

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: P546167

Luminaire Tested: **FMR-12-4-LD4-2HI-50-UNV-80-84-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: P546167
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-12-4-LD4-2HI-50-UNV-80-84-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

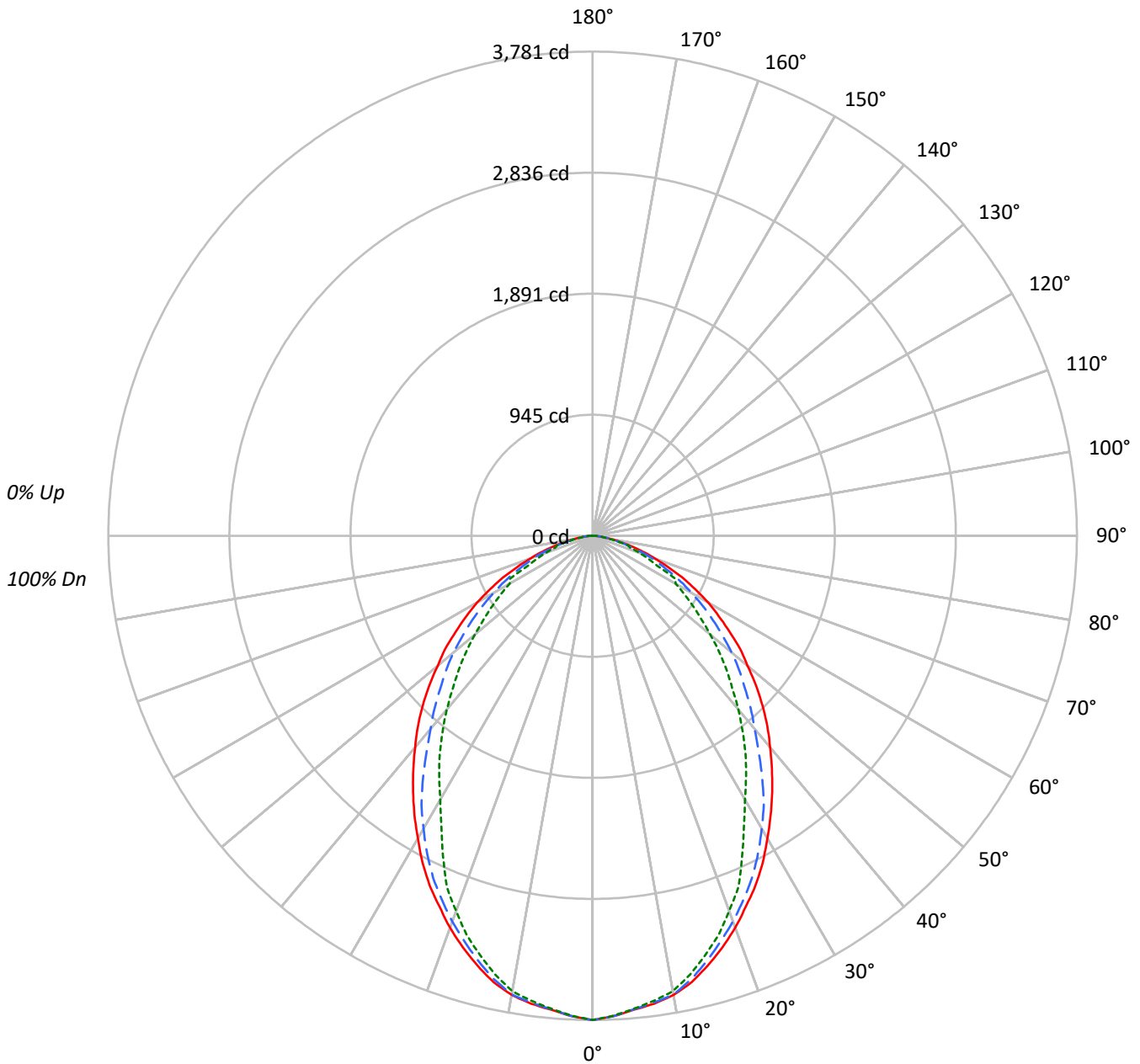
Lumens per Lamp: N/A
Luminaire Lumens: 7423.0 lumens
Efficiency: N/A
Efficacy: 85.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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: P546167

CATALOG NUMBER: FMR-12-4-LD4-2HI-50-UNV-80-84-EDD

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				20	
RC	80				70				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				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10175	10175	10175
5°	10037	10025	10013
10°	9950	9938	9866
15°	9682	9584	9450
20°	9326	9176	8925
25°	8943	8748	8203
30°	8476	8204	7389
35°	8027	7582	6835
40°	7570	6910	6219
45°	7137	6388	5623
50°	6606	5929	5014
55°	6111	5373	4491
60°	5599	4799	4023
65°	4926	4203	3563
70°	4058	3680	3027
75°	3227	2818	2954
80°	2168	2032	1897
85°	1349	1621	1890



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	352.0	4.7
10°-20°	966.0	13.0
20°-30°	1337.3	18.0
30°-40°	1426.0	19.2
40°-50°	1300.9	17.5
50°-60°	1019.1	13.7
60°-70°	664.2	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°	2655.3	35.8
0°-40°	4081.2	55.0
0°-60°	6401.3	86.2
0°-90°	7423.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7423.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3781	3781	3781	3781	3781	
5°	3716	3711	3711	3707	3707	353
15°	3475	3475	3440	3405	3392	977
25°	3012	2994	2946	2841	2763	1383
35°	2444	2426	2308	2133	2081	1528
45°	1875	1836	1679	1539	1478	1445
55°	1303	1263	1145	1010	957	1168
65°	774	730	660	673	560	762
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°	3781.2	3781.2	3781.2	3781.2	3781.2
2.5°	3754.9	3754.9	3754.9	3750.6	3750.6
5°	3715.6	3711.2	3711.2	3706.9	3706.9
7.5°	3685.0	3680.6	3676.3	3671.9	3663.2
10°	3641.3	3641.3	3636.9	3615.1	3610.7
12.5°	3571.4	3567.0	3549.5	3518.9	3510.2
15°	3475.2	3475.2	3440.2	3405.2	3392.1
17.5°	3370.3	3365.9	3322.2	3287.2	3269.7
20°	3256.6	3247.9	3204.2	3147.3	3116.7
22.5°	3129.9	3129.9	3077.4	3003.1	2972.5
25°	3011.8	2994.3	2946.3	2841.3	2762.7
27.5°	2876.3	2850.1	2797.6	2649.0	2557.2
30°	2727.7	2714.6	2640.3	2447.9	2378.0
32.5°	2587.8	2566.0	2487.3	2286.2	2229.4
35°	2443.6	2426.1	2308.0	2133.2	2080.7
37.5°	2299.3	2277.4	2128.8	1988.9	1923.4
40°	2155.1	2128.8	1967.1	1840.3	1770.4
42.5°	2019.5	1984.6	1827.2	1691.7	1613.0
45°	1875.3	1835.9	1678.6	1538.7	1477.5
47.5°	1731.0	1696.1	1551.8	1407.6	1337.6
50°	1578.0	1547.4	1416.3	1272.0	1197.7
52.5°	1451.3	1403.2	1276.4	1132.2	1071.0
55°	1302.6	1263.3	1145.3	1009.8	957.3
57.5°	1167.1	1127.8	1018.5	891.7	848.0
60°	1040.4	983.5	891.7	782.5	747.5
62.5°	900.5	856.8	778.1	686.3	730.0
65°	773.7	730.0	660.1	673.2	559.5
67.5°	633.8	612.0	550.8	489.6	472.1
70°	515.8	489.6	467.7	402.2	384.7
72.5°	410.9	384.7	354.1	319.1	306.0
75°	310.4	288.5	271.0	257.9	284.1
77.5°	214.2	205.5	192.3	179.2	174.9
80°	139.9	135.5	131.1	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)