

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: P547329

Luminaire Tested: **FMR-24-4-LD4-4HI-50-UNV-81-86-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: P547329
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-LD4-4HI-50-UNV-81-86-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

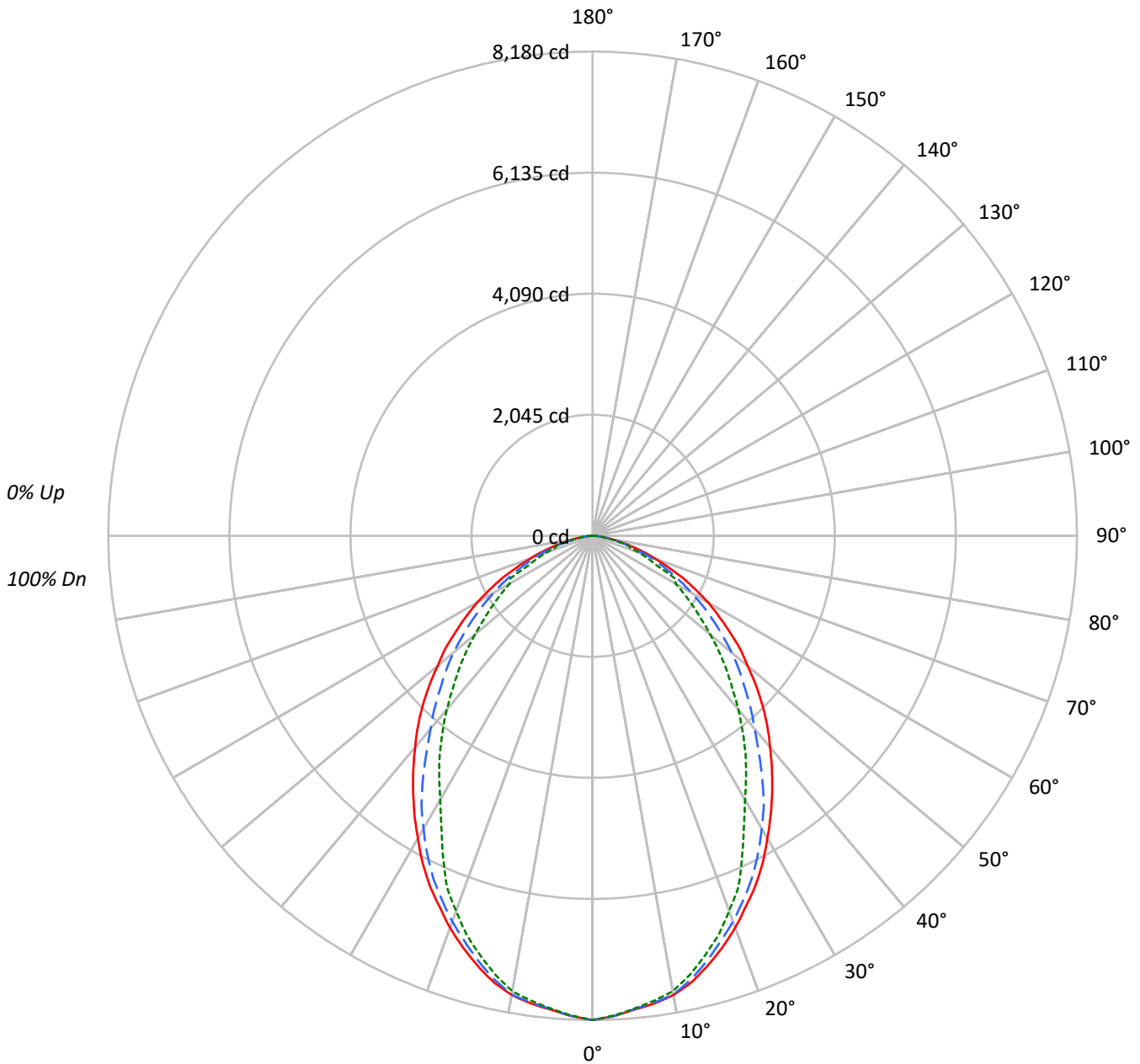
Lumens per Lamp: N/A
Luminaire Lumens: 16059.0 lumens
Efficiency: N/A
Efficacy: 92.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
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°	11006	11006	11006
5°	10857	10844	10831
10°	10763	10750	10672
15°	10473	10367	10222
20°	10088	9925	9655
25°	9673	9463	8873
30°	9168	8874	7993
35°	8683	8202	7394
40°	8189	7475	6727
45°	7720	6910	6082
50°	7146	6414	5424
55°	6611	5812	4858
60°	6057	5191	4352
65°	5329	4546	3854
70°	4390	3981	3274
75°	3490	3048	3196
80°	2345	2198	2052
85°	1460	1752	2044



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	761.5	4.7
10°-20°	2089.8	13.0
20°-30°	2893.2	18.0
30°-40°	3085.0	19.2
40°-50°	2814.4	17.5
50°-60°	2204.8	13.7
60°-70°	1437.0	8.9
70°-80°	636.7	4.0
80°-90°	136.7	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°	5744.4	35.8
0°-40°	8829.4	55.0
0°-60°	13848.6	86.2
0°-90°	16059.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16059.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8180	8180	8180	8180	8180	
5°	8038	8029	8029	8020	8020	763
15°	7518	7518	7443	7367	7339	2114
25°	6516	6478	6374	6147	5977	2991
35°	5286	5249	4993	4615	4502	3305
45°	4057	3972	3632	3329	3196	3125
55°	2818	2733	2478	2184	2071	2528
65°	1674	1579	1428	1456	1210	1650
75°	671	624	586	558	615	720
85°	95	104	114	123	132	131
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8180.2	8180.2	8180.2	8180.2	8180.2
2.5°	8123.5	8123.5	8123.5	8114.0	8114.0
5°	8038.4	8028.9	8028.9	8019.5	8019.5
7.5°	7972.2	7962.7	7953.3	7943.8	7924.9
10°	7877.6	7877.6	7868.2	7820.9	7811.4
12.5°	7726.3	7716.9	7679.0	7612.8	7593.9
15°	7518.3	7518.3	7442.6	7366.9	7338.6
17.5°	7291.3	7281.8	7187.3	7111.6	7073.8
20°	7045.4	7026.5	6931.9	6809.0	6742.8
22.5°	6771.2	6771.2	6657.7	6496.9	6430.7
25°	6515.8	6478.0	6374.0	6147.0	5976.8
27.5°	6222.7	6165.9	6052.4	5730.9	5532.3
30°	5901.1	5872.8	5712.0	5295.9	5144.6
32.5°	5598.5	5551.2	5381.0	4946.0	4823.0
35°	5286.4	5248.6	4993.3	4615.0	4501.5
37.5°	4974.3	4927.1	4605.5	4302.9	4161.0
40°	4662.3	4605.5	4255.6	3981.4	3830.1
42.5°	4369.1	4293.4	3953.0	3659.8	3489.6
45°	4057.0	3971.9	3631.5	3328.8	3196.4
47.5°	3744.9	3669.3	3357.2	3045.1	2893.8
50°	3413.9	3347.8	3064.0	2752.0	2591.2
52.5°	3139.7	3035.7	2761.4	2449.3	2316.9
55°	2818.2	2733.1	2477.7	2184.5	2071.1
57.5°	2525.0	2439.9	2203.5	1929.2	1834.6
60°	2250.7	2127.8	1929.2	1692.8	1617.1
62.5°	1948.1	1853.6	1683.3	1484.7	1579.3
65°	1673.9	1579.3	1428.0	1456.4	1210.5
67.5°	1371.3	1324.0	1191.6	1059.2	1021.3
70°	1115.9	1059.2	1011.9	870.0	832.2
72.5°	889.0	832.2	766.0	690.4	662.0
75°	671.4	624.2	586.3	558.0	614.7
77.5°	463.4	444.5	416.1	387.7	378.3
80°	302.6	293.2	283.7	274.3	264.8
82.5°	179.7	179.7	179.7	179.7	179.7
85°	94.6	104.0	113.5	122.9	132.4
87.5°	56.7	56.7	66.2	75.7	85.1
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)