

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: P545709

Luminaire Tested: **FMR-12-2-LD4-2LO-50-UNV-82-96-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: P545709
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-LD4-2LO-50-UNV-82-96-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC 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

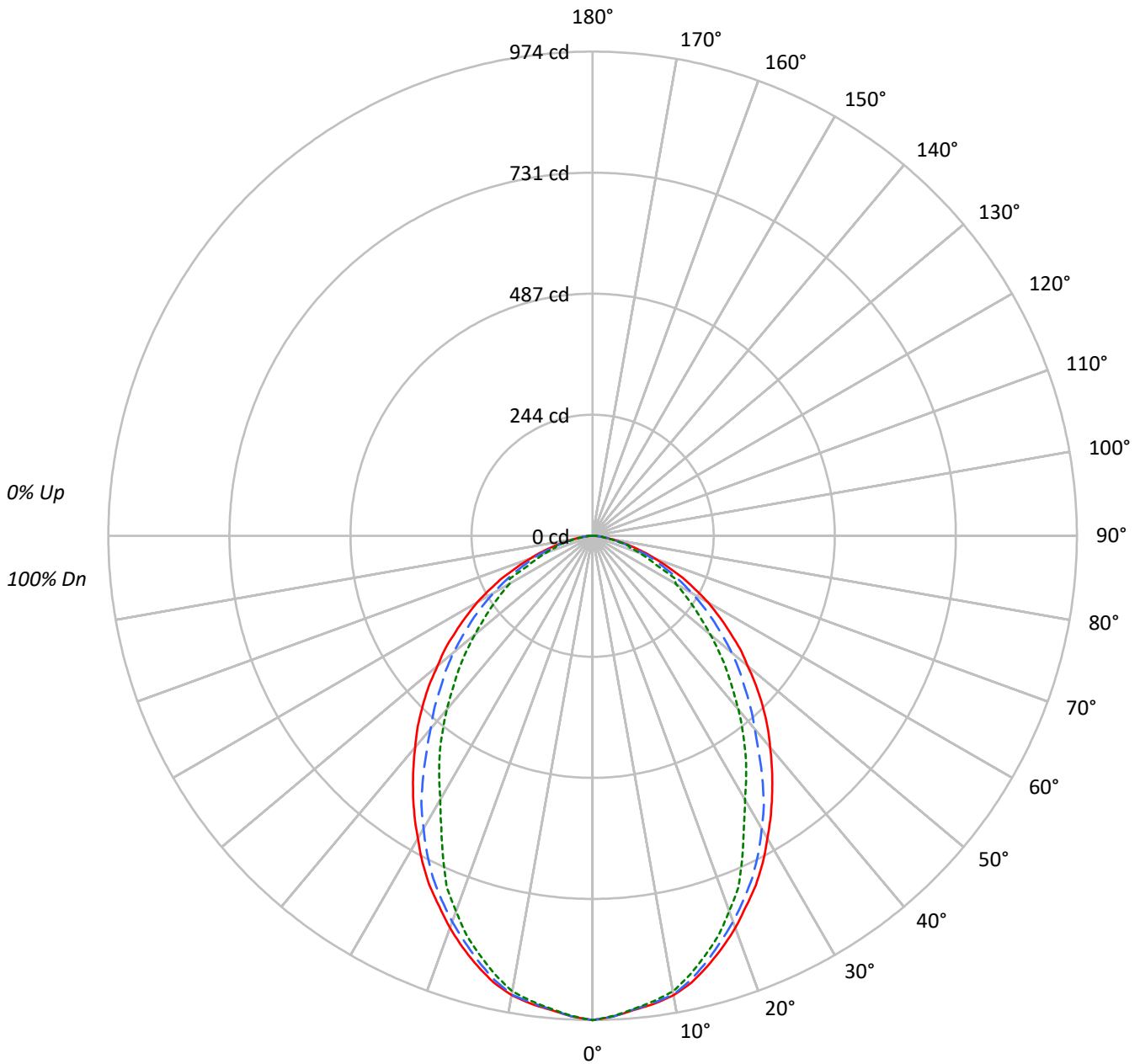
Lumens per Lamp: N/A
Luminaire Lumens: 1913.0 lumens
Efficiency: N/A
Efficacy: 81.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	5245	5245	5245
5°	5173	5167	5161
10°	5128	5122	5085
15°	4990	4940	4871
20°	4807	4730	4600
25°	4609	4509	4228
30°	4369	4228	3808
35°	4137	3908	3523
40°	3902	3561	3205
45°	3679	3293	2898
50°	3405	3056	2585
55°	3150	2770	2315
60°	2886	2474	2073
65°	2539	2166	1836
70°	2091	1896	1559
75°	1664	1451	1522
80°	1116	1048	976
85°	698	834	976



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.7	4.7
10°-20°	248.9	13.0
20°-30°	344.6	18.0
30°-40°	367.5	19.2
40°-50°	335.3	17.5
50°-60°	262.6	13.7
60°-70°	171.2	8.9
70°-80°	75.8	4.0
80°-90°	16.3	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°	684.3	35.8
0°-40°	1051.8	55.0
0°-60°	1649.7	86.2
0°-90°	1913.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1913.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	974	974	974	974	974	
5°	958	956	956	955	955	91
15°	896	896	887	878	874	252
25°	776	772	759	732	712	356
35°	630	625	595	550	536	394
45°	483	473	433	396	381	372
55°	336	326	295	260	247	301
65°	199	188	170	174	144	196
75°	80	74	70	66	73	86
85°	11	12	14	15	16	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	974.5	974.5	974.5	974.5	974.5
2.5°	967.7	967.7	967.7	966.6	966.6
5°	957.6	956.4	956.4	955.3	955.3
7.5°	949.7	948.5	947.4	946.3	944.0
10°	938.4	938.4	937.3	931.6	930.5
12.5°	920.4	919.3	914.8	906.9	904.6
15°	895.6	895.6	886.6	877.6	874.2
17.5°	868.6	867.4	856.2	847.2	842.7
20°	839.3	837.0	825.8	811.1	803.2
22.5°	806.6	806.6	793.1	773.9	766.0
25°	776.2	771.7	759.3	732.3	712.0
27.5°	741.3	734.5	721.0	682.7	659.0
30°	703.0	699.6	680.4	630.9	612.8
32.5°	666.9	661.3	641.0	589.2	574.5
35°	629.7	625.2	594.8	549.8	536.2
37.5°	592.6	586.9	548.6	512.6	495.7
40°	555.4	548.6	506.9	474.3	456.2
42.5°	520.5	511.4	470.9	436.0	415.7
45°	483.3	473.1	432.6	396.5	380.8
47.5°	446.1	437.1	399.9	362.7	344.7
50°	406.7	398.8	365.0	327.8	308.7
52.5°	374.0	361.6	328.9	291.8	276.0
55°	335.7	325.6	295.2	260.2	246.7
57.5°	300.8	290.6	262.5	229.8	218.5
60°	268.1	253.5	229.8	201.7	192.6
62.5°	232.1	220.8	200.5	176.9	188.1
65°	199.4	188.1	170.1	173.5	144.2
67.5°	163.3	157.7	141.9	126.2	121.7
70°	132.9	126.2	120.5	103.6	99.1
72.5°	105.9	99.1	91.2	82.2	78.9
75°	80.0	74.4	69.8	66.5	73.2
77.5°	55.2	52.9	49.6	46.2	45.1
80°	36.0	34.9	33.8	32.7	31.5
82.5°	21.4	21.4	21.4	21.4	21.4
85°	11.3	12.4	13.5	14.6	15.8
87.5°	6.8	6.8	7.9	9.0	10.1
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)