

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: P547191

Luminaire Tested: **FMR-24-4-LD4-3STD-40-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: P547191
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-80-84-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

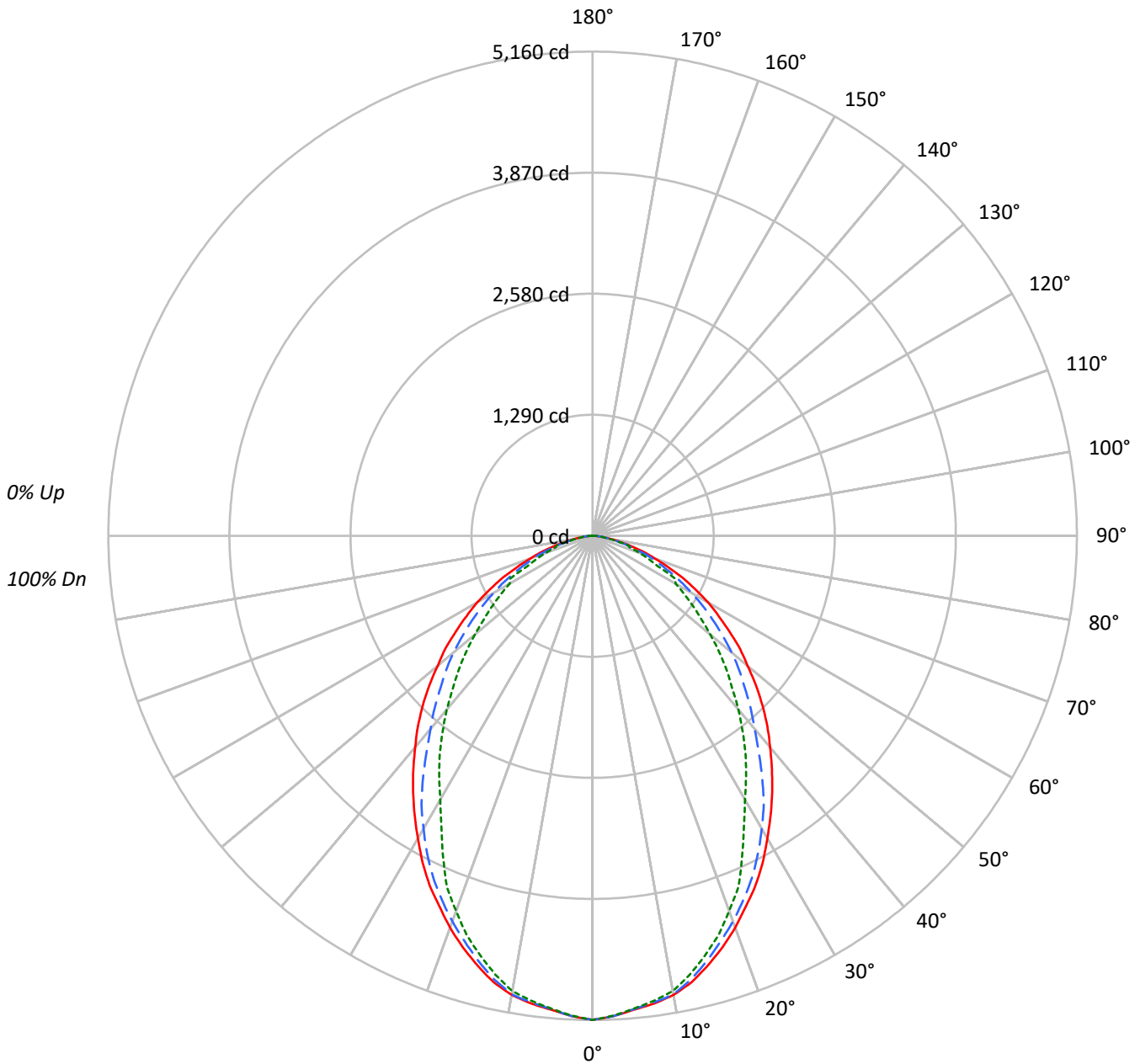
Lumens per Lamp: N/A
Luminaire Lumens: 10129.0 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
Input Voltage (V): NR
Input Current (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: P547191

CATALOG NUMBER: FMR-24-4-LD4-3STD-40-UNV-80-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P547191

CATALOG NUMBER: FMR-24-4-LD4-3STD-40-UNV-80-84-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°	6942	6942	6942
5°	6848	6840	6832
10°	6788	6780	6731
15°	6605	6539	6448
20°	6363	6260	6089
25°	6101	5968	5597
30°	5783	5597	5041
35°	5477	5173	4664
40°	5165	4715	4243
45°	4869	4358	3836
50°	4507	4045	3421
55°	4170	3666	3064
60°	3820	3274	2745
65°	3361	2868	2431
70°	2769	2511	2065
75°	2202	1922	2015
80°	1479	1386	1294
85°	920	1105	1289



TEST NUMBER: P547191

CATALOG NUMBER: FMR-24-4-LD4-3STD-40-UNV-80-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	480.3	4.7
10°-20°	1318.1	13.0
20°-30°	1824.8	18.0
30°-40°	1945.8	19.2
40°-50°	1775.1	17.5
50°-60°	1390.7	13.7
60°-70°	906.4	8.9
70°-80°	401.6	4.0
80°-90°	86.2	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°	3623.2	35.8
0°-40°	5569.0	55.0
0°-60°	8734.8	86.2
0°-90°	10129.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10129.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5160	5160	5160	5160	5160	
5°	5070	5064	5064	5058	5058	481
15°	4742	4742	4694	4647	4629	1333
25°	4110	4086	4020	3877	3770	1887
35°	3334	3310	3149	2911	2839	2085
45°	2559	2505	2290	2100	2016	1971
55°	1778	1724	1563	1378	1306	1594
65°	1056	996	901	919	764	1040
75°	424	394	370	352	388	454
85°	60	66	72	78	84	83
90°	0	0	0	0	0	



TEST NUMBER: P547191

CATALOG NUMBER: FMR-24-4-LD4-3STD-40-UNV-80-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5159.6	5159.6	5159.6	5159.6	5159.6
2.5°	5123.8	5123.8	5123.8	5117.8	5117.8
5°	5070.1	5064.1	5064.1	5058.2	5058.2
7.5°	5028.4	5022.4	5016.4	5010.5	4998.5
10°	4968.7	4968.7	4962.7	4932.9	4926.9
12.5°	4873.3	4867.3	4843.4	4801.7	4789.8
15°	4742.0	4742.0	4694.3	4646.6	4628.7
17.5°	4598.9	4592.9	4533.3	4485.6	4461.7
20°	4443.8	4431.9	4372.2	4294.7	4252.9
22.5°	4270.8	4270.8	4199.2	4097.8	4056.1
25°	4109.8	4085.9	4020.3	3877.1	3769.8
27.5°	3924.9	3889.1	3817.5	3614.7	3489.4
30°	3722.1	3704.2	3602.8	3340.3	3244.9
32.5°	3531.2	3501.4	3394.0	3119.6	3042.1
35°	3334.3	3310.5	3149.4	2910.8	2839.3
37.5°	3137.5	3107.7	2904.9	2714.0	2624.5
40°	2940.7	2904.9	2684.2	2511.2	2415.8
42.5°	2755.8	2708.0	2493.3	2308.4	2201.0
45°	2558.9	2505.2	2290.5	2099.6	2016.1
47.5°	2362.1	2314.4	2117.5	1920.7	1825.2
50°	2153.3	2111.5	1932.6	1735.8	1634.4
52.5°	1980.3	1914.7	1741.7	1544.9	1461.4
55°	1777.5	1723.8	1562.8	1377.9	1306.3
57.5°	1592.6	1538.9	1389.8	1216.8	1157.2
60°	1419.6	1342.1	1216.8	1067.7	1020.0
62.5°	1228.8	1169.1	1061.7	936.5	996.1
65°	1055.8	996.1	900.7	918.6	763.5
67.5°	864.9	835.1	751.6	668.1	644.2
70°	703.8	668.1	638.2	548.8	524.9
72.5°	560.7	524.9	483.2	435.4	417.5
75°	423.5	393.7	369.8	351.9	387.7
77.5°	292.3	280.3	262.5	244.6	238.6
80°	190.9	184.9	178.9	173.0	167.0
82.5°	113.3	113.3	113.3	113.3	113.3
85°	59.6	65.6	71.6	77.5	83.5
87.5°	35.8	35.8	41.8	47.7	53.7
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)