

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: P547323

Luminaire Tested: **FMR-24-4-LD4-4HI-50-UNV-80-88-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: P547323
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-LD4-4HI-50-UNV-80-88-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

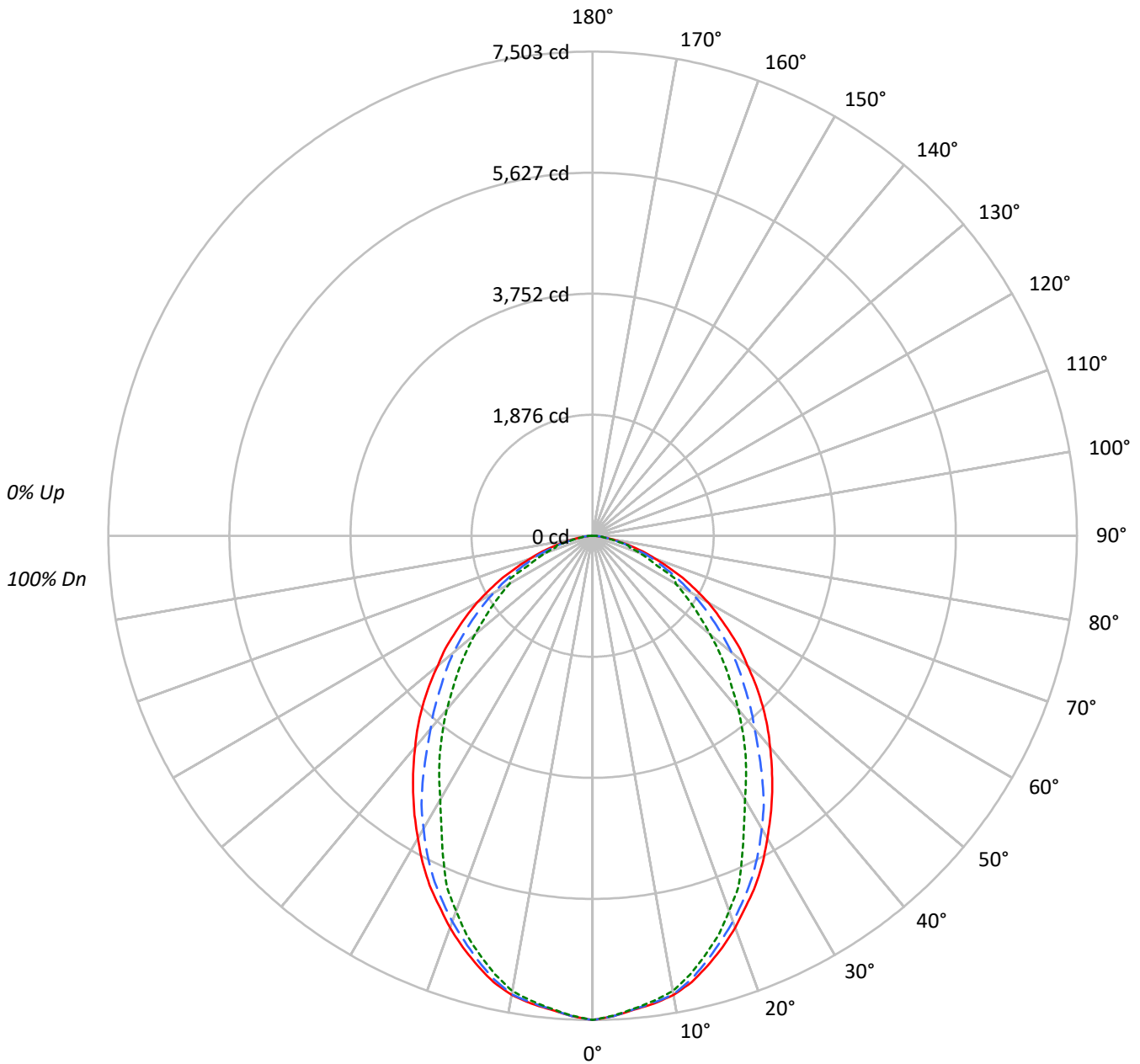
Lumens per Lamp: N/A
Luminaire Lumens: 14729.0 lumens
Efficiency: N/A
Efficacy: 85.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
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: P547323

CATALOG NUMBER: FMR-24-4-LD4-4HI-50-UNV-80-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P547323

CATALOG NUMBER: FMR-24-4-LD4-4HI-50-UNV-80-88-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°	10095	10095	10095
5°	9958	9946	9934
10°	9871	9860	9788
15°	9605	9509	9376
20°	9252	9103	8855
25°	8872	8679	8138
30°	8409	8139	7331
35°	7964	7522	6782
40°	7511	6856	6170
45°	7080	6338	5578
50°	6554	5883	4975
55°	6063	5331	4456
60°	5555	4761	3991
65°	4888	4170	3535
70°	4026	3651	3003
75°	3201	2796	2931
80°	2151	2016	1882
85°	1338	1607	1874



TEST NUMBER: P547323

CATALOG NUMBER: FMR-24-4-LD4-4HI-50-UNV-80-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	698.4	4.7
10°-20°	1916.7	13.0
20°-30°	2653.6	18.0
30°-40°	2829.5	19.2
40°-50°	2581.3	17.5
50°-60°	2022.2	13.7
60°-70°	1318.0	8.9
70°-80°	583.9	4.0
80°-90°	125.4	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°	5268.7	35.8
0°-40°	8098.2	55.0
0°-60°	12701.7	86.2
0°-90°	14729.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14729.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7503	7503	7503	7503	7503	
5°	7373	7364	7364	7355	7355	700
15°	6896	6896	6826	6757	6731	1939
25°	5976	5942	5846	5638	5482	2744
35°	4849	4814	4580	4233	4129	3031
45°	3721	3643	3331	3053	2932	2866
55°	2585	2507	2272	2004	1900	2318
65°	1535	1448	1310	1336	1110	1513
75°	616	572	538	512	564	660
85°	87	95	104	113	121	120
90°	0	0	0	0	0	



TEST NUMBER: P547323

CATALOG NUMBER: FMR-24-4-LD4-4HI-50-UNV-80-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7502.8	7502.8	7502.8	7502.8	7502.8
2.5°	7450.7	7450.7	7450.7	7442.0	7442.0
5°	7372.7	7364.0	7364.0	7355.3	7355.3
7.5°	7311.9	7303.3	7294.6	7285.9	7268.6
10°	7225.2	7225.2	7216.5	7173.2	7164.5
12.5°	7086.4	7077.7	7043.0	6982.3	6965.0
15°	6895.6	6895.6	6826.2	6756.8	6730.8
17.5°	6687.4	6678.8	6592.0	6522.6	6487.9
20°	6461.9	6444.6	6357.8	6245.1	6184.4
22.5°	6210.4	6210.4	6106.3	5958.8	5898.1
25°	5976.2	5941.5	5846.1	5637.9	5481.8
27.5°	5707.3	5655.3	5551.2	5256.3	5074.1
30°	5412.4	5386.4	5238.9	4857.3	4718.5
32.5°	5134.8	5091.5	4935.3	4536.3	4423.6
35°	4848.6	4813.9	4579.7	4232.8	4128.7
37.5°	4562.4	4519.0	4224.1	3946.5	3816.4
40°	4276.1	4224.1	3903.2	3651.6	3512.9
42.5°	4007.3	3937.9	3625.6	3356.7	3200.6
45°	3721.0	3643.0	3330.7	3053.1	2931.7
47.5°	3434.8	3365.4	3079.2	2792.9	2654.2
50°	3131.2	3070.5	2810.3	2524.0	2376.6
52.5°	2879.7	2784.3	2532.7	2246.5	2125.1
55°	2584.8	2506.7	2272.5	2003.6	1899.5
57.5°	2315.9	2237.8	2021.0	1769.4	1682.7
60°	2064.3	1951.6	1769.4	1552.6	1483.2
62.5°	1786.8	1700.0	1543.9	1361.8	1448.5
65°	1535.2	1448.5	1309.7	1335.8	1110.2
67.5°	1257.7	1214.3	1092.9	971.5	936.8
70°	1023.5	971.5	928.1	798.0	763.3
72.5°	815.3	763.3	702.6	633.2	607.2
75°	615.8	572.5	537.8	511.7	563.8
77.5°	425.0	407.7	381.6	355.6	346.9
80°	277.6	268.9	260.2	251.5	242.9
82.5°	164.8	164.8	164.8	164.8	164.8
85°	86.7	95.4	104.1	112.8	121.4
87.5°	52.0	52.0	60.7	69.4	78.1
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)