

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: P547445

Luminaire Tested: **FMR-24-4-LD4-4LO-50-UNV-93-96-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: P547445
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-LD4-4LO-50-UNV-93-96-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

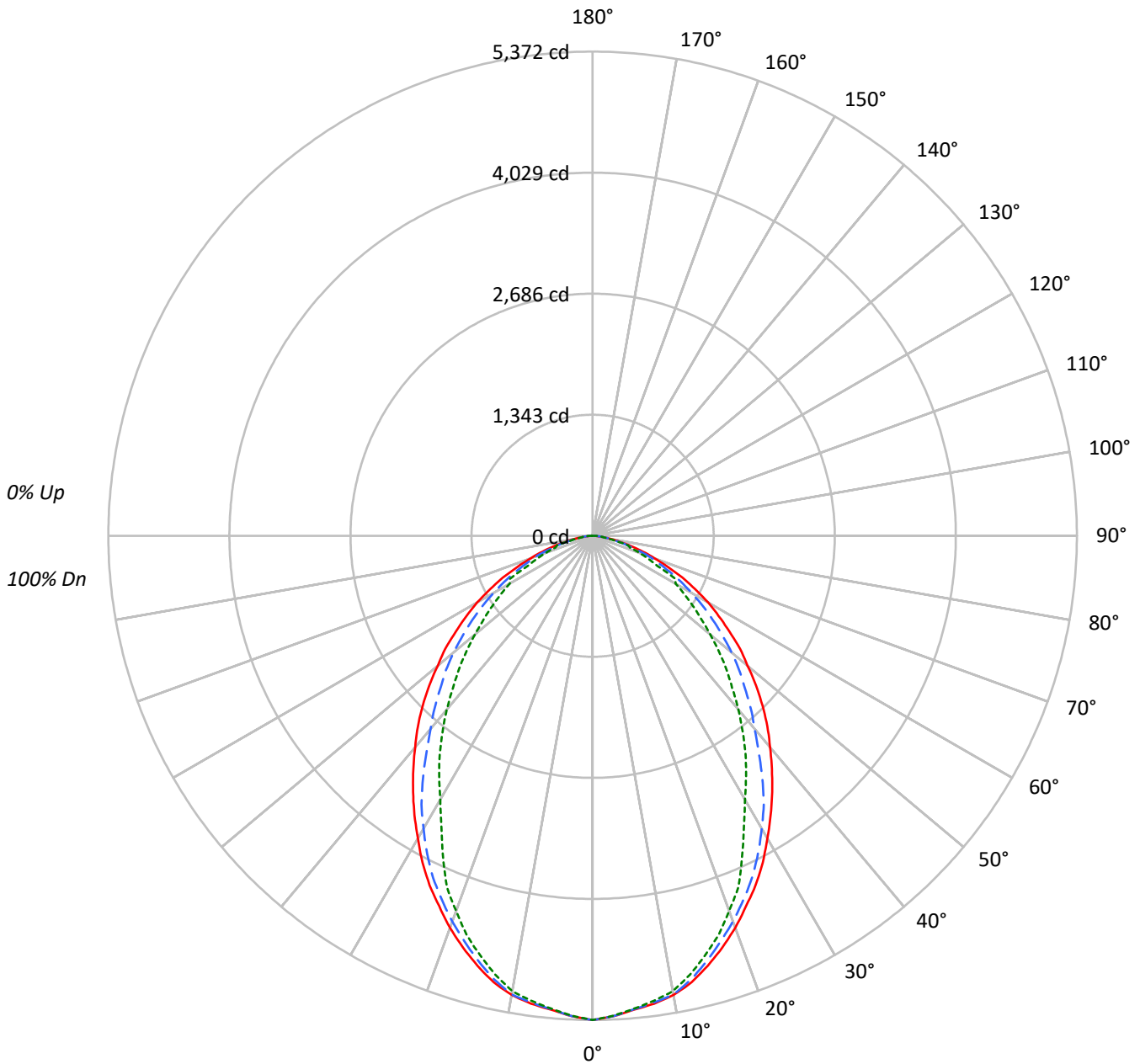
Lumens per Lamp: N/A
Luminaire Lumens: 10547.0 lumens
Efficiency: N/A
Efficacy: 112.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
Input Voltage (V): NR
Input Current (A_{in}): 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°	7229	7229	7229
5°	7130	7122	7114
10°	7069	7060	7009
15°	6878	6809	6714
20°	6625	6519	6341
25°	6353	6215	5827
30°	6021	5828	5249
35°	5703	5387	4856
40°	5378	4909	4418
45°	5070	4538	3995
50°	4693	4212	3562
55°	4342	3817	3191
60°	3978	3409	2858
65°	3500	2986	2531
70°	2883	2615	2150
75°	2293	2002	2099
80°	1540	1444	1347
85°	959	1150	1343



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	500.1	4.7
10°-20°	1372.5	13.0
20°-30°	1900.1	18.0
30°-40°	2026.1	19.2
40°-50°	1848.4	17.5
50°-60°	1448.1	13.7
60°-70°	943.8	8.9
70°-80°	418.1	4.0
80°-90°	89.8	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°	3772.7	35.8
0°-40°	5798.8	55.0
0°-60°	9095.3	86.2
0°-90°	10547.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10547.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5372	5372	5372	5372	5372	
5°	5279	5273	5273	5267	5267	501
15°	4938	4938	4888	4838	4820	1388
25°	4279	4254	4186	4037	3925	1965
35°	3472	3447	3279	3031	2956	2171
45°	2664	2609	2385	2186	2099	2052
55°	1851	1795	1627	1435	1360	1660
65°	1099	1037	938	956	795	1083
75°	441	410	385	366	404	473
85°	62	68	74	81	87	86
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5372.5	5372.5	5372.5	5372.5	5372.5
2.5°	5335.2	5335.2	5335.2	5329.0	5329.0
5°	5279.3	5273.1	5273.1	5266.9	5266.9
7.5°	5235.9	5229.6	5223.4	5217.2	5204.8
10°	5173.7	5173.7	5167.5	5136.5	5130.3
12.5°	5074.4	5068.2	5043.3	4999.8	4987.4
15°	4937.7	4937.7	4888.0	4838.4	4819.7
17.5°	4788.7	4782.5	4720.3	4670.7	4645.8
20°	4627.2	4614.8	4552.7	4471.9	4428.4
22.5°	4447.1	4447.1	4372.5	4266.9	4223.5
25°	4279.4	4254.5	4186.2	4037.1	3925.3
27.5°	4086.8	4049.6	3975.0	3763.9	3633.4
30°	3875.7	3857.0	3751.4	3478.2	3378.8
32.5°	3676.9	3645.8	3534.0	3248.3	3167.6
35°	3471.9	3447.1	3279.4	3031.0	2956.4
37.5°	3267.0	3235.9	3024.7	2826.0	2732.8
40°	3062.0	3024.7	2794.9	2614.8	2515.4
42.5°	2869.5	2819.8	2596.2	2403.7	2291.9
45°	2664.5	2608.6	2385.0	2186.3	2099.3
47.5°	2459.5	2409.9	2204.9	1999.9	1900.6
50°	2242.2	2198.7	2012.4	1807.4	1701.8
52.5°	2062.0	1993.7	1813.6	1608.6	1521.7
55°	1850.9	1795.0	1627.3	1434.7	1360.2
57.5°	1658.3	1602.4	1447.2	1267.0	1204.9
60°	1478.2	1397.5	1267.0	1111.8	1062.1
62.5°	1279.5	1217.4	1105.6	975.1	1037.2
65°	1099.3	1037.2	937.9	956.5	795.0
67.5°	900.6	869.5	782.6	695.6	670.8
70°	732.9	695.6	664.6	571.4	546.6
72.5°	583.8	546.6	503.1	453.4	434.8
75°	441.0	409.9	385.1	366.4	403.7
77.5°	304.3	291.9	273.3	254.7	248.4
80°	198.8	192.5	186.3	180.1	173.9
82.5°	118.0	118.0	118.0	118.0	118.0
85°	62.1	68.3	74.5	80.7	87.0
87.5°	37.3	37.3	43.5	49.7	55.9
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)