

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: P547221

Luminaire Tested: **FMR-24-4-LD4-3STD-40-UNV-93-96-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: P547221
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-LD4-3STD-40-UNV-93-96-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

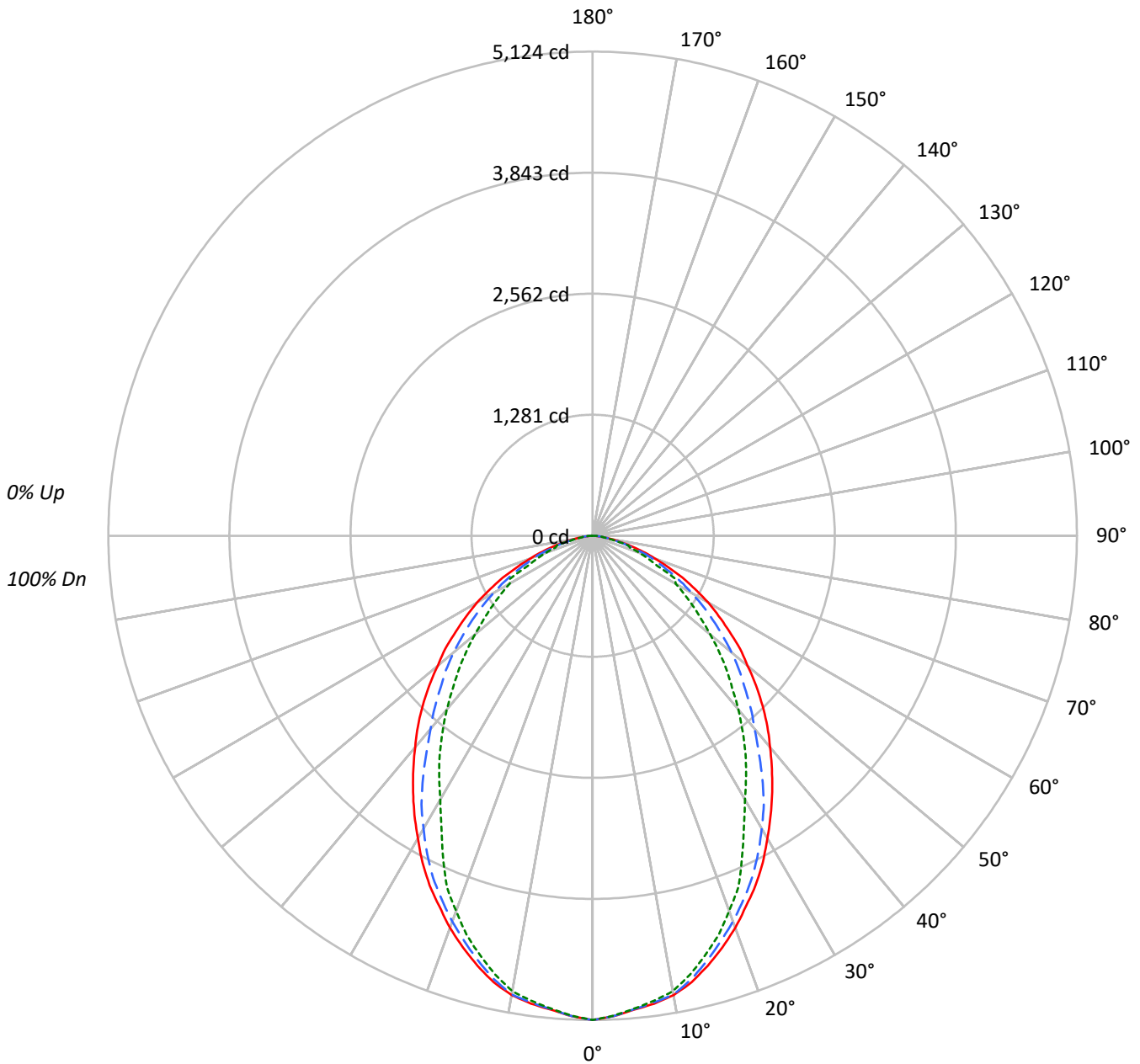
Lumens per Lamp: N/A
Luminaire Lumens: 10060.0 lumens
Efficiency: N/A
Efficacy: 100.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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: P547221

CATALOG NUMBER: FMR-24-4-LD4-3STD-40-UNV-93-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P547221

CATALOG NUMBER: FMR-24-4-LD4-3STD-40-UNV-93-96-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°	6895	6895	6895
5°	6801	6793	6785
10°	6742	6734	6686
15°	6560	6494	6404
20°	6319	6218	6048
25°	6060	5928	5558
30°	5743	5559	5007
35°	5439	5138	4632
40°	5130	4682	4214
45°	4836	4329	3810
50°	4477	4018	3398
55°	4141	3641	3043
60°	3794	3252	2726
65°	3338	2848	2414
70°	2750	2494	2051
75°	2187	1909	2002
80°	1469	1377	1285
85°	914	1098	1280



TEST NUMBER: P547221

CATALOG NUMBER: FMR-24-4-LD4-3STD-40-UNV-93-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	477.0	4.7
10°-20°	1309.1	13.0
20°-30°	1812.4	18.0
30°-40°	1932.5	19.2
40°-50°	1763.0	17.5
50°-60°	1381.2	13.7
60°-70°	900.2	8.9
70°-80°	398.8	4.0
80°-90°	85.6	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°	3598.5	35.8
0°-40°	5531.1	55.0
0°-60°	8675.3	86.2
0°-90°	10060.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10060.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5124	5124	5124	5124	5124	
5°	5036	5030	5030	5024	5024	478
15°	4710	4710	4662	4615	4597	1324
25°	4082	4058	3993	3851	3744	1874
35°	3312	3288	3128	2891	2820	2070
45°	2542	2488	2275	2085	2002	1958
55°	1765	1712	1552	1368	1297	1583
65°	1049	989	895	912	758	1033
75°	421	391	367	350	385	451
85°	59	65	71	77	83	82
90°	0	0	0	0	0	



TEST NUMBER: P547221

CATALOG NUMBER: FMR-24-4-LD4-3STD-40-UNV-93-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5124.4	5124.4	5124.4	5124.4	5124.4
2.5°	5088.9	5088.9	5088.9	5083.0	5083.0
5°	5035.6	5029.6	5029.6	5023.7	5023.7
7.5°	4994.1	4988.2	4982.2	4976.3	4964.5
10°	4934.9	4934.9	4928.9	4899.3	4893.4
12.5°	4840.1	4834.1	4810.4	4769.0	4757.1
15°	4709.7	4709.7	4662.3	4614.9	4597.2
17.5°	4567.6	4561.6	4502.4	4455.0	4431.3
20°	4413.5	4401.7	4342.4	4265.4	4224.0
22.5°	4241.7	4241.7	4170.6	4069.9	4028.5
25°	4081.8	4058.1	3992.9	3850.7	3744.1
27.5°	3898.1	3862.6	3791.5	3590.1	3465.7
30°	3696.7	3678.9	3578.2	3317.5	3222.8
32.5°	3507.1	3477.5	3370.9	3098.4	3021.3
35°	3311.6	3287.9	3128.0	2891.0	2819.9
37.5°	3116.1	3086.5	2885.1	2695.5	2606.6
40°	2920.6	2885.1	2665.9	2494.1	2399.3
42.5°	2737.0	2689.6	2476.3	2292.7	2186.0
45°	2541.5	2488.2	2274.9	2085.3	2002.4
47.5°	2346.0	2298.6	2103.1	1907.6	1812.8
50°	2138.6	2097.2	1919.4	1723.9	1623.2
52.5°	1966.8	1901.7	1729.9	1534.4	1451.4
55°	1765.4	1712.1	1552.1	1368.5	1297.4
57.5°	1581.8	1528.4	1380.3	1208.5	1149.3
60°	1410.0	1332.9	1208.5	1060.4	1013.0
62.5°	1220.4	1161.1	1054.5	930.1	989.3
65°	1048.6	989.3	894.6	912.3	758.3
67.5°	859.0	829.4	746.4	663.5	639.8
70°	699.1	663.5	633.9	545.0	521.3
72.5°	556.9	521.3	479.9	432.5	414.7
75°	420.6	391.0	367.3	349.5	385.1
77.5°	290.3	278.4	260.7	242.9	237.0
80°	189.6	183.7	177.7	171.8	165.9
82.5°	112.6	112.6	112.6	112.6	112.6
85°	59.2	65.2	71.1	77.0	82.9
87.5°	35.5	35.5	41.5	47.4	53.3
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)