

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: P547002

Luminaire Tested: **FMR-24-4-LD4-3HI-40-UNV-80-87-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: P547002
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-80-87-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

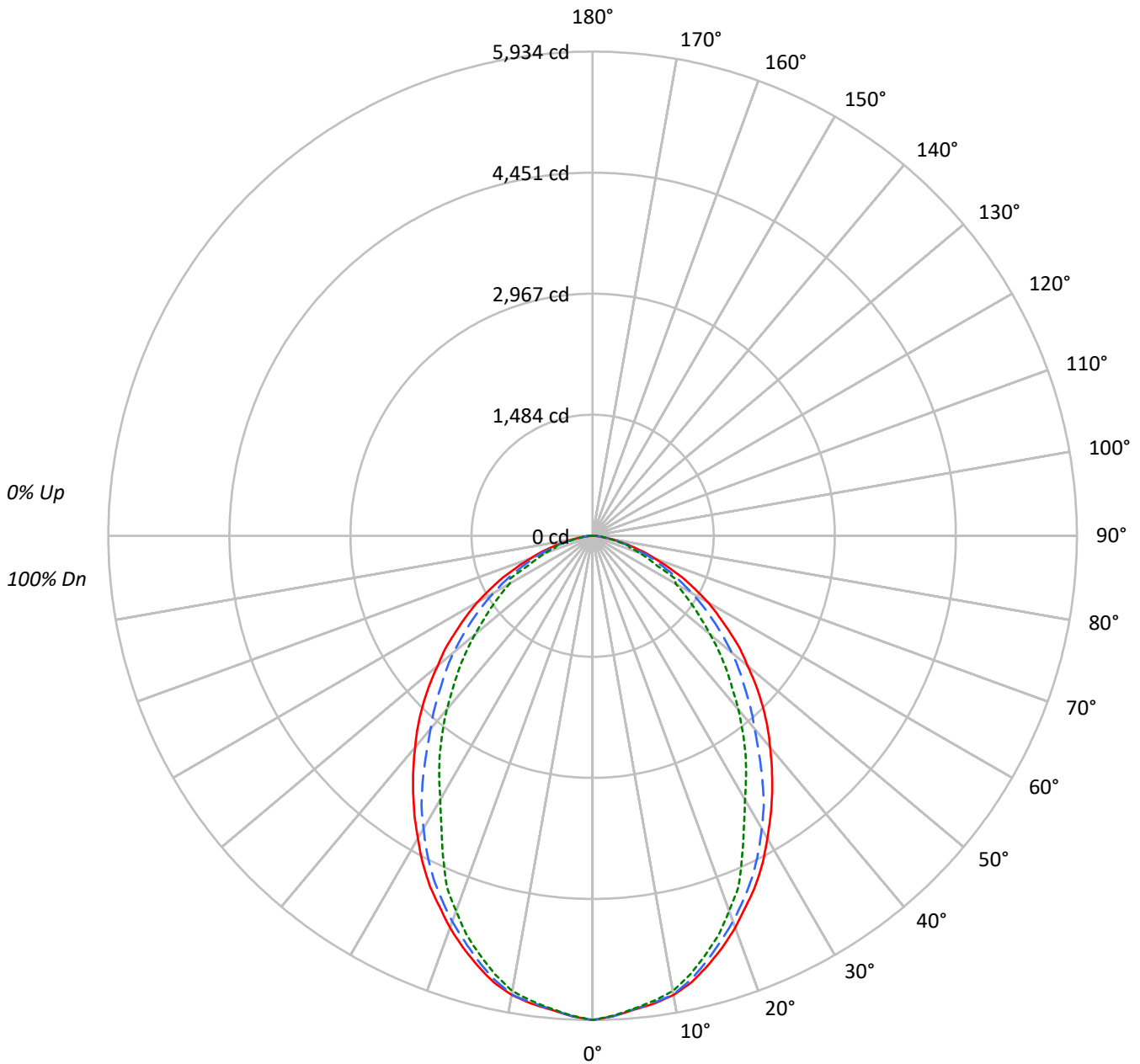
Lumens per Lamp: N/A
Luminaire Lumens: 11649.0 lumens
Efficiency: N/A
Efficacy: 89.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	7984	7984	7984
5°	7875	7866	7857
10°	7807	7798	7742
15°	7597	7520	7415
20°	7318	7200	7003
25°	7017	6864	6436
30°	6650	6437	5798
35°	6299	5949	5363
40°	5940	5422	4880
45°	5600	5012	4412
50°	5184	4652	3934
55°	4795	4216	3524
60°	4394	3766	3157
65°	3866	3298	2796
70°	3185	2888	2375
75°	2532	2211	2318
80°	1701	1595	1488
85°	1059	1271	1482



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	552.4	4.7
10°-20°	1515.9	13.0
20°-30°	2098.7	18.0
30°-40°	2237.8	19.2
40°-50°	2041.5	17.5
50°-60°	1599.4	13.7
60°-70°	1042.4	8.9
70°-80°	461.8	4.0
80°-90°	99.1	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°	4166.9	35.8
0°-40°	6404.7	55.0
0°-60°	10045.6	86.2
0°-90°	11649.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11649.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5934	5934	5934	5934	5934	
5°	5831	5824	5824	5817	5817	553
15°	5454	5454	5399	5344	5323	1533
25°	4726	4699	4624	4459	4336	2170
35°	3835	3807	3622	3348	3265	2397
45°	2943	2881	2634	2415	2319	2267
55°	2044	1982	1797	1585	1502	1834
65°	1214	1146	1036	1056	878	1197
75°	487	453	425	405	446	522
85°	69	76	82	89	96	95
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5933.8	5933.8	5933.8	5933.8	5933.8
2.5°	5892.7	5892.7	5892.7	5885.8	5885.8
5°	5830.9	5824.1	5824.1	5817.2	5817.2
7.5°	5782.9	5776.1	5769.2	5762.3	5748.6
10°	5714.3	5714.3	5707.5	5673.2	5666.3
12.5°	5604.6	5597.7	5570.3	5522.2	5508.5
15°	5453.6	5453.6	5398.8	5343.9	5323.3
17.5°	5289.0	5282.2	5213.6	5158.7	5131.2
20°	5110.7	5096.9	5028.3	4939.2	4891.1
22.5°	4911.7	4911.7	4829.4	4712.8	4664.8
25°	4726.5	4699.1	4623.6	4459.0	4335.5
27.5°	4513.8	4472.7	4390.4	4157.1	4013.1
30°	4280.6	4260.0	4143.4	3841.6	3731.8
32.5°	4061.1	4026.8	3903.3	3587.7	3498.6
35°	3834.7	3807.3	3622.0	3347.6	3265.3
37.5°	3608.3	3574.0	3340.8	3121.3	3018.4
40°	3381.9	3340.8	3087.0	2888.0	2778.3
42.5°	3169.3	3114.4	2867.5	2654.8	2531.3
45°	2942.9	2881.2	2634.2	2414.7	2318.7
47.5°	2716.5	2661.7	2435.3	2208.9	2099.1
50°	2476.4	2428.4	2222.6	1996.2	1879.6
52.5°	2277.5	2202.0	2003.1	1776.7	1680.7
55°	2044.3	1982.5	1797.3	1584.6	1502.3
57.5°	1831.6	1769.9	1598.4	1399.4	1330.8
60°	1632.7	1543.5	1399.4	1227.9	1173.0
62.5°	1413.1	1344.5	1221.1	1077.0	1145.6
65°	1214.2	1145.6	1035.9	1056.4	878.1
67.5°	994.7	960.4	864.4	768.3	740.9
70°	809.5	768.3	734.0	631.1	603.7
72.5°	644.8	603.7	555.7	500.8	480.2
75°	487.1	452.8	425.3	404.7	445.9
77.5°	336.1	322.4	301.8	281.3	274.4
80°	219.5	212.7	205.8	198.9	192.1
82.5°	130.3	130.3	130.3	130.3	130.3
85°	68.6	75.5	82.3	89.2	96.0
87.5°	41.2	41.2	48.0	54.9	61.7
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)