

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: P547031

Luminaire Tested: **FMR-24-4-LD4-3HI-50-UNV-80-84-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: P547031
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-80-84-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

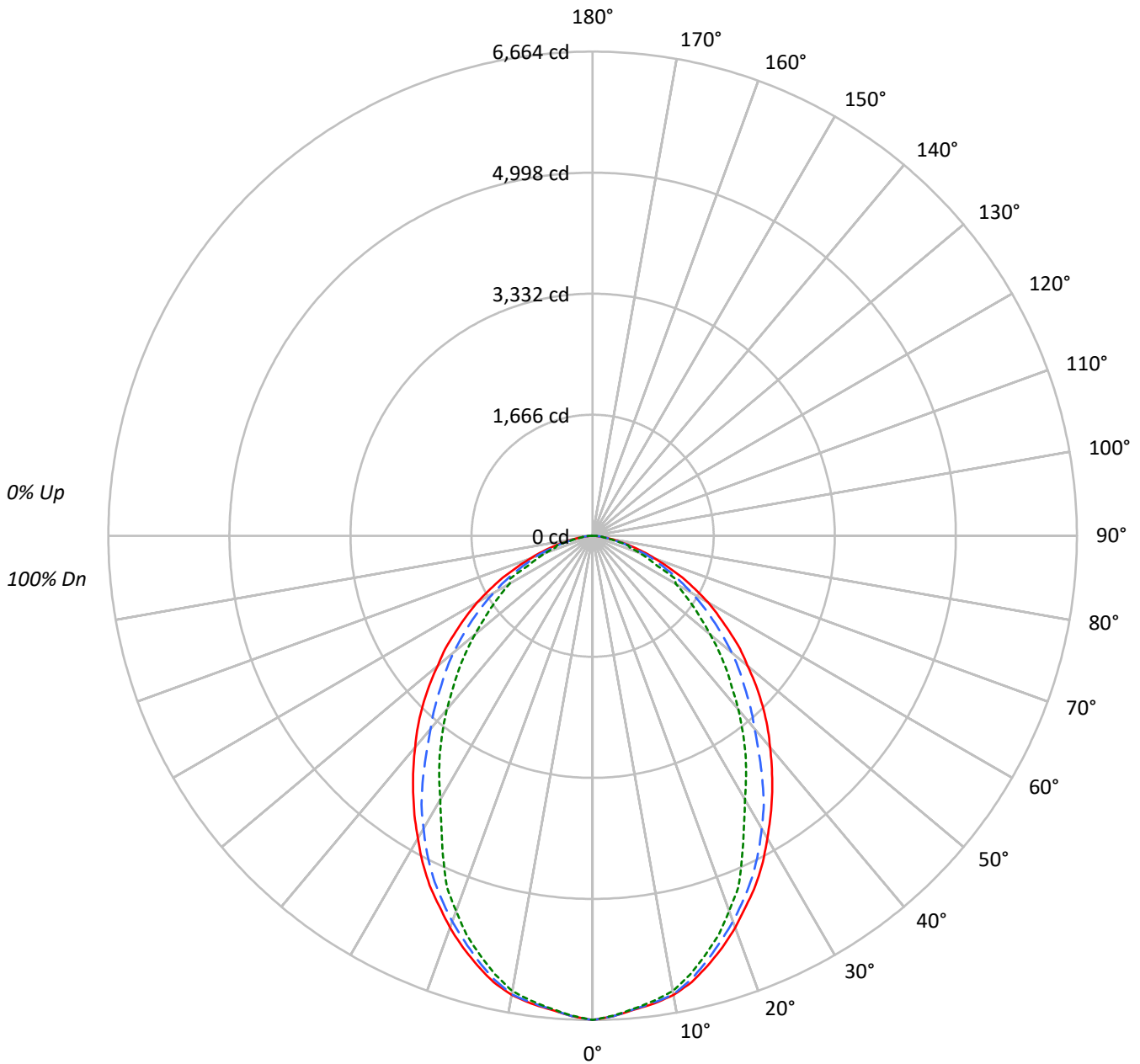
Lumens per Lamp: N/A
Luminaire Lumens: 13082.0 lumens
Efficiency: N/A
Efficacy: 100.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

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Luminous Intensity Polar Plot





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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°	8966	8966	8966
5°	8844	8834	8823
10°	8768	8757	8694
15°	8531	8445	8327
20°	8218	8085	7865
25°	7880	7709	7228
30°	7469	7229	6511
35°	7073	6681	6023
40°	6671	6089	5480
45°	6289	5629	4955
50°	5821	5225	4418
55°	5385	4735	3958
60°	4934	4229	3545
65°	4341	3704	3139
70°	3576	3243	2667
75°	2844	2483	2603
80°	1910	1791	1671
85°	1189	1426	1666



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	620.3	4.7
10°-20°	1702.4	13.0
20°-30°	2356.8	18.0
30°-40°	2513.1	19.2
40°-50°	2292.7	17.5
50°-60°	1796.1	13.7
60°-70°	1170.6	8.9
70°-80°	518.6	4.0
80°-90°	111.3	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°	4679.5	35.8
0°-40°	7192.6	55.0
0°-60°	11281.4	86.2
0°-90°	13082.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13082.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6664	6664	6664	6664	6664	
5°	6548	6540	6540	6533	6533	622
15°	6124	6124	6063	6001	5978	1722
25°	5308	5277	5192	5008	4869	2437
35°	4306	4276	4068	3760	3667	2692
45°	3305	3236	2958	2712	2604	2546
55°	2296	2226	2018	1780	1687	2059
65°	1364	1286	1163	1186	986	1344
75°	547	508	478	454	501	586
85°	77	85	92	100	108	107
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6663.8	6663.8	6663.8	6663.8	6663.8
2.5°	6617.6	6617.6	6617.6	6609.9	6609.9
5°	6548.2	6540.5	6540.5	6532.8	6532.8
7.5°	6494.3	6486.6	6478.9	6471.2	6455.8
10°	6417.3	6417.3	6409.6	6371.1	6363.3
12.5°	6294.0	6286.3	6255.5	6201.6	6186.2
15°	6124.5	6124.5	6062.9	6001.3	5978.2
17.5°	5939.6	5931.9	5854.9	5793.3	5762.5
20°	5739.3	5723.9	5646.9	5546.7	5492.8
22.5°	5515.9	5515.9	5423.5	5292.5	5238.6
25°	5307.9	5277.1	5192.4	5007.5	4868.8
27.5°	5069.1	5022.9	4930.4	4668.5	4506.7
30°	4807.2	4784.1	4653.1	4314.1	4190.9
32.5°	4560.7	4522.1	4383.5	4029.1	3928.9
35°	4306.4	4275.6	4067.6	3759.5	3667.0
37.5°	4052.2	4013.7	3751.8	3505.2	3389.7
40°	3798.0	3751.8	3466.7	3243.3	3120.0
42.5°	3559.2	3497.5	3220.2	2981.4	2842.7
45°	3304.9	3235.6	2958.3	2711.7	2603.9
47.5°	3050.7	2989.1	2734.9	2480.6	2357.4
50°	2781.1	2727.1	2496.0	2241.8	2110.8
52.5°	2557.7	2472.9	2249.5	1995.3	1887.4
55°	2295.7	2226.4	2018.4	1779.6	1687.1
57.5°	2056.9	1987.6	1795.0	1571.6	1494.5
60°	1833.5	1733.4	1571.6	1379.0	1317.4
62.5°	1587.0	1509.9	1371.3	1209.5	1286.5
65°	1363.6	1286.5	1163.3	1186.4	986.1
67.5°	1117.1	1078.5	970.7	862.8	832.0
70°	909.0	862.8	824.3	708.8	677.9
72.5°	724.2	677.9	624.0	562.4	539.3
75°	547.0	508.5	477.6	454.5	500.7
77.5°	377.5	362.1	339.0	315.9	308.2
80°	246.5	238.8	231.1	223.4	215.7
82.5°	146.4	146.4	146.4	146.4	146.4
85°	77.0	84.7	92.4	100.1	107.9
87.5°	46.2	46.2	53.9	61.6	69.3
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)