

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: P546171

Luminaire Tested: **FMR-12-4-LD4-2HI-50-UNV-80-88-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: P546171
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-12-4-LD4-2HI-50-UNV-80-88-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

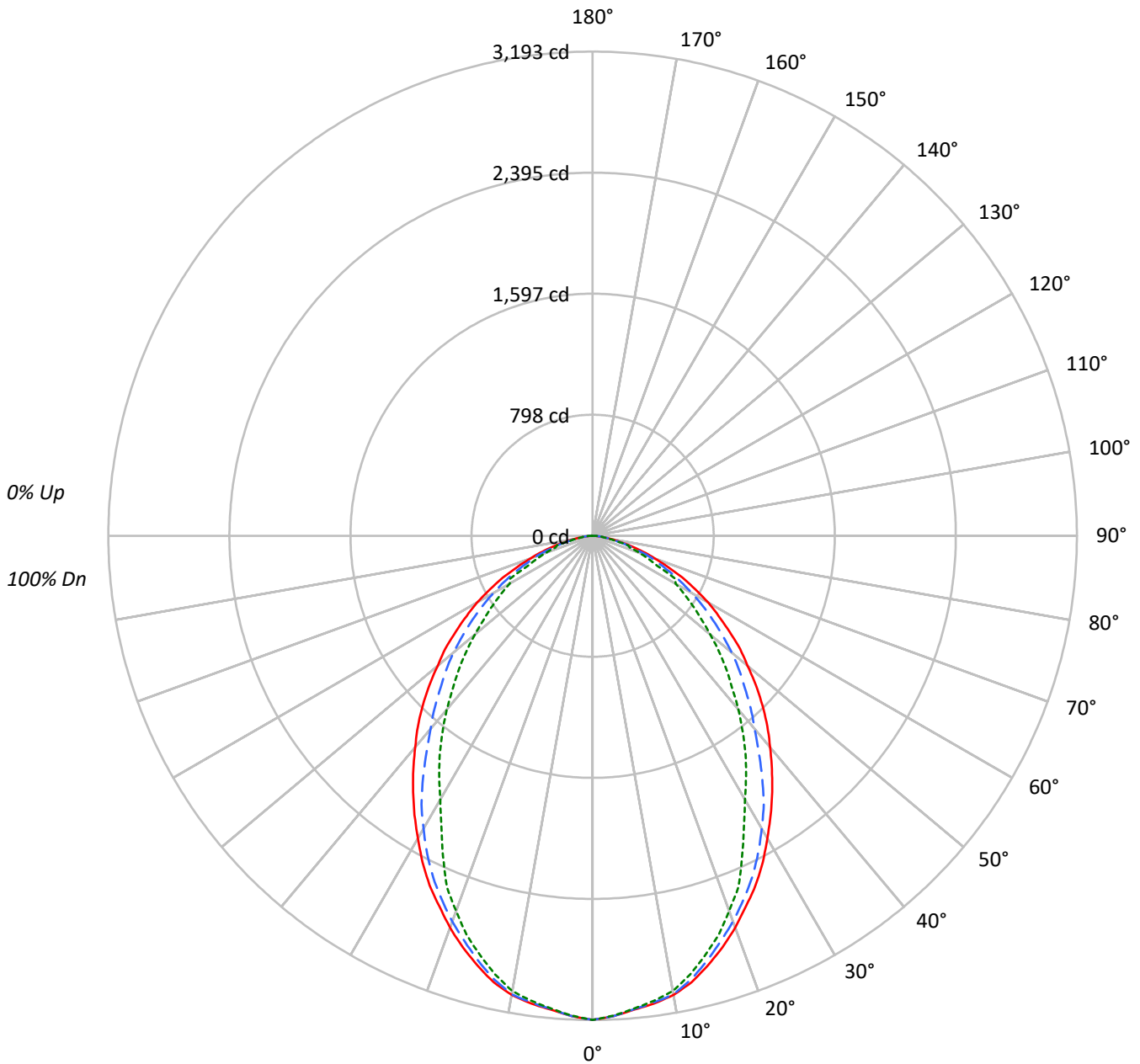
Lumens per Lamp: N/A
Luminaire Lumens: 6268.0 lumens
Efficiency: N/A
Efficacy: 72.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	8592	8592	8592
5°	8475	8465	8455
10°	8402	8391	8331
15°	8175	8093	7980
20°	7875	7748	7537
25°	7551	7387	6926
30°	7157	6927	6239
35°	6778	6402	5772
40°	6392	5835	5251
45°	6026	5394	4748
50°	5578	5007	4234
55°	5161	4537	3793
60°	4728	4053	3397
65°	4160	3549	3009
70°	3427	3108	2555
75°	2725	2380	2494
80°	1830	1715	1602
85°	1139	1368	1596



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	297.2	4.7
10°-20°	815.7	13.0
20°-30°	1129.2	18.0
30°-40°	1204.1	19.2
40°-50°	1098.5	17.5
50°-60°	860.6	13.7
60°-70°	560.9	8.9
70°-80°	248.5	4.0
80°-90°	53.3	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°	2242.1	35.8
0°-40°	3446.2	55.0
0°-60°	5405.3	86.2
0°-90°	6268.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6268.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3193	3193	3193	3193	3193	
5°	3138	3134	3134	3130	3130	298
15°	2934	2934	2905	2875	2864	825
25°	2543	2528	2488	2399	2333	1168
35°	2063	2049	1949	1801	1757	1290
45°	1584	1550	1417	1299	1248	1220
55°	1100	1067	967	853	808	987
65°	653	616	557	568	472	644
75°	262	244	229	218	240	281
85°	37	41	44	48	52	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3192.8	3192.8	3192.8	3192.8	3192.8
2.5°	3170.7	3170.7	3170.7	3167.0	3167.0
5°	3137.5	3133.8	3133.8	3130.1	3130.1
7.5°	3111.6	3107.9	3104.2	3100.6	3093.2
10°	3074.7	3074.7	3071.0	3052.6	3048.9
12.5°	3015.7	3012.0	2997.2	2971.4	2964.0
15°	2934.5	2934.5	2904.9	2875.4	2864.3
17.5°	2845.9	2842.2	2805.3	2775.7	2761.0
20°	2749.9	2742.5	2705.6	2657.6	2631.8
22.5°	2642.9	2642.9	2598.6	2535.8	2510.0
25°	2543.2	2528.4	2487.8	2399.2	2332.8
27.5°	2428.8	2406.6	2362.3	2236.8	2159.3
30°	2303.3	2292.2	2229.4	2067.0	2008.0
32.5°	2185.2	2166.7	2100.3	1930.5	1882.5
35°	2063.3	2048.6	1948.9	1801.3	1757.0
37.5°	1941.5	1923.1	1797.6	1679.5	1624.1
40°	1819.7	1797.6	1661.0	1554.0	1494.9
42.5°	1705.3	1675.8	1542.9	1428.5	1362.0
45°	1583.5	1550.3	1417.4	1299.3	1247.6
47.5°	1461.7	1432.2	1310.4	1188.5	1129.5
50°	1332.5	1306.7	1195.9	1074.1	1011.4
52.5°	1225.5	1184.9	1077.8	956.0	904.3
55°	1100.0	1066.7	967.1	852.7	808.4
57.5°	985.5	952.3	860.0	753.0	716.1
60°	878.5	830.5	753.0	660.7	631.2
62.5°	760.4	723.5	657.0	579.5	616.4
65°	653.3	616.4	557.4	568.4	472.5
67.5°	535.2	516.8	465.1	413.4	398.6
70°	435.6	413.4	395.0	339.6	324.8
72.5°	347.0	324.8	299.0	269.5	258.4
75°	262.1	243.6	228.9	217.8	239.9
77.5°	180.9	173.5	162.4	151.3	147.6
80°	118.1	114.4	110.7	107.0	103.4
82.5°	70.1	70.1	70.1	70.1	70.1
85°	36.9	40.6	44.3	48.0	51.7
87.5°	22.1	22.1	25.8	29.5	33.2
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)