

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: P547040

Luminaire Tested: **FMR-24-4-LD4-3HI-50-UNV-81-85-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: P547040
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-81-85-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

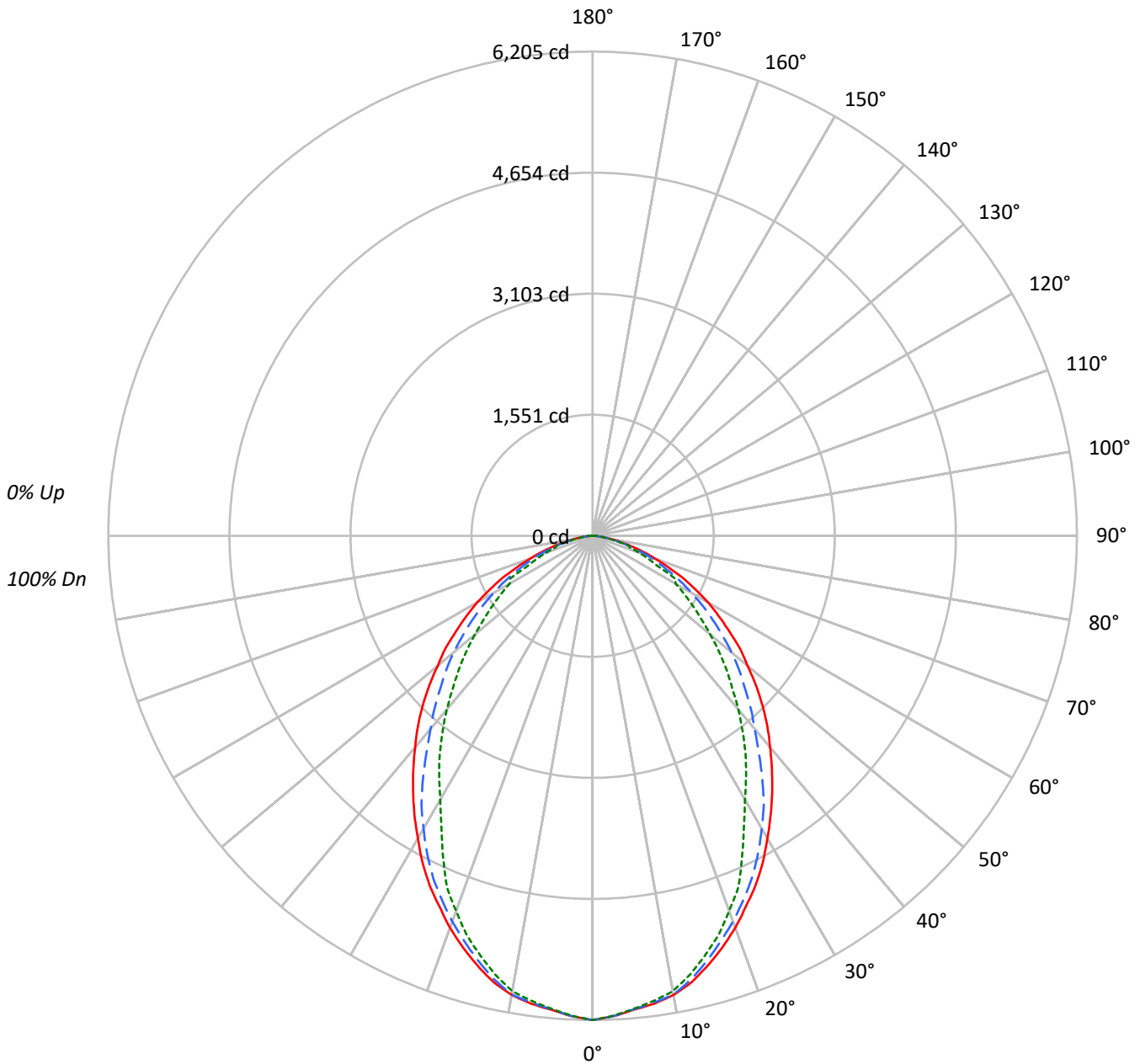
Lumens per Lamp: N/A
Luminaire Lumens: 12182.0 lumens
Efficiency: N/A
Efficacy: 94.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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: P547040

CATALOG NUMBER: FMR-24-4-LD4-3HI-50-UNV-81-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P547040

CATALOG NUMBER: FMR-24-4-LD4-3HI-50-UNV-81-85-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°	8349	8349	8349
5°	8236	8226	8216
10°	8164	8155	8096
15°	7944	7864	7754
20°	7652	7529	7324
25°	7338	7178	6731
30°	6955	6732	6063
35°	6587	6222	5609
40°	6212	5670	5103
45°	5856	5242	4614
50°	5421	4865	4114
55°	5015	4409	3685
60°	4595	3938	3301
65°	4043	3449	2923
70°	3330	3020	2484
75°	2648	2312	2424
80°	1779	1667	1557
85°	1107	1329	1550



TEST NUMBER: P547040

CATALOG NUMBER: FMR-24-4-LD4-3HI-50-UNV-81-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	577.6	4.7
10°-20°	1585.3	13.0
20°-30°	2194.7	18.0
30°-40°	2340.2	19.2
40°-50°	2134.9	17.5
50°-60°	1672.5	13.7
60°-70°	1090.1	8.9
70°-80°	483.0	4.0
80°-90°	103.7	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°	4357.6	35.8
0°-40°	6697.8	55.0
0°-60°	10505.3	86.2
0°-90°	12182.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12182.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6205	6205	6205	6205	6205	
5°	6098	6091	6091	6083	6083	579
15°	5703	5703	5646	5588	5567	1603
25°	4943	4914	4835	4663	4534	2269
35°	4010	3982	3788	3501	3415	2507
45°	3078	3013	2755	2525	2425	2371
55°	2138	2073	1880	1657	1571	1917
65°	1270	1198	1083	1105	918	1251
75°	509	474	445	423	466	546
85°	72	79	86	93	100	99
90°	0	0	0	0	0	



TEST NUMBER: P547040

CATALOG NUMBER: FMR-24-4-LD4-3HI-50-UNV-81-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6205.3	6205.3	6205.3	6205.3	6205.3
2.5°	6162.3	6162.3	6162.3	6155.1	6155.1
5°	6097.7	6090.6	6090.6	6083.4	6083.4
7.5°	6047.5	6040.4	6033.2	6026.0	6011.7
10°	5975.8	5975.8	5968.6	5932.7	5925.6
12.5°	5861.0	5853.8	5825.1	5774.9	5760.6
15°	5703.2	5703.2	5645.8	5588.4	5566.9
17.5°	5531.0	5523.8	5452.1	5394.7	5366.0
20°	5344.5	5330.1	5258.4	5165.1	5114.9
22.5°	5136.4	5136.4	5050.4	4928.4	4878.2
25°	4942.8	4914.1	4835.1	4663.0	4533.8
27.5°	4720.4	4677.3	4591.2	4347.3	4196.7
30°	4476.5	4454.9	4333.0	4017.3	3902.6
32.5°	4246.9	4211.0	4081.9	3751.9	3658.6
35°	4010.2	3981.5	3787.8	3500.8	3414.7
37.5°	3773.4	3737.6	3493.6	3264.1	3156.5
40°	3536.7	3493.6	3228.2	3020.2	2905.4
42.5°	3314.3	3256.9	2998.7	2776.3	2647.1
45°	3077.6	3013.0	2754.7	2525.2	2424.7
47.5°	2840.8	2783.4	2546.7	2310.0	2195.2
50°	2589.7	2539.5	2324.3	2087.6	1965.6
52.5°	2381.7	2302.8	2094.8	1858.0	1757.6
55°	2137.8	2073.2	1879.5	1657.2	1571.1
57.5°	1915.4	1850.8	1671.5	1463.5	1391.7
60°	1707.4	1614.1	1463.5	1284.1	1226.7
62.5°	1477.8	1406.1	1276.9	1126.3	1198.0
65°	1269.8	1198.0	1083.2	1104.8	918.2
67.5°	1040.2	1004.3	903.9	803.5	774.8
70°	846.5	803.5	767.6	660.0	631.3
72.5°	674.3	631.3	581.1	523.7	502.2
75°	509.3	473.5	444.8	423.3	466.3
77.5°	351.5	337.2	315.6	294.1	287.0
80°	229.6	222.4	215.2	208.0	200.9
82.5°	136.3	136.3	136.3	136.3	136.3
85°	71.7	78.9	86.1	93.3	100.4
87.5°	43.0	43.0	50.2	57.4	64.6
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)