

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: P547051

Luminaire Tested: **FMR-24-4-LD4-3HI-50-UNV-82-88-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: P547051
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-82-88-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC 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

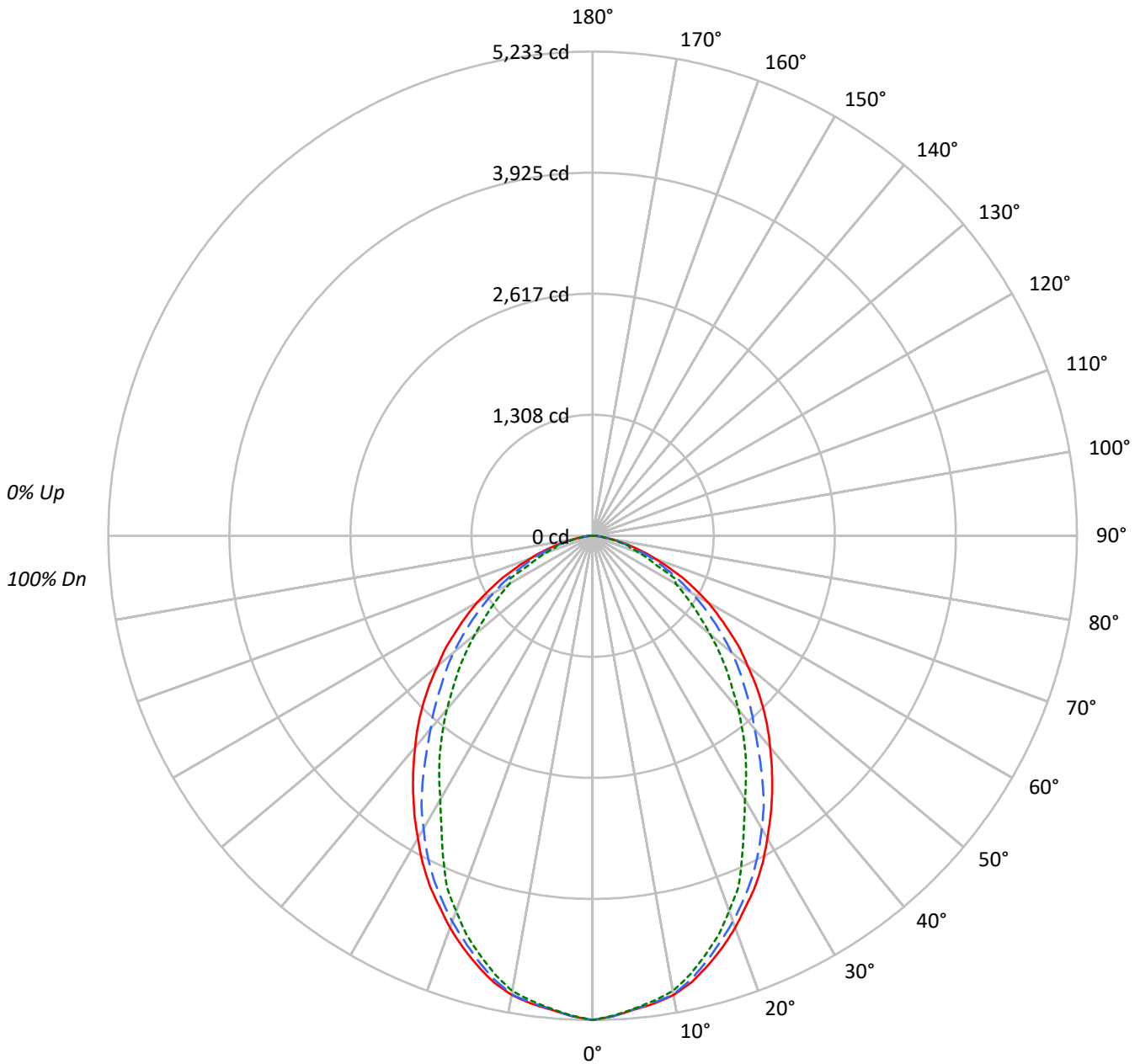
Lumens per Lamp: N/A
Luminaire Lumens: 10273.0 lumens
Efficiency: N/A
Efficacy: 79.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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: P547051

CATALOG NUMBER: FMR-24-4-LD4-3HI-50-UNV-82-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P547051

CATALOG NUMBER: FMR-24-4-LD4-3HI-50-UNV-82-88-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°	7041	7041	7041
5°	6945	6937	6929
10°	6885	6877	6827
15°	6699	6632	6539
20°	6453	6349	6176
25°	6188	6053	5676
30°	5865	5677	5113
35°	5555	5247	4730
40°	5238	4781	4303
45°	4938	4420	3891
50°	4571	4103	3470
55°	4229	3718	3108
60°	3874	3321	2784
65°	3409	2908	2465
70°	2808	2546	2094
75°	2233	1950	2044
80°	1500	1406	1313
85°	934	1121	1308



TEST NUMBER: P547051

CATALOG NUMBER: FMR-24-4-LD4-3HI-50-UNV-82-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	487.1	4.7
10°-20°	1336.8	13.0
20°-30°	1850.8	18.0
30°-40°	1973.5	19.2
40°-50°	1800.4	17.5
50°-60°	1410.5	13.7
60°-70°	919.3	8.9
70°-80°	407.3	4.0
80°-90°	87.4	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°	3674.7	35.8
0°-40°	5648.2	55.0
0°-60°	8859.0	86.2
0°-90°	10273.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10273.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5233	5233	5233	5233	5233	
5°	5142	5136	5136	5130	5130	488
15°	4810	4810	4761	4713	4694	1352
25°	4168	4144	4077	3932	3823	1914
35°	3382	3358	3194	2952	2880	2114
45°	2595	2541	2323	2130	2045	1999
55°	1803	1748	1585	1398	1325	1617
65°	1071	1010	914	932	774	1055
75°	430	399	375	357	393	460
85°	60	66	73	79	85	84
90°	0	0	0	0	0	



TEST NUMBER: P547051

CATALOG NUMBER: FMR-24-4-LD4-3HI-50-UNV-82-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5232.9	5232.9	5232.9	5232.9	5232.9
2.5°	5196.6	5196.6	5196.6	5190.6	5190.6
5°	5142.2	5136.1	5136.1	5130.1	5130.1
7.5°	5099.8	5093.8	5087.7	5081.7	5069.6
10°	5039.3	5039.3	5033.3	5003.0	4997.0
12.5°	4942.5	4936.5	4912.3	4870.0	4857.9
15°	4809.5	4809.5	4761.1	4712.7	4694.5
17.5°	4664.3	4658.2	4597.7	4549.3	4525.1
20°	4507.0	4494.9	4434.4	4355.7	4313.4
22.5°	4331.5	4331.5	4258.9	4156.1	4113.7
25°	4168.2	4144.0	4077.4	3932.3	3823.4
27.5°	3980.7	3944.4	3871.8	3666.1	3539.0
30°	3775.0	3756.8	3654.0	3387.8	3291.0
32.5°	3581.4	3551.1	3442.2	3164.0	3085.3
35°	3381.7	3357.5	3194.2	2952.2	2879.6
37.5°	3182.1	3151.9	2946.2	2752.6	2661.8
40°	2982.5	2946.2	2722.3	2546.9	2450.1
42.5°	2794.9	2746.5	2528.7	2341.2	2232.3
45°	2595.3	2540.8	2323.1	2129.5	2044.8
47.5°	2395.7	2347.3	2147.6	1948.0	1851.2
50°	2183.9	2141.6	1960.1	1760.4	1657.6
52.5°	2008.5	1941.9	1766.5	1566.9	1482.2
55°	1802.8	1748.3	1585.0	1397.5	1324.9
57.5°	1615.3	1560.8	1409.6	1234.1	1173.6
60°	1439.8	1361.2	1234.1	1082.9	1034.5
62.5°	1246.2	1185.7	1076.8	949.8	1010.3
65°	1070.8	1010.3	913.5	931.6	774.4
67.5°	877.2	846.9	762.3	677.6	653.4
70°	713.9	677.6	647.3	556.6	532.4
72.5°	568.7	532.4	490.0	441.6	423.5
75°	429.5	399.3	375.1	356.9	393.2
77.5°	296.4	284.3	266.2	248.0	242.0
80°	193.6	187.5	181.5	175.4	169.4
82.5°	114.9	114.9	114.9	114.9	114.9
85°	60.5	66.5	72.6	78.6	84.7
87.5°	36.3	36.3	42.3	48.4	54.4
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)