978	1782
40°	1974	1802	1622
45°	1861	1666	1467
50°	1723	1546	1308
55°	1594	1402	1171
60°	1461	1252	1049
65°	1285	1096	930
70°	1059	960	790
75°	842	734	771
80°	564	530	496
85°	352	420	494



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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)