

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: P547101

Luminaire Tested: **FMR-24-4-LD4-3LO-40-UNV-80-96-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: P547101
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-40-UNV-80-96-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

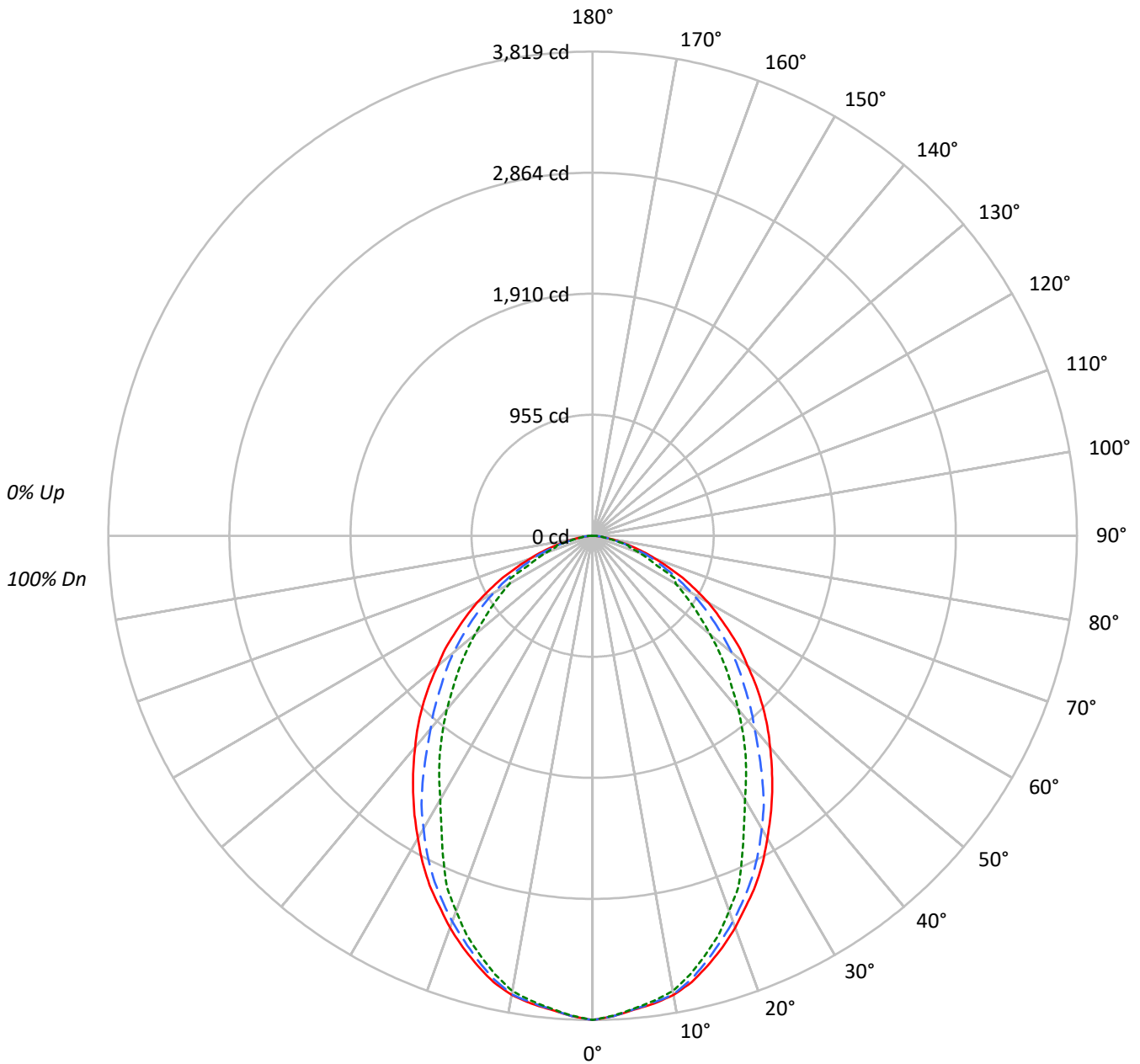
Lumens per Lamp: N/A
Luminaire Lumens: 7497.0 lumens
Efficiency: N/A
Efficacy: 106.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
Input Voltage (V): NR
Input Current (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

TEST NUMBER: P547101

CATALOG NUMBER: FMR-24-4-LD4-3LO-40-UNV-80-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P547101

CATALOG NUMBER: FMR-24-4-LD4-3LO-40-UNV-80-96-EDD

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°	5138	5138	5138
5°	5068	5062	5056
10°	5025	5018	4982
15°	4889	4840	4772
20°	4709	4634	4507
25°	4516	4418	4142
30°	4280	4143	3731
35°	4054	3829	3452
40°	3823	3489	3140
45°	3604	3226	2839
50°	3336	2994	2532
55°	3086	2713	2268
60°	2827	2423	2031
65°	2488	2122	1799
70°	2050	1858	1528
75°	1630	1423	1492
80°	1095	1026	958
85°	681	818	954



TEST NUMBER: P547101

CATALOG NUMBER: FMR-24-4-LD4-3LO-40-UNV-80-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	355.5	4.7
10°-20°	975.6	13.0
20°-30°	1350.7	18.0
30°-40°	1440.2	19.2
40°-50°	1313.9	17.5
50°-60°	1029.3	13.7
60°-70°	670.9	8.9
70°-80°	297.2	4.0
80°-90°	63.8	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°	2681.7	35.8
0°-40°	4121.9	55.0
0°-60°	6465.1	86.2
0°-90°	7497.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7497.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3819	3819	3819	3819	3819	
5°	3753	3748	3748	3744	3744	356
15°	3510	3510	3474	3439	3426	987
25°	3042	3024	2976	2870	2790	1397
35°	2468	2450	2331	2154	2102	1543
45°	1894	1854	1695	1554	1492	1459
55°	1316	1276	1157	1020	967	1180
65°	781	737	667	680	565	770
75°	314	291	274	260	287	336
85°	44	49	53	57	62	61
90°	0	0	0	0	0	



TEST NUMBER: P547101

CATALOG NUMBER: FMR-24-4-LD4-3LO-40-UNV-80-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3818.9	3818.9	3818.9	3818.9	3818.9
2.5°	3792.4	3792.4	3792.4	3788.0	3788.0
5°	3752.6	3748.2	3748.2	3743.8	3743.8
7.5°	3721.7	3717.3	3712.9	3708.5	3699.7
10°	3677.6	3677.6	3673.2	3651.1	3646.7
12.5°	3607.0	3602.5	3584.9	3554.0	3545.1
15°	3509.8	3509.8	3474.5	3439.2	3425.9
17.5°	3403.9	3399.5	3355.3	3320.0	3302.3
20°	3289.1	3280.3	3236.1	3178.7	3147.8
22.5°	3161.1	3161.1	3108.1	3033.0	3002.1
25°	3041.9	3024.2	2975.6	2869.7	2790.2
27.5°	2905.0	2878.5	2825.5	2675.4	2582.7
30°	2754.9	2741.6	2666.6	2472.3	2401.7
32.5°	2613.6	2591.5	2512.1	2309.0	2251.6
35°	2467.9	2450.3	2331.1	2154.5	2101.5
37.5°	2322.2	2300.2	2150.0	2008.8	1942.5
40°	2176.5	2150.0	1986.7	1858.7	1788.0
42.5°	2039.7	2004.4	1845.4	1708.6	1629.1
45°	1894.0	1854.2	1695.3	1554.0	1492.2
47.5°	1748.3	1713.0	1567.3	1421.6	1351.0
50°	1593.8	1562.9	1430.4	1284.7	1209.7
52.5°	1465.7	1417.2	1289.1	1143.5	1081.6
55°	1315.6	1275.9	1156.7	1019.8	966.9
57.5°	1178.8	1139.0	1028.7	900.6	856.5
60°	1050.7	993.3	900.6	790.3	754.9
62.5°	909.5	865.3	785.8	693.1	737.3
65°	781.4	737.3	666.6	679.9	565.1
67.5°	640.2	618.1	556.3	494.5	476.8
70°	521.0	494.5	472.4	406.2	388.5
72.5°	415.0	388.5	357.6	322.3	309.0
75°	313.5	291.4	273.7	260.5	287.0
77.5°	216.3	207.5	194.3	181.0	176.6
80°	141.3	136.9	132.4	128.0	123.6
82.5°	83.9	83.9	83.9	83.9	83.9
85°	44.1	48.6	53.0	57.4	61.8
87.5°	26.5	26.5	30.9	35.3	39.7
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)