

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: P545380

Luminaire Tested: **FMR-12-2-LD4-1LO-40-UNV-81-94-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: P545380
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-81-94-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

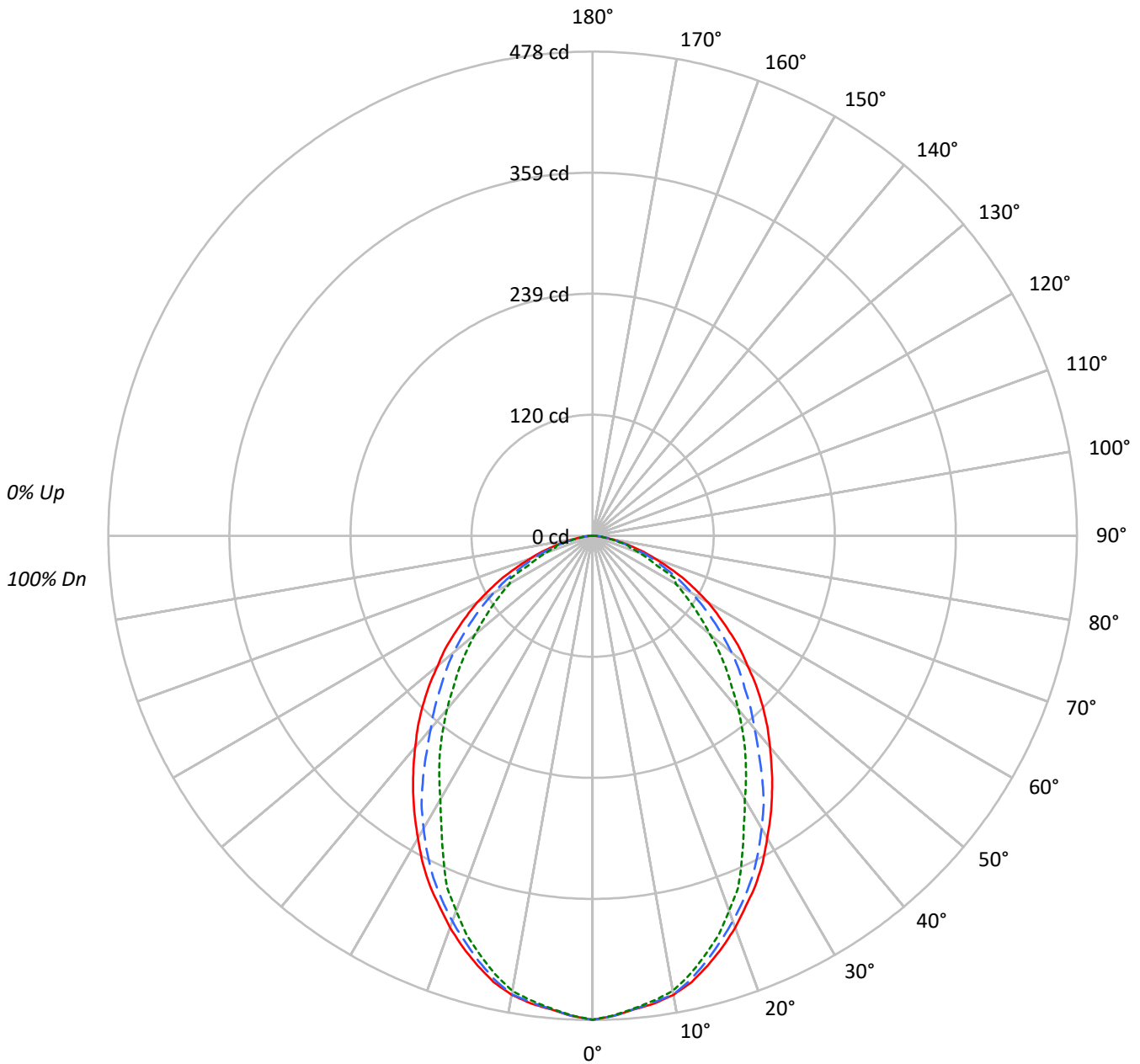
Lumens per Lamp: N/A
Luminaire Lumens: 938.0 lumens
Efficiency: N/A
Efficacy: 80.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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									
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°	2571	2571	2571
5°	2536	2534	2531
10°	2514	2512	2494
15°	2447	2422	2388
20°	2357	2319	2255
25°	2260	2211	2073
30°	2142	2073	1867
35°	2029	1917	1727
40°	1913	1747	1572
45°	1804	1614	1421
50°	1670	1499	1268
55°	1544	1358	1135
60°	1415	1213	1017
65°	1245	1062	900
70°	1026	930	765
75°	815	711	747
80°	549	514	480
85°	340	408	475



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.5	4.7
10°-20°	122.1	13.0
20°-30°	169.0	18.0
30°-40°	180.2	19.2
40°-50°	164.4	17.5
50°-60°	128.8	13.7
60°-70°	83.9	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°	335.5	35.8
0°-40°	515.7	55.0
0°-60°	808.9	86.2
0°-90°	938.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	938.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	478	478	478	478	478	
5°	470	469	469	468	468	45
15°	439	439	435	430	429	123
25°	381	378	372	359	349	175
35°	309	307	292	270	263	193
45°	237	232	212	194	187	183
55°	165	160	145	128	121	148
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°	477.8	477.8	477.8	477.8	477.8
2.5°	474.5	474.5	474.5	473.9	473.9
5°	469.5	469.0	469.0	468.4	468.4
7.5°	465.7	465.1	464.5	464.0	462.9
10°	460.1	460.1	459.6	456.8	456.3
12.5°	451.3	450.7	448.5	444.7	443.6
15°	439.1	439.1	434.7	430.3	428.6
17.5°	425.9	425.3	419.8	415.4	413.2
20°	411.5	410.4	404.9	397.7	393.8
22.5°	395.5	395.5	388.9	379.5	375.6
25°	380.6	378.4	372.3	359.0	349.1
27.5°	363.5	360.1	353.5	334.7	323.1
30°	344.7	343.0	333.6	309.3	300.5
32.5°	327.0	324.2	314.3	288.9	281.7
35°	308.8	306.6	291.7	269.6	262.9
37.5°	290.5	287.8	269.0	251.3	243.0
40°	272.3	269.0	248.6	232.6	223.7
42.5°	255.2	250.8	230.9	213.8	203.8
45°	237.0	232.0	212.1	194.4	186.7
47.5°	218.7	214.3	196.1	177.9	169.0
50°	199.4	195.5	179.0	160.7	151.4
52.5°	183.4	177.3	161.3	143.1	135.3
55°	164.6	159.6	144.7	127.6	121.0
57.5°	147.5	142.5	128.7	112.7	107.2
60°	131.5	124.3	112.7	98.9	94.5
62.5°	113.8	108.3	98.3	86.7	92.2
65°	97.8	92.2	83.4	85.1	70.7
67.5°	80.1	77.3	69.6	61.9	59.7
70°	65.2	61.9	59.1	50.8	48.6
72.5°	51.9	48.6	44.7	40.3	38.7
75°	39.2	36.5	34.2	32.6	35.9
77.5°	27.1	26.0	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)