

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: P545713

Luminaire Tested: **FMR-12-2-LD4-2LO-50-UNV-93-86-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: P545713
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-93-86-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

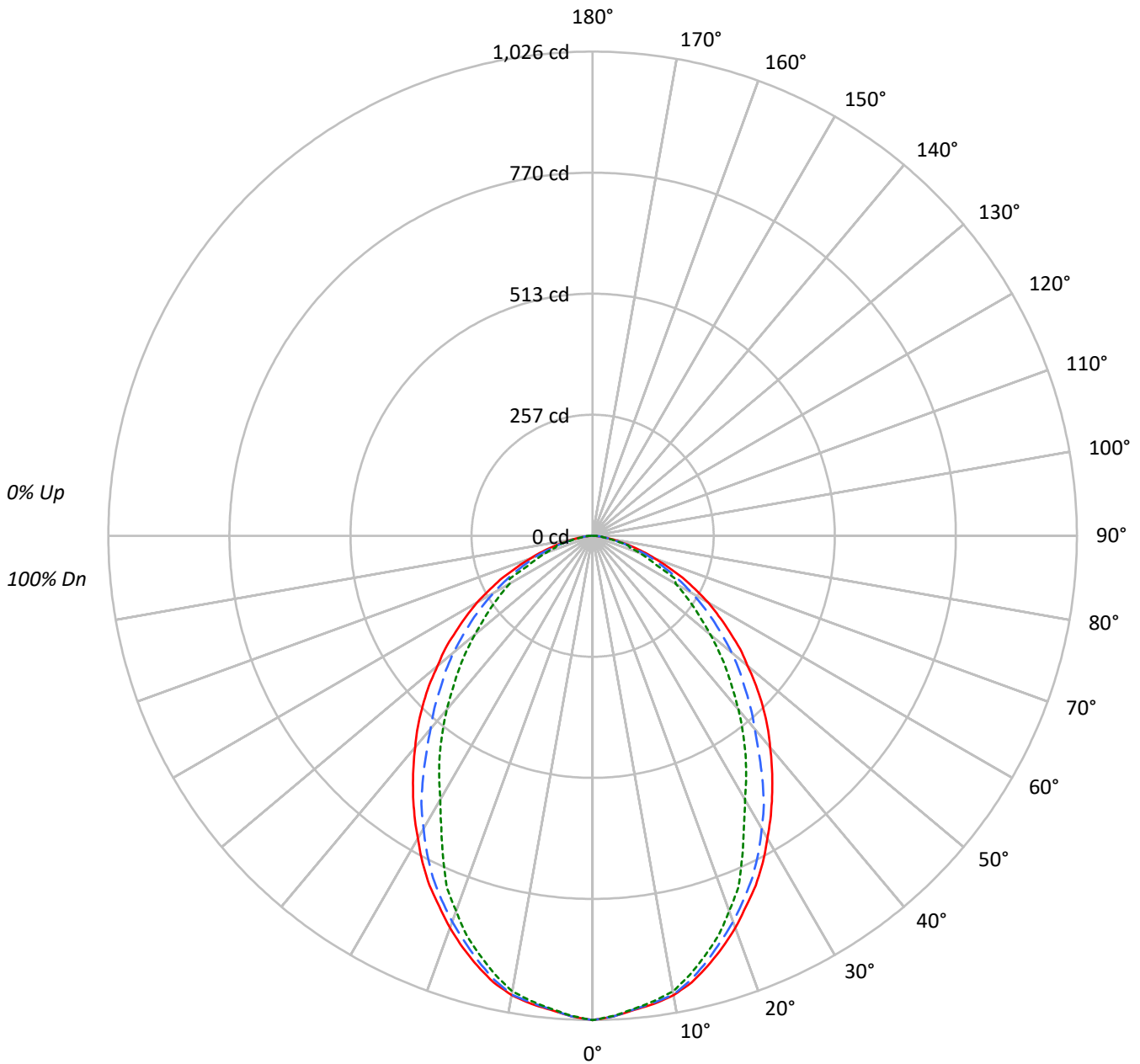
Lumens per Lamp: N/A
Luminaire Lumens: 2015.0 lumens
Efficiency: N/A
Efficacy: 86.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P545713

CATALOG NUMBER: FMR-12-2-LD4-2LO-50-UNV-93-86-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°	5524	5524	5524
5°	5449	5442	5436
10°	5402	5396	5356
15°	5256	5204	5131
20°	5063	4982	4845
25°	4855	4749	4453
30°	4601	4454	4011
35°	4358	4116	3711
40°	4110	3752	3377
45°	3875	3468	3053
50°	3587	3219	2722
55°	3318	2917	2439
60°	3040	2606	2184
65°	2674	2282	1934
70°	2203	1998	1643
75°	1751	1530	1603
80°	1178	1103	1029
85°	735	877	1025



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.5	4.7
10°-20°	262.2	13.0
20°-30°	363.0	18.0
30°-40°	387.1	19.2
40°-50°	353.1	17.5
50°-60°	276.7	13.7
60°-70°	180.3	8.9
70°-80°	79.9	4.0
80°-90°	17.1	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°	720.8	35.8
0°-40°	1107.9	55.0
0°-60°	1737.7	86.2
0°-90°	2015.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2015.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1026	1026	1026	1026	1026	
5°	1009	1007	1007	1006	1006	96
15°	943	943	934	924	921	265
25°	818	813	800	771	750	375
35°	663	659	626	579	565	415
45°	509	498	456	418	401	392
55°	354	343	311	274	260	317
65°	210	198	179	183	152	207
75°	84	78	74	70	77	90
85°	12	13	14	15	17	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1026.4	1026.4	1026.4	1026.4	1026.4
2.5°	1019.3	1019.3	1019.3	1018.1	1018.1
5°	1008.6	1007.4	1007.4	1006.2	1006.2
7.5°	1000.3	999.1	997.9	996.7	994.4
10°	988.4	988.4	987.3	981.3	980.1
12.5°	969.5	968.3	963.5	955.2	952.8
15°	943.4	943.4	933.9	924.4	920.8
17.5°	914.9	913.7	901.8	892.3	887.6
20°	884.0	881.6	869.8	854.4	846.0
22.5°	849.6	849.6	835.4	815.2	806.9
25°	817.6	812.8	799.8	771.3	749.9
27.5°	780.8	773.7	759.4	719.1	694.2
30°	740.4	736.9	716.7	664.5	645.5
32.5°	702.5	696.5	675.2	620.6	605.2
35°	663.3	658.6	626.5	579.1	564.8
37.5°	624.2	618.2	577.9	539.9	522.1
40°	585.0	577.9	534.0	499.6	480.6
42.5°	548.2	538.7	496.0	459.2	437.9
45°	509.1	498.4	455.7	417.7	401.1
47.5°	469.9	460.4	421.2	382.1	363.1
50°	428.4	420.1	384.5	345.3	325.1
52.5°	394.0	380.9	346.5	307.3	290.7
55°	353.6	342.9	310.9	274.1	259.9
57.5°	316.8	306.1	276.5	242.1	230.2
60°	282.4	267.0	242.1	212.4	202.9
62.5°	244.4	232.6	211.2	186.3	198.2
65°	210.0	198.2	179.2	182.7	151.9
67.5°	172.1	166.1	149.5	132.9	128.2
70°	140.0	132.9	127.0	109.2	104.4
72.5°	111.5	104.4	96.1	86.6	83.1
75°	84.2	78.3	73.6	70.0	77.1
77.5°	58.1	55.8	52.2	48.7	47.5
80°	38.0	36.8	35.6	34.4	33.2
82.5°	22.5	22.5	22.5	22.5	22.5
85°	11.9	13.1	14.2	15.4	16.6
87.5°	7.1	7.1	8.3	9.5	10.7
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)