

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: P547148

Luminaire Tested: **FMR-24-4-LD4-3LO-50-UNV-82-94-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: P547148
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-24-4-LD4-3LO-50-UNV-82-94-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC 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

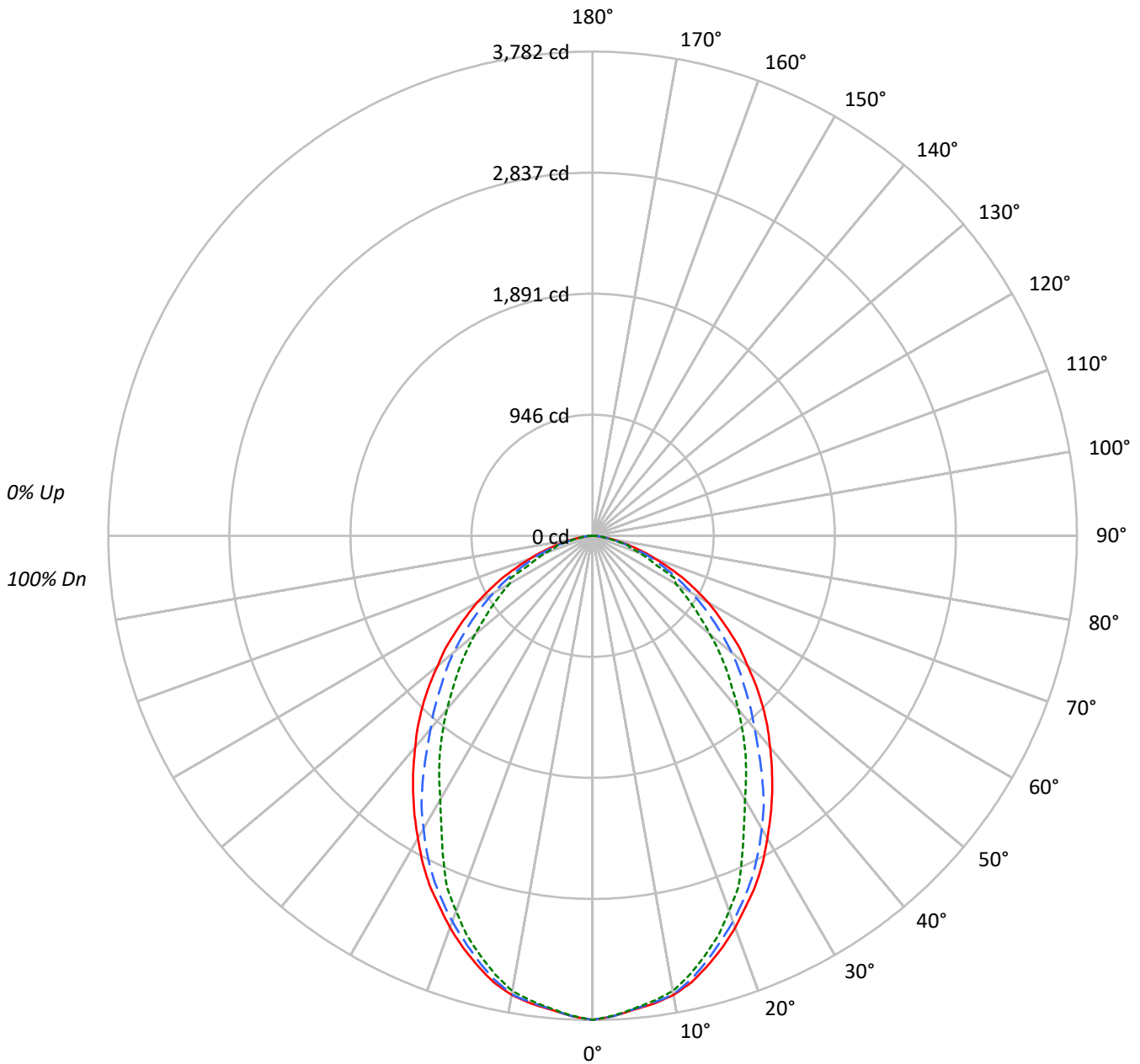
Lumens per Lamp: N/A
Luminaire Lumens: 7424.0 lumens
Efficiency: N/A
Efficacy: 105.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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°	5088	5088	5088
5°	5019	5013	5007
10°	4976	4970	4934
15°	4841	4793	4726
20°	4664	4588	4463
25°	4472	4375	4102
30°	4238	4103	3695
35°	4014	3792	3418
40°	3786	3456	3110
45°	3569	3194	2812
50°	3304	2965	2507
55°	3056	2687	2246
60°	2800	2400	2012
65°	2464	2102	1782
70°	2030	1840	1513
75°	1614	1409	1477
80°	1084	1017	948
85°	675	810	945



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	352.0	4.7
10°-20°	966.1	13.0
20°-30°	1337.5	18.0
30°-40°	1426.2	19.2
40°-50°	1301.1	17.5
50°-60°	1019.3	13.7
60°-70°	664.3	8.9
70°-80°	294.3	4.0
80°-90°	63.2	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°	2655.6	35.8
0°-40°	4081.8	55.0
0°-60°	6402.2	86.2
0°-90°	7424.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7424.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3782	3782	3782	3782	3782	
5°	3716	3712	3712	3707	3707	353
15°	3476	3476	3441	3406	3393	977
25°	3012	2995	2947	2842	2763	1383
35°	2444	2426	2308	2134	2081	1528
45°	1876	1836	1679	1539	1478	1445
55°	1303	1264	1145	1010	957	1169
65°	774	730	660	673	560	763
75°	310	288	271	258	284	333
85°	44	48	52	57	61	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3781.7	3781.7	3781.7	3781.7	3781.7
2.5°	3755.5	3755.5	3755.5	3751.1	3751.1
5°	3716.1	3711.7	3711.7	3707.4	3707.4
7.5°	3685.5	3681.1	3676.8	3672.4	3663.6
10°	3641.8	3641.8	3637.4	3615.6	3611.2
12.5°	3571.8	3567.5	3550.0	3519.4	3510.6
15°	3475.7	3475.7	3440.7	3405.7	3392.6
17.5°	3370.7	3366.4	3322.6	3287.7	3270.2
20°	3257.1	3248.3	3204.6	3147.8	3117.2
22.5°	3130.3	3130.3	3077.8	3003.5	2972.9
25°	3012.2	2994.7	2946.7	2841.7	2763.0
27.5°	2876.7	2850.5	2798.0	2649.4	2557.6
30°	2728.1	2714.9	2640.6	2448.3	2378.3
32.5°	2588.2	2566.3	2487.6	2286.5	2229.7
35°	2443.9	2426.4	2308.4	2133.5	2081.0
37.5°	2299.6	2277.8	2129.1	1989.2	1923.6
40°	2155.3	2129.1	1967.4	1840.6	1770.6
42.5°	2019.8	1984.8	1827.5	1691.9	1613.2
45°	1875.5	1836.2	1678.8	1538.9	1477.7
47.5°	1731.3	1696.3	1552.0	1407.7	1337.8
50°	1578.3	1547.6	1416.5	1272.2	1197.9
52.5°	1451.5	1403.4	1276.6	1132.3	1071.1
55°	1302.8	1263.5	1145.4	1009.9	957.4
57.5°	1167.3	1127.9	1018.7	891.9	848.1
60°	1040.5	983.7	891.9	782.6	747.6
62.5°	900.6	856.9	778.2	686.4	730.1
65°	773.8	730.1	660.2	673.3	559.6
67.5°	633.9	612.1	550.9	489.7	472.2
70°	515.9	489.7	467.8	402.2	384.7
72.5°	411.0	384.7	354.1	319.1	306.0
75°	310.4	288.5	271.1	257.9	284.2
77.5°	214.2	205.5	192.4	179.2	174.9
80°	139.9	135.5	131.2	126.8	122.4
82.5°	83.1	83.1	83.1	83.1	83.1
85°	43.7	48.1	52.5	56.8	61.2
87.5°	26.2	26.2	30.6	35.0	39.3
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)