

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: P545428

Luminaire Tested: **FMR-12-2-LD4-1LO-50-UNV-93-94-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: P545428
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-50-UNV-93-94-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

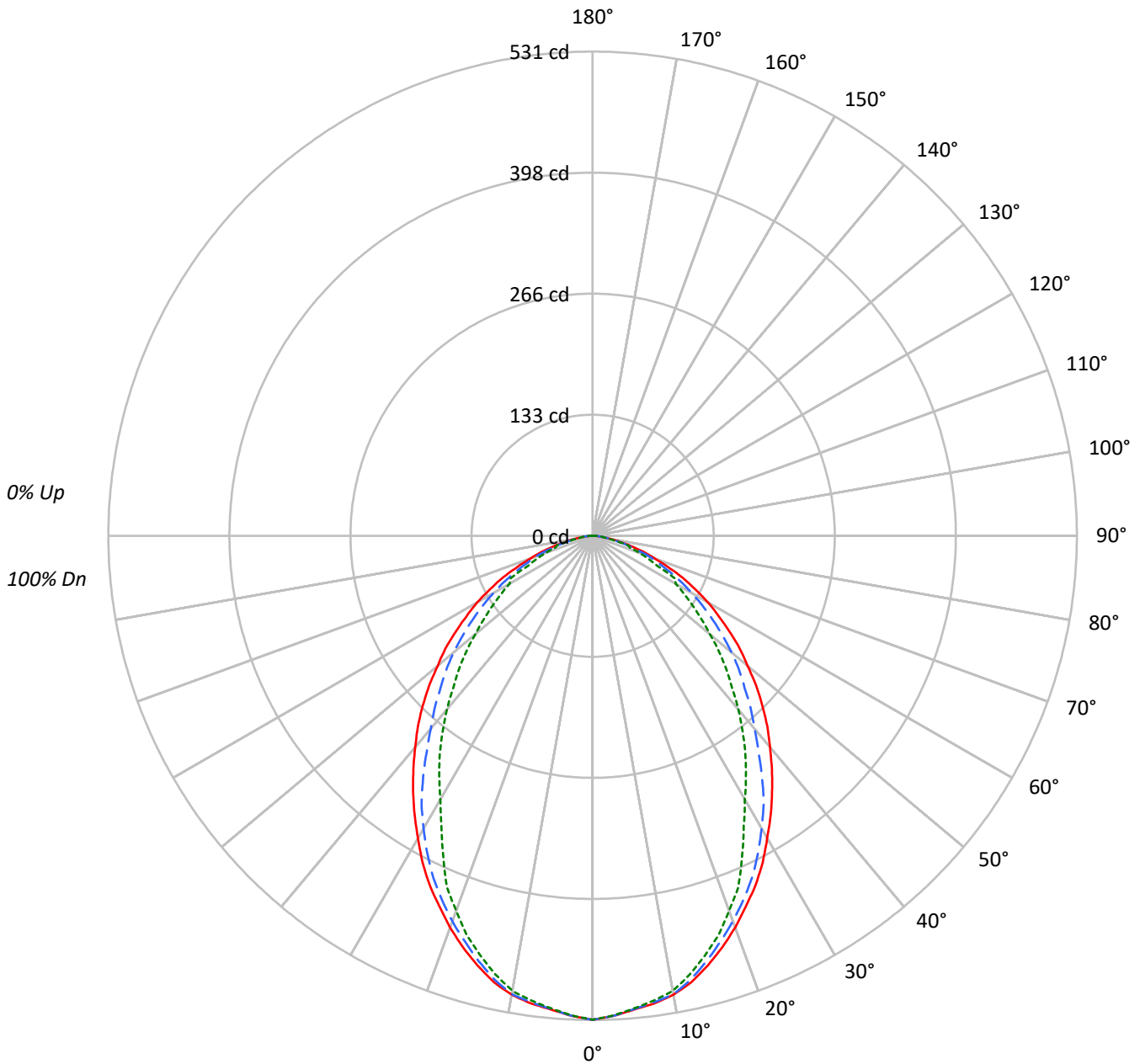
Lumens per Lamp: N/A
Luminaire Lumens: 1042.0 lumens
Efficiency: N/A
Efficacy: 89.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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°	2857	2857	2857
5°	2818	2815	2811
10°	2793	2790	2770
15°	2718	2691	2653
20°	2618	2576	2506
25°	2511	2456	2303
30°	2380	2303	2074
35°	2254	2129	1919
40°	2125	1940	1746
45°	2003	1793	1579
50°	1855	1665	1407
55°	1716	1509	1261
60°	1572	1348	1129
65°	1383	1181	1000
70°	1139	1034	850
75°	907	790	830
80°	607	570	533
85°	377	457	531



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.4	4.7
10°-20°	135.6	13.0
20°-30°	187.7	18.0
30°-40°	200.2	19.2
40°-50°	182.6	17.5
50°-60°	143.1	13.7
60°-70°	93.2	8.9
70°-80°	41.3	4.0
80°-90°	8.9	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°	372.7	35.8
0°-40°	572.9	55.0
0°-60°	898.6	86.2
0°-90°	1042.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1042.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	531	531	531	531	531	
5°	522	521	521	520	520	50
15°	488	488	483	478	476	137
25°	423	420	414	399	388	194
35°	343	341	324	299	292	214
45°	263	258	236	216	207	203
55°	183	177	161	142	134	164
65°	109	102	93	94	78	107
75°	44	40	38	36	40	47
85°	6	7	7	8	9	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	530.8	530.8	530.8	530.8	530.8
2.5°	527.1	527.1	527.1	526.5	526.5
5°	521.6	521.0	521.0	520.3	520.3
7.5°	517.3	516.7	516.1	515.4	514.2
10°	511.1	511.1	510.5	507.5	506.8
12.5°	501.3	500.7	498.3	494.0	492.7
15°	487.8	487.8	482.9	478.0	476.2
17.5°	473.1	472.5	466.4	461.4	459.0
20°	457.1	455.9	449.8	441.8	437.5
22.5°	439.4	439.4	432.0	421.6	417.3
25°	422.8	420.3	413.6	398.9	387.8
27.5°	403.8	400.1	392.7	371.9	359.0
30°	382.9	381.1	370.6	343.6	333.8
32.5°	363.3	360.2	349.1	320.9	312.9
35°	343.0	340.6	324.0	299.4	292.1
37.5°	322.8	319.7	298.8	279.2	270.0
40°	302.5	298.8	276.1	258.3	248.5
42.5°	283.5	278.6	256.5	237.5	226.4
45°	263.2	257.7	235.6	216.0	207.4
47.5°	243.0	238.1	217.8	197.6	187.8
50°	221.5	217.2	198.8	178.6	168.1
52.5°	203.7	197.0	179.2	158.9	150.3
55°	182.9	177.3	160.8	141.7	134.4
57.5°	163.8	158.3	143.0	125.2	119.0
60°	146.0	138.1	125.2	109.8	104.9
62.5°	126.4	120.3	109.2	96.3	102.5
65°	108.6	102.5	92.7	94.5	78.5
67.5°	89.0	85.9	77.3	68.7	66.3
70°	72.4	68.7	65.7	56.5	54.0
72.5°	57.7	54.0	49.7	44.8	43.0
75°	43.6	40.5	38.0	36.2	39.9
77.5°	30.1	28.8	27.0	25.2	24.5
80°	19.6	19.0	18.4	17.8	17.2
82.5°	11.7	11.7	11.7	11.7	11.7
85°	6.1	6.7	7.4	8.0	8.6
87.5°	3.7	3.7	4.3	4.9	5.5
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)