

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: P545215

Luminaire Tested: **FMR-12-1-LD4-2STD-50-UNV-81-84-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: P545215
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-LD4-2STD-50-UNV-81-84-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

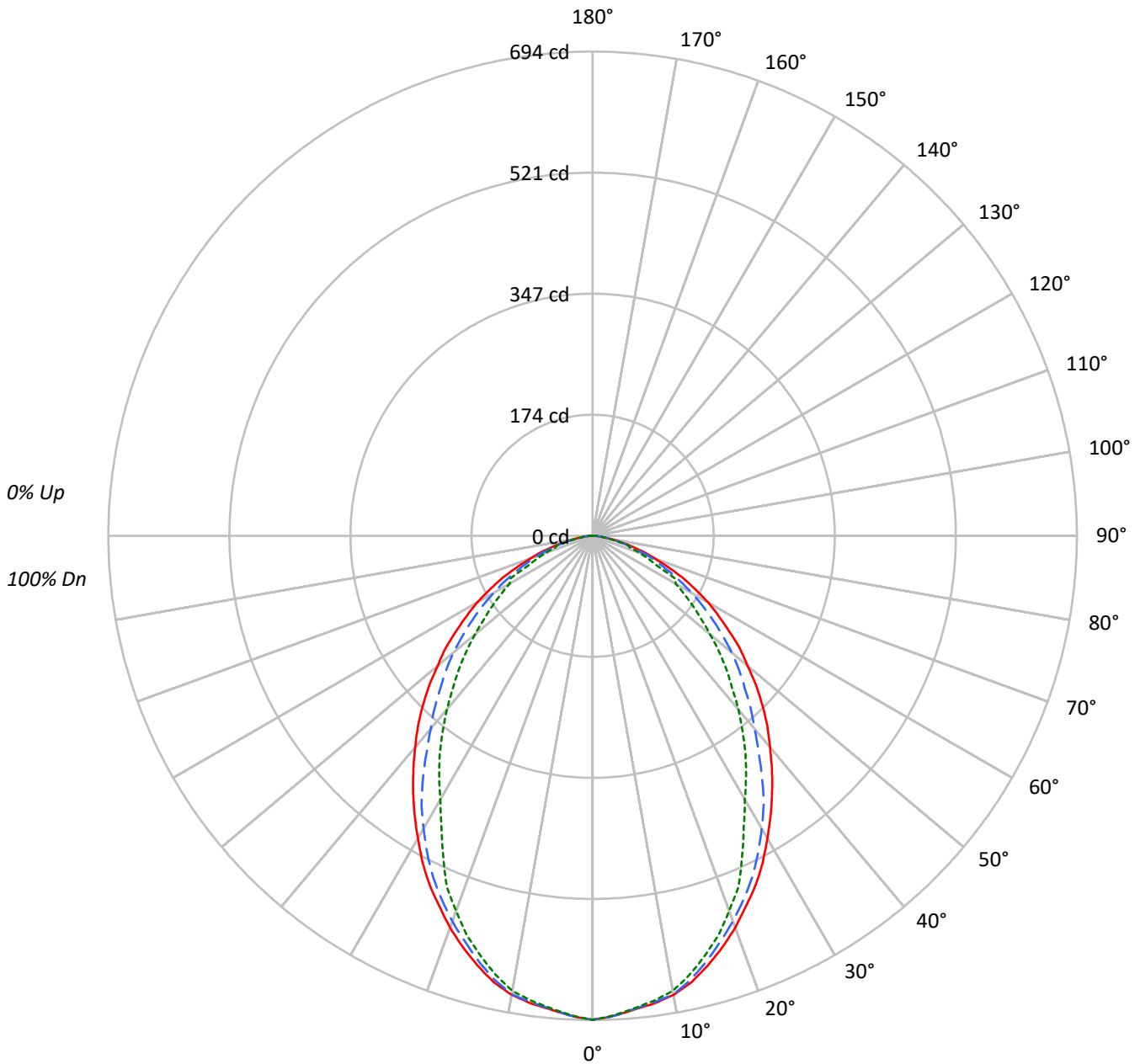
Lumens per Lamp: N/A
Luminaire Lumens: 1362.0 lumens
Efficiency: N/A
Efficacy: 82.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
Input Voltage (V): NR
Input Current (A_{in}): 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°	7468	7468	7468
5°	7367	7358	7349
10°	7302	7294	7241
15°	7105	7034	6936
20°	6844	6734	6551
25°	6563	6421	6020
30°	6221	6021	5423
35°	5892	5565	5017
40°	5556	5071	4564
45°	5238	4689	4127
50°	4848	4352	3681
55°	4485	3943	3297
60°	4110	3522	2954
65°	3617	3084	2616
70°	2977	2700	2222
75°	2366	2067	2167
80°	1593	1494	1395
85°	988	1186	1383



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.6	4.7
10°-20°	177.2	13.0
20°-30°	245.4	18.0
30°-40°	261.6	19.2
40°-50°	238.7	17.5
50°-60°	187.0	13.7
60°-70°	121.9	8.9
70°-80°	54.0	4.0
80°-90°	11.6	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°	487.2	35.8
0°-40°	748.8	55.0
0°-60°	1174.5	86.2
0°-90°	1362.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1362.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	694	694	694	694	694	
5°	682	681	681	680	680	65
15°	638	638	631	625	622	179
25°	553	549	541	521	507	254
35°	448	445	424	391	382	280
45°	344	337	308	282	271	265
55°	239	232	210	185	176	214
65°	142	134	121	124	103	140
75°	57	53	50	47	52	61
85°	8	9	10	10	11	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	693.8	693.8	693.8	693.8	693.8
2.5°	689.0	689.0	689.0	688.2	688.2
5°	681.8	681.0	681.0	680.1	680.1
7.5°	676.1	675.3	674.5	673.7	672.1
10°	668.1	668.1	667.3	663.3	662.5
12.5°	655.3	654.5	651.3	645.7	644.1
15°	637.6	637.6	631.2	624.8	622.4
17.5°	618.4	617.6	609.6	603.2	599.9
20°	597.5	595.9	587.9	577.5	571.9
22.5°	574.3	574.3	564.7	551.0	545.4
25°	552.6	549.4	540.6	521.3	506.9
27.5°	527.8	522.9	513.3	486.1	469.2
30°	500.5	498.1	484.4	449.2	436.3
32.5°	474.8	470.8	456.4	419.5	409.1
35°	448.4	445.1	423.5	391.4	381.8
37.5°	421.9	417.9	390.6	364.9	352.9
40°	395.4	390.6	360.9	337.7	324.8
42.5°	370.6	364.1	335.3	310.4	296.0
45°	344.1	336.9	308.0	282.3	271.1
47.5°	317.6	311.2	284.7	258.3	245.4
50°	289.5	283.9	259.9	233.4	219.8
52.5°	266.3	257.5	234.2	207.7	196.5
55°	239.0	231.8	210.1	185.3	175.7
57.5°	214.2	206.9	186.9	163.6	155.6
60°	190.9	180.5	163.6	143.6	137.2
62.5°	165.2	157.2	142.8	125.9	133.9
65°	142.0	133.9	121.1	123.5	102.7
67.5°	116.3	112.3	101.1	89.8	86.6
70°	94.6	89.8	85.8	73.8	70.6
72.5°	75.4	70.6	65.0	58.6	56.1
75°	56.9	52.9	49.7	47.3	52.1
77.5°	39.3	37.7	35.3	32.9	32.1
80°	25.7	24.9	24.1	23.3	22.5
82.5°	15.2	15.2	15.2	15.2	15.2
85°	8.0	8.8	9.6	10.4	11.2
87.5°	4.8	4.8	5.6	6.4	7.2
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)