

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: P547034

Luminaire Tested: **FMR-24-4-LD4-3HI-50-UNV-80-87-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: P547034
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-80-87-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

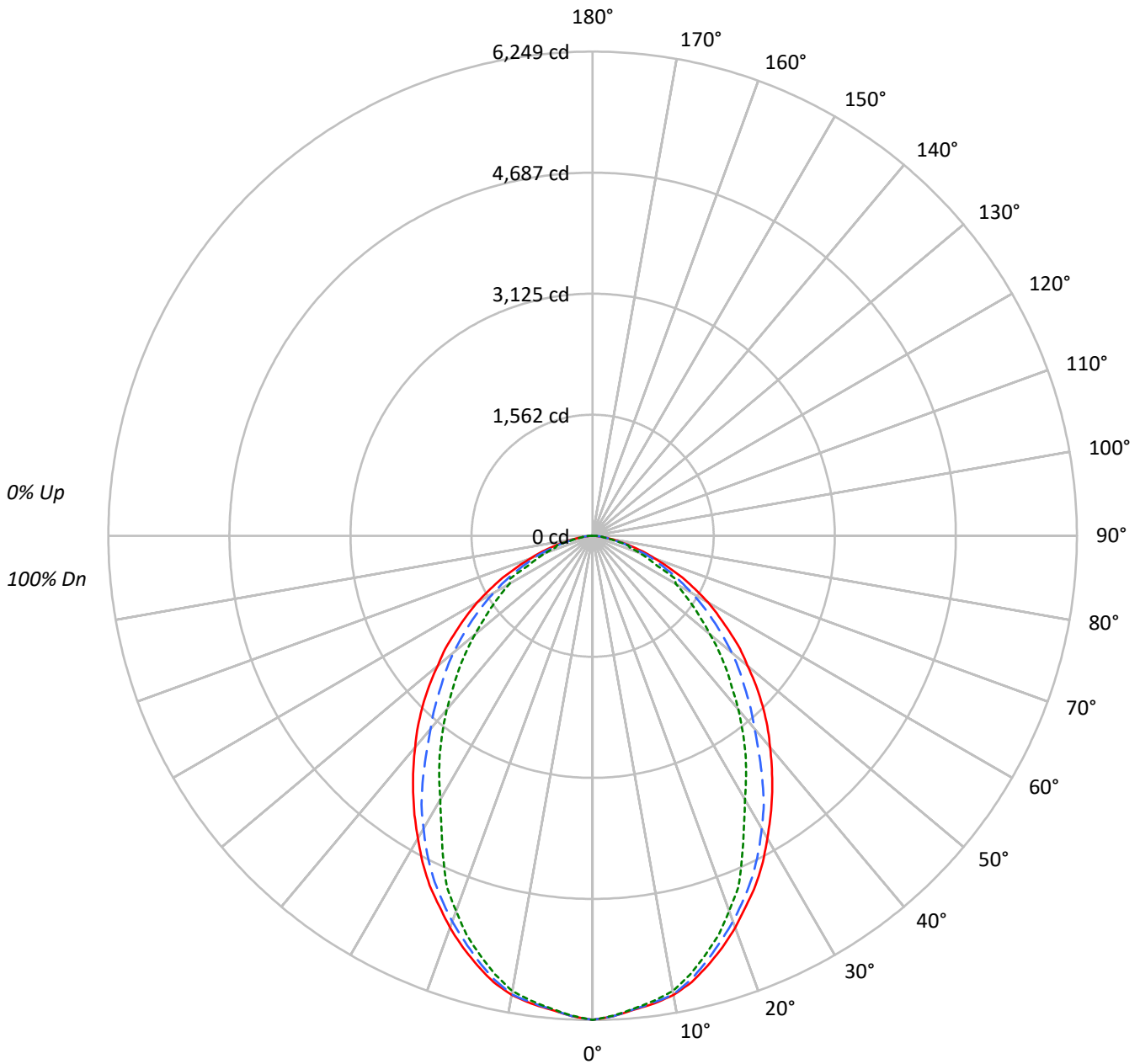
Lumens per Lamp: N/A
Luminaire Lumens: 12267.0 lumens
Efficiency: N/A
Efficacy: 94.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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: P547034

CATALOG NUMBER: FMR-24-4-LD4-3HI-50-UNV-80-87-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P547034

CATALOG NUMBER: FMR-24-4-LD4-3HI-50-UNV-80-87-EDD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				
RC	80				70				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	100	100	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8407	8407	8407
5°	8293	8284	8274
10°	8221	8212	8152
15°	8000	7919	7808
20°	7706	7582	7375
25°	7389	7228	6778
30°	7003	6779	6105
35°	6633	6265	5648
40°	6255	5710	5139
45°	5897	5278	4646
50°	5459	4899	4143
55°	5050	4440	3711
60°	4627	3966	3324
65°	4071	3473	2944
70°	3353	3041	2501
75°	2666	2328	2441
80°	1791	1679	1567
85°	1115	1338	1561



TEST NUMBER: P547034

CATALOG NUMBER: FMR-24-4-LD4-3HI-50-UNV-80-87-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	581.7	4.7
10°-20°	1596.3	13.0
20°-30°	2210.0	18.0
30°-40°	2356.5	19.2
40°-50°	2149.8	17.5
50°-60°	1684.2	13.7
60°-70°	1097.7	8.9
70°-80°	486.3	4.0
80°-90°	104.4	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°	4388.0	35.8
0°-40°	6744.5	55.0
0°-60°	10578.6	86.2
0°-90°	12267.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12267.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6249	6249	6249	6249	6249	
5°	6140	6133	6133	6126	6126	583
15°	5743	5743	5685	5627	5606	1615
25°	4977	4948	4869	4696	4566	2285
35°	4038	4009	3814	3525	3439	2525
45°	3099	3034	2774	2543	2442	2387
55°	2153	2088	1893	1669	1582	1931
65°	1279	1206	1091	1112	925	1260
75°	513	477	448	426	470	550
85°	72	80	87	94	101	100
90°	0	0	0	0	0	



TEST NUMBER: P547034

CATALOG NUMBER: FMR-24-4-LD4-3HI-50-UNV-80-87-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6248.6	6248.6	6248.6	6248.6	6248.6
2.5°	6205.3	6205.3	6205.3	6198.1	6198.1
5°	6140.3	6133.1	6133.1	6125.8	6125.8
7.5°	6089.7	6082.5	6075.3	6068.0	6053.6
10°	6017.5	6017.5	6010.3	5974.1	5966.9
12.5°	5901.9	5894.7	5865.8	5815.2	5800.8
15°	5743.0	5743.0	5685.2	5627.4	5605.7
17.5°	5569.6	5562.4	5490.1	5432.3	5403.5
20°	5381.8	5367.3	5295.1	5201.2	5150.6
22.5°	5172.3	5172.3	5085.6	4962.8	4912.2
25°	4977.2	4948.3	4868.9	4695.5	4565.5
27.5°	4753.3	4710.0	4623.3	4377.7	4226.0
30°	4507.7	4486.0	4363.2	4045.4	3929.8
32.5°	4276.5	4240.4	4110.4	3778.1	3684.2
35°	4038.1	4009.2	3814.2	3525.2	3438.6
37.5°	3799.8	3763.6	3518.0	3286.9	3178.5
40°	3561.4	3518.0	3250.7	3041.2	2925.7
42.5°	3337.4	3279.6	3019.6	2795.6	2665.6
45°	3099.0	3034.0	2774.0	2542.8	2441.7
47.5°	2860.7	2802.9	2564.5	2326.1	2210.5
50°	2607.8	2557.2	2340.5	2102.1	1979.3
52.5°	2398.3	2318.9	2109.4	1871.0	1769.8
55°	2152.7	2087.7	1892.7	1668.7	1582.0
57.5°	1928.8	1863.8	1683.2	1473.7	1401.4
60°	1719.3	1625.4	1473.7	1293.1	1235.3
62.5°	1488.1	1415.9	1285.8	1134.1	1206.4
65°	1278.6	1206.4	1090.8	1112.5	924.7
67.5°	1047.5	1011.3	910.2	809.1	780.2
70°	852.4	809.1	773.0	664.6	635.7
72.5°	679.0	635.7	585.1	527.3	505.7
75°	512.9	476.8	447.9	426.2	469.6
77.5°	354.0	339.5	317.9	296.2	289.0
80°	231.2	223.9	216.7	209.5	202.3
82.5°	137.3	137.3	137.3	137.3	137.3
85°	72.2	79.5	86.7	93.9	101.1
87.5°	43.3	43.3	50.6	57.8	65.0
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)