

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: P547061

Luminaire Tested: **FMR-24-4-LD4-3HI-50-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: P547061
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-LD4-3HI-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

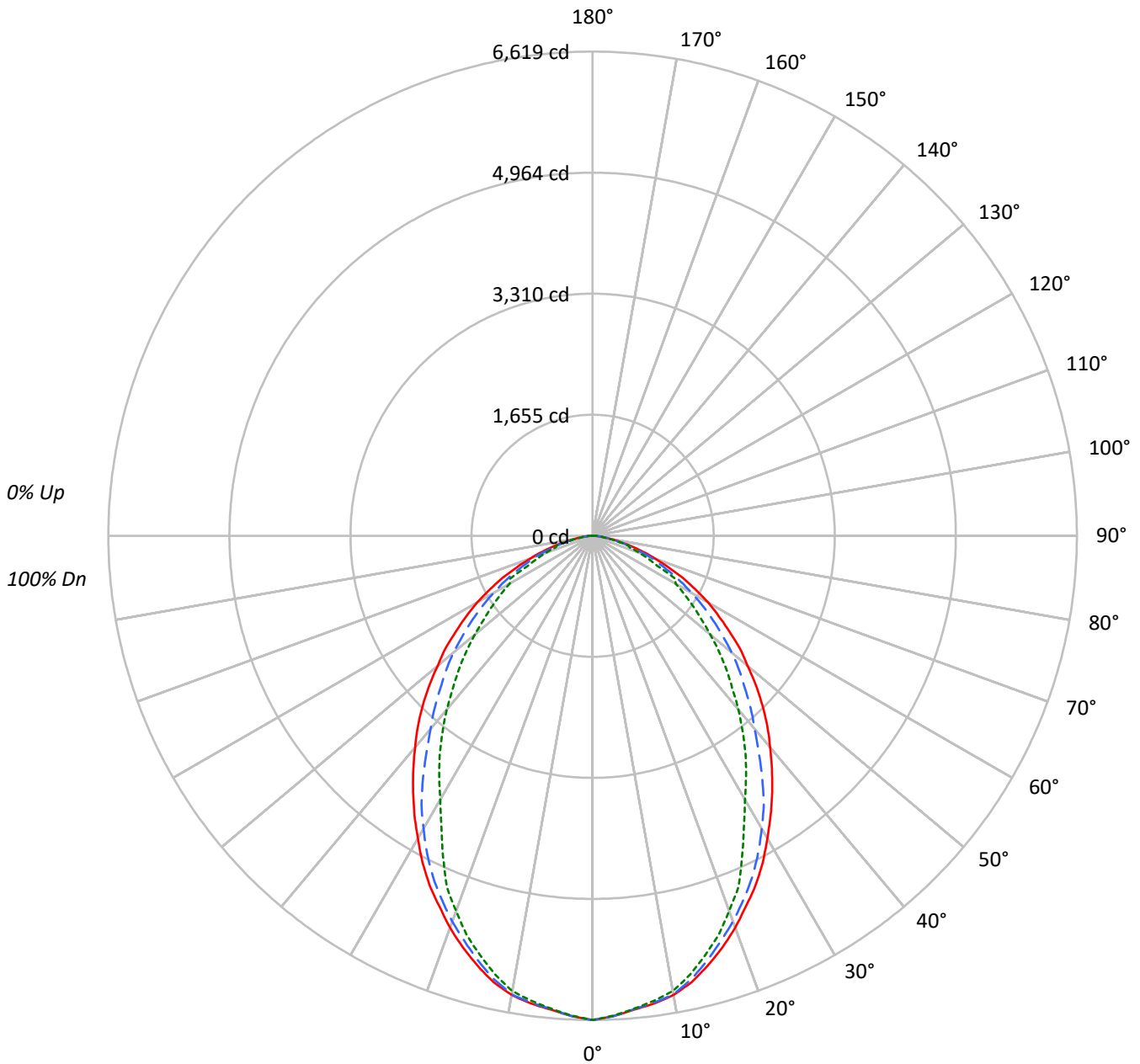
Lumens per Lamp: N/A
Luminaire Lumens: 12994.0 lumens
Efficiency: N/A
Efficacy: 100.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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: P547061

CATALOG NUMBER: FMR-24-4-LD4-3HI-50-UNV-93-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P547061

CATALOG NUMBER: FMR-24-4-LD4-3HI-50-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°	8906	8906	8906
5°	8785	8774	8764
10°	8709	8698	8635
15°	8474	8389	8271
20°	8162	8031	7812
25°	7827	7657	7180
30°	7418	7181	6467
35°	7026	6636	5983
40°	6626	6048	5443
45°	6246	5591	4921
50°	5782	5189	4389
55°	5349	4703	3931
60°	4901	4201	3521
65°	4312	3679	3118
70°	3552	3221	2649
75°	2824	2466	2586
80°	1898	1779	1660
85°	1181	1417	1653



TEST NUMBER: P547061

CATALOG NUMBER: FMR-24-4-LD4-3HI-50-UNV-93-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	616.1	4.7
10°-20°	1690.9	13.0
20°-30°	2341.0	18.0
30°-40°	2496.2	19.2
40°-50°	2277.2	17.5
50°-60°	1784.0	13.7
60°-70°	1162.8	8.9
70°-80°	515.1	4.0
80°-90°	110.6	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°	4648.1	35.8
0°-40°	7144.2	55.0
0°-60°	11205.5	86.2
0°-90°	12994.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12994.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6619	6619	6619	6619	6619	
5°	6504	6496	6496	6489	6489	617
15°	6083	6083	6022	5961	5938	1710
25°	5272	5242	5157	4974	4836	2420
35°	4278	4247	4040	3734	3642	2674
45°	3283	3214	2938	2694	2586	2529
55°	2280	2211	2005	1768	1676	2045
65°	1354	1278	1156	1178	980	1335
75°	543	505	474	452	497	582
85°	76	84	92	100	107	106
90°	0	0	0	0	0	



TEST NUMBER: P547061

CATALOG NUMBER: FMR-24-4-LD4-3HI-50-UNV-93-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6619.0	6619.0	6619.0	6619.0	6619.0
2.5°	6573.1	6573.1	6573.1	6565.4	6565.4
5°	6504.2	6496.5	6496.5	6488.9	6488.9
7.5°	6450.6	6443.0	6435.3	6427.7	6412.4
10°	6374.1	6374.1	6366.5	6328.2	6320.5
12.5°	6251.7	6244.0	6213.4	6159.9	6144.5
15°	6083.3	6083.3	6022.1	5960.9	5937.9
17.5°	5899.7	5892.0	5815.5	5754.3	5723.7
20°	5700.7	5685.4	5608.9	5509.4	5455.9
22.5°	5478.8	5478.8	5387.0	5256.9	5203.4
25°	5272.2	5241.6	5157.4	4973.8	4836.1
27.5°	5035.0	4989.1	4897.3	4637.1	4476.4
30°	4774.8	4751.9	4621.8	4285.1	4162.7
32.5°	4530.0	4491.7	4354.0	4002.0	3902.5
35°	4277.5	4246.9	4040.2	3734.2	3642.3
37.5°	4024.9	3986.7	3726.5	3481.7	3366.9
40°	3772.4	3726.5	3443.4	3221.5	3099.1
42.5°	3535.2	3474.0	3198.5	2961.3	2823.6
45°	3282.7	3213.8	2938.4	2693.5	2586.4
47.5°	3030.2	2969.0	2716.5	2463.9	2341.5
50°	2762.4	2708.8	2479.2	2226.7	2096.6
52.5°	2540.5	2456.3	2234.4	1981.9	1874.7
55°	2280.3	2211.4	2004.8	1767.6	1675.8
57.5°	2043.1	1974.2	1782.9	1561.0	1484.5
60°	1821.2	1721.7	1561.0	1369.7	1308.5
62.5°	1576.3	1499.8	1362.1	1201.4	1277.9
65°	1354.4	1277.9	1155.5	1178.4	979.5
67.5°	1109.5	1071.3	964.2	857.0	826.4
70°	902.9	857.0	818.8	704.0	673.4
72.5°	719.3	673.4	619.8	558.6	535.6
75°	543.3	505.0	474.4	451.5	497.4
77.5°	374.9	359.6	336.7	313.7	306.1
80°	244.9	237.2	229.6	221.9	214.3
82.5°	145.4	145.4	145.4	145.4	145.4
85°	76.5	84.2	91.8	99.5	107.1
87.5°	45.9	45.9	53.6	61.2	68.9
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)