

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: P547029

Luminaire Tested: **FMR-24-4-LD4-3HI-40-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: P547029
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

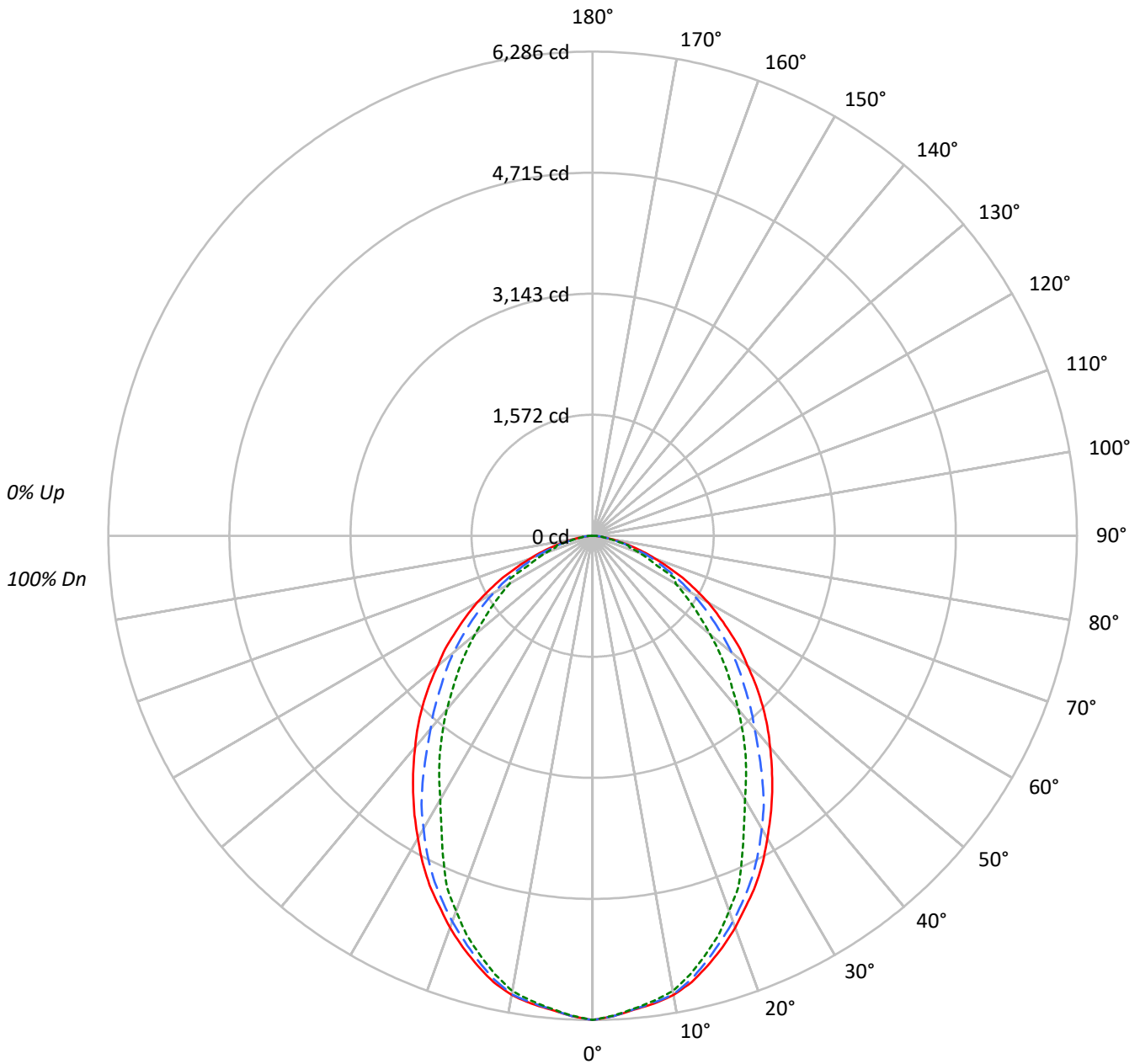
Lumens per Lamp: N/A
Luminaire Lumens: 12340.0 lumens
Efficiency: N/A
Efficacy: 95.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	8457	8457	8457
5°	8343	8333	8323
10°	8270	8260	8201
15°	8047	7966	7855
20°	7752	7627	7419
25°	7433	7271	6818
30°	7045	6819	6142
35°	6672	6302	5682
40°	6293	5744	5169
45°	5932	5310	4674
50°	5491	4928	4168
55°	5080	4466	3733
60°	4654	3989	3344
65°	4095	3493	2961
70°	3373	3059	2516
75°	2682	2342	2455
80°	1801	1689	1577
85°	1122	1346	1570



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	585.1	4.7
10°-20°	1605.8	13.0
20°-30°	2223.2	18.0
30°-40°	2370.5	19.2
40°-50°	2162.6	17.5
50°-60°	1694.2	13.7
60°-70°	1104.2	8.9
70°-80°	489.2	4.0
80°-90°	105.0	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°	4414.1	35.8
0°-40°	6784.7	55.0
0°-60°	10641.5	86.2
0°-90°	12340.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12340.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6286	6286	6286	6286	6286	
5°	6177	6170	6170	6162	6162	586
15°	5777	5777	5719	5661	5639	1624
25°	5007	4978	4898	4724	4593	2299
35°	4062	4033	3837	3546	3459	2540
45°	3118	3052	2790	2558	2456	2401
55°	2166	2100	1904	1679	1591	1942
65°	1286	1214	1097	1119	930	1268
75°	516	480	450	429	472	553
85°	73	80	87	94	102	101
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6285.8	6285.8	6285.8	6285.8	6285.8
2.5°	6242.2	6242.2	6242.2	6235.0	6235.0
5°	6176.8	6169.6	6169.6	6162.3	6162.3
7.5°	6126.0	6118.7	6111.4	6104.2	6089.6
10°	6053.3	6053.3	6046.0	6009.7	6002.4
12.5°	5937.0	5929.8	5900.7	5849.8	5835.3
15°	5777.2	5777.2	5719.0	5660.9	5639.1
17.5°	5602.7	5595.5	5522.8	5464.7	5435.6
20°	5413.8	5399.3	5326.6	5232.1	5181.3
22.5°	5203.1	5203.1	5115.9	4992.3	4941.5
25°	5006.9	4977.8	4897.9	4723.5	4592.7
27.5°	4781.6	4738.0	4650.8	4403.7	4251.1
30°	4534.5	4512.7	4389.2	4069.4	3953.2
32.5°	4302.0	4265.6	4134.8	3800.6	3706.1
35°	4062.2	4033.1	3836.9	3546.2	3459.0
37.5°	3822.4	3786.0	3539.0	3306.4	3197.4
40°	3582.6	3539.0	3270.1	3059.3	2943.1
42.5°	3357.3	3299.2	3037.5	2812.3	2681.5
45°	3117.5	3052.1	2790.5	2557.9	2456.2
47.5°	2877.7	2819.5	2579.7	2339.9	2223.7
50°	2623.3	2572.5	2354.5	2114.7	1991.1
52.5°	2412.6	2332.7	2121.9	1882.1	1780.4
55°	2165.5	2100.1	1903.9	1678.6	1591.4
57.5°	1940.3	1874.8	1693.2	1482.4	1409.8
60°	1729.5	1635.0	1482.4	1300.8	1242.6
62.5°	1497.0	1424.3	1293.5	1140.9	1213.6
65°	1286.2	1213.6	1097.3	1119.1	930.2
67.5°	1053.7	1017.4	915.6	813.9	784.8
70°	857.5	813.9	777.6	668.6	639.5
72.5°	683.1	639.5	588.6	530.5	508.7
75°	515.9	479.6	450.5	428.7	472.3
77.5°	356.1	341.5	319.7	297.9	290.7
80°	232.5	225.3	218.0	210.7	203.5
82.5°	138.1	138.1	138.1	138.1	138.1
85°	72.7	79.9	87.2	94.5	101.7
87.5°	43.6	43.6	50.9	58.1	65.4
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)