

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: P545101

Luminaire Tested: **FMR-12-1-LD4-2LO-40-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: P545101
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-82-96-EDD
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

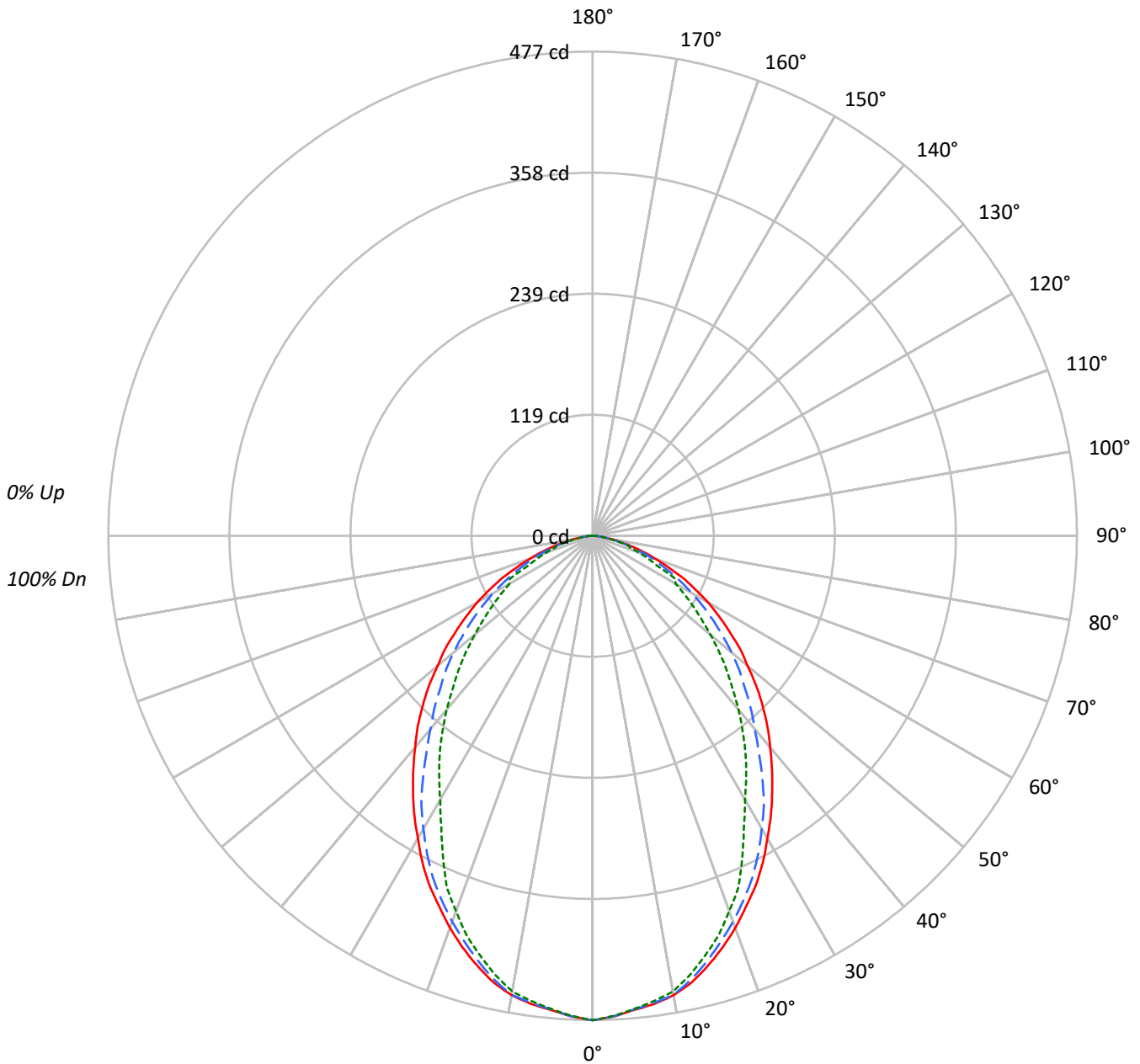
Lumens per Lamp: N/A
Luminaire Lumens: 937.0 lumens
Efficiency: N/A
Efficacy: 80.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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	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°	5138	5138	5138
5°	5068	5062	5056
10°	5023	5018	4982
15°	4889	4840	4772
20°	4709	4633	4506
25°	4516	4417	4141
30°	4279	4143	3731
35°	4052	3828	3452
40°	3822	3489	3140
45°	3603	3226	2839
50°	3336	2994	2532
55°	3085	2714	2267
60°	2827	2424	2032
65°	2488	2122	1798
70°	2049	1857	1530
75°	1630	1422	1493
80°	1097	1029	961
85°	679	815	951



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.4	4.7
10°-20°	121.9	13.0
20°-30°	168.8	18.0
30°-40°	180.0	19.2
40°-50°	164.2	17.5
50°-60°	128.7	13.7
60°-70°	83.8	8.9
70°-80°	37.2	4.0
80°-90°	8.0	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°	335.2	35.8
0°-40°	515.2	55.0
0°-60°	808.0	86.2
0°-90°	937.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	937.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	477	477	477	477	477	
5°	469	468	468	468	468	45
15°	439	439	434	430	428	123
25°	380	378	372	359	349	175
35°	308	306	291	269	263	193
45°	237	232	212	194	186	182
55°	164	160	145	128	121	147
65°	98	92	83	85	71	96
75°	39	36	34	33	36	42
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°	477.3	477.3	477.3	477.3	477.3
2.5°	474.0	474.0	474.0	473.4	473.4
5°	469.0	468.5	468.5	467.9	467.9
7.5°	465.2	464.6	464.1	463.5	462.4
10°	459.6	459.6	459.1	456.3	455.8
12.5°	450.8	450.3	448.1	444.2	443.1
15°	438.7	438.7	434.3	429.8	428.2
17.5°	425.4	424.9	419.4	414.9	412.7
20°	411.1	410.0	404.5	397.3	393.4
22.5°	395.1	395.1	388.5	379.1	375.2
25°	380.2	378.0	371.9	358.7	348.7
27.5°	363.1	359.8	353.1	334.4	322.8
30°	344.3	342.7	333.3	309.0	300.2
32.5°	326.7	323.9	314.0	288.6	281.4
35°	308.4	306.2	291.3	269.3	262.7
37.5°	290.2	287.5	268.7	251.1	242.8
40°	272.0	268.7	248.3	232.3	223.5
42.5°	254.9	250.5	230.6	213.5	203.6
45°	236.7	231.8	211.9	194.2	186.5
47.5°	218.5	214.1	195.9	177.7	168.8
50°	199.2	195.3	178.8	160.6	151.2
52.5°	183.2	177.1	161.1	142.9	135.2
55°	164.4	159.5	144.6	127.5	120.8
57.5°	147.3	142.4	128.6	112.6	107.0
60°	131.3	124.2	112.6	98.8	94.4
62.5°	113.7	108.2	98.2	86.6	92.1
65°	97.7	92.1	83.3	85.0	70.6
67.5°	80.0	77.3	69.5	61.8	59.6
70°	65.1	61.8	59.0	50.8	48.6
72.5°	51.9	48.6	44.7	40.3	38.6
75°	39.2	36.4	34.2	32.6	35.9
77.5°	27.0	25.9	24.3	22.6	22.1
80°	17.7	17.1	16.6	16.0	15.5
82.5°	10.5	10.5	10.5	10.5	10.5
85°	5.5	6.1	6.6	7.2	7.7
87.5°	3.3	3.3	3.9	4.4	5.0
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)