

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: P545395

Luminaire Tested: **FMR-12-2-LD4-1LO-40-UNV-93-88-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: P545395
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-93-88-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

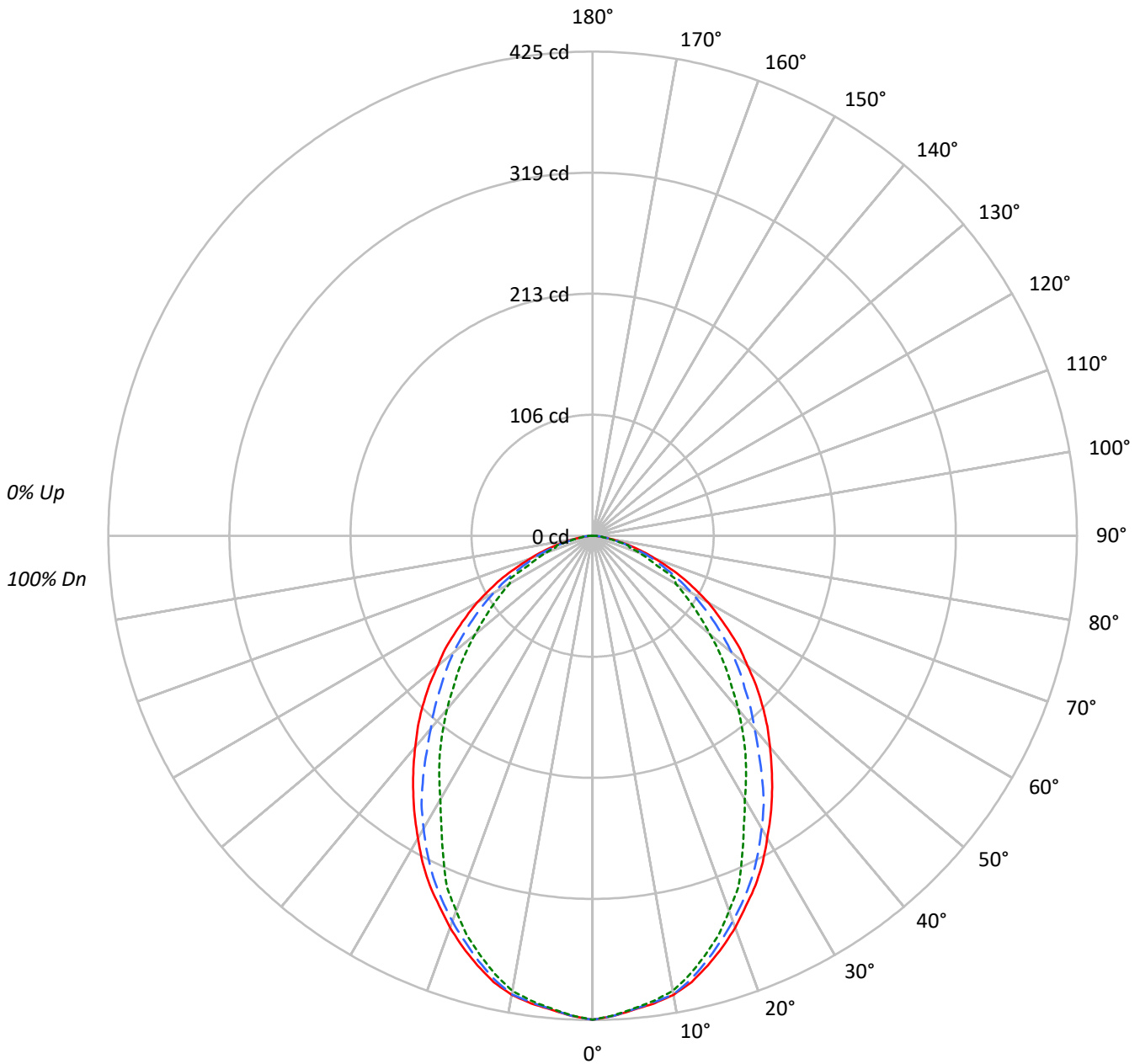
Lumens per Lamp: N/A
Luminaire Lumens: 834.0 lumens
Efficiency: N/A
Efficacy: 71.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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				20				
RC	80				70				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	100	100	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2286	2286	2286
5°	2256	2253	2250
10°	2236	2233	2217
15°	2175	2154	2123
20°	2096	2062	2006
25°	2010	1966	1843
30°	1905	1843	1661
35°	1804	1704	1536
40°	1701	1553	1397
45°	1604	1435	1263
50°	1485	1332	1127
55°	1374	1208	1010
60°	1258	1079	904
65°	1107	945	801
70°	913	828	680
75°	726	634	663
80°	487	456	428
85°	303	364	426



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.5	4.7
10°-20°	108.5	13.0
20°-30°	150.2	18.0
30°-40°	160.2	19.2
40°-50°	146.2	17.5
50°-60°	114.5	13.7
60°-70°	74.6	8.9
70°-80°	33.1	4.0
80°-90°	7.1	0.8
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°	298.3	35.8
0°-40°	458.5	55.0
0°-60°	719.2	86.2
0°-90°	834.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	834.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	425	425	425	425	425	
5°	418	417	417	416	416	40
15°	390	390	386	383	381	110
25°	338	336	331	319	310	155
35°	274	273	259	240	234	172
45°	211	206	189	173	166	162
55°	146	142	129	114	108	131
65°	87	82	74	76	63	86
75°	35	32	30	29	32	37
85°	5	5	6	6	7	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	424.8	424.8	424.8	424.8	424.8
2.5°	421.9	421.9	421.9	421.4	421.4
5°	417.5	417.0	417.0	416.5	416.5
7.5°	414.0	413.5	413.0	412.6	411.6
10°	409.1	409.1	408.6	406.2	405.7
12.5°	401.3	400.8	398.8	395.4	394.4
15°	390.4	390.4	386.5	382.6	381.1
17.5°	378.7	378.2	373.3	369.3	367.4
20°	365.9	364.9	360.0	353.6	350.2
22.5°	351.6	351.6	345.8	337.4	334.0
25°	338.4	336.4	331.0	319.2	310.4
27.5°	323.2	320.2	314.3	297.6	287.3
30°	306.5	305.0	296.6	275.0	267.2
32.5°	290.7	288.3	279.5	256.9	250.5
35°	274.5	272.6	259.3	239.7	233.8
37.5°	258.3	255.9	239.2	223.5	216.1
40°	242.1	239.2	221.0	206.8	198.9
42.5°	226.9	223.0	205.3	190.1	181.2
45°	210.7	206.3	188.6	172.9	166.0
47.5°	194.5	190.6	174.4	158.1	150.3
50°	177.3	173.9	159.1	142.9	134.6
52.5°	163.1	157.7	143.4	127.2	120.3
55°	146.4	141.9	128.7	113.5	107.6
57.5°	131.1	126.7	114.4	100.2	95.3
60°	116.9	110.5	100.2	87.9	84.0
62.5°	101.2	96.3	87.4	77.1	82.0
65°	86.9	82.0	74.2	75.6	62.9
67.5°	71.2	68.8	61.9	55.0	53.0
70°	58.0	55.0	52.6	45.2	43.2
72.5°	46.2	43.2	39.8	35.9	34.4
75°	34.9	32.4	30.5	29.0	31.9
77.5°	24.1	23.1	21.6	20.1	19.6
80°	15.7	15.2	14.7	14.2	13.8
82.5°	9.3	9.3	9.3	9.3	9.3
85°	4.9	5.4	5.9	6.4	6.9
87.5°	2.9	2.9	3.4	3.9	4.4
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)