

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: P547451

Luminaire Tested: **FMR-24-4-LD4-4STD-35-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: P547451
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-LD4-4STD-35-UNV-80-88-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

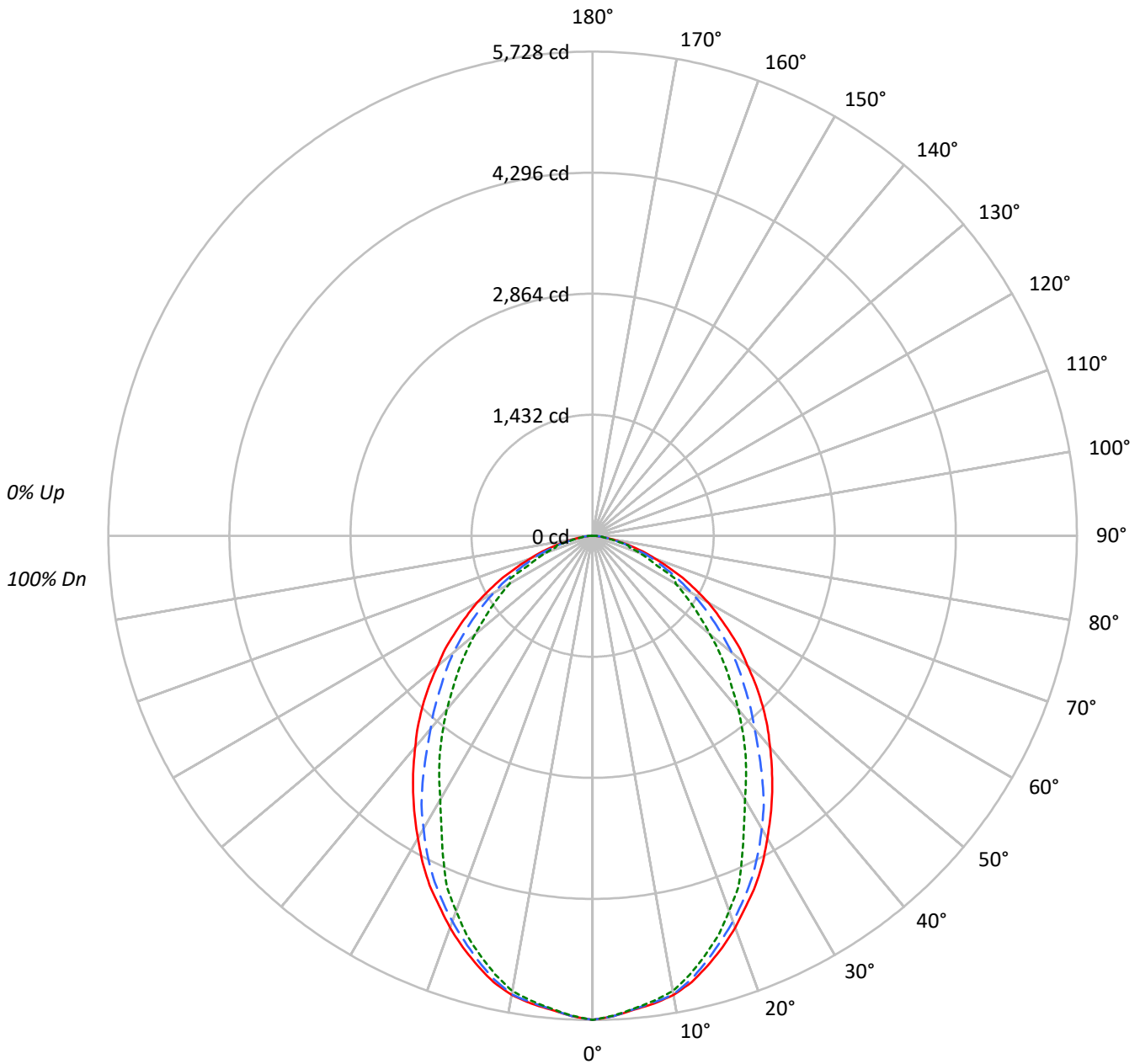
Lumens per Lamp: N/A
Luminaire Lumens: 11244.0 lumens
Efficiency: N/A
Efficacy: 84.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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°	7706	7706	7706
5°	7602	7593	7584
10°	7536	7527	7472
15°	7333	7259	7157
20°	7063	6949	6760
25°	6773	6625	6213
30°	6419	6213	5596
35°	6080	5742	5177
40°	5734	5233	4710
45°	5405	4838	4258
50°	5003	4491	3798
55°	4629	4069	3402
60°	4241	3635	3047
65°	3731	3183	2698
70°	3074	2787	2292
75°	2444	2134	2237
80°	1642	1539	1437
85°	1022	1227	1431



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	533.2	4.7
10°-20°	1463.2	13.0
20°-30°	2025.7	18.0
30°-40°	2160.0	19.2
40°-50°	1970.5	17.5
50°-60°	1543.8	13.7
60°-70°	1006.1	8.9
70°-80°	445.8	4.0
80°-90°	95.7	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°	4022.1	35.8
0°-40°	6182.1	55.0
0°-60°	9696.4	86.2
0°-90°	11244.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11244.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5728	5728	5728	5728	5728	
5°	5628	5622	5622	5615	5615	534
15°	5264	5264	5211	5158	5138	1480
25°	4562	4536	4463	4304	4185	2094
35°	3701	3675	3496	3231	3152	2314
45°	2841	2781	2543	2331	2238	2188
55°	1973	1914	1735	1530	1450	1770
65°	1172	1106	1000	1020	848	1155
75°	470	437	410	391	430	504
85°	66	73	80	86	93	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5727.5	5727.5	5727.5	5727.5	5727.5
2.5°	5687.8	5687.8	5687.8	5681.2	5681.2
5°	5628.2	5621.6	5621.6	5615.0	5615.0
7.5°	5581.9	5575.3	5568.6	5562.0	5548.8
10°	5515.7	5515.7	5509.0	5475.9	5469.3
12.5°	5409.7	5403.1	5376.6	5330.3	5317.0
15°	5264.0	5264.0	5211.1	5158.1	5138.2
17.5°	5105.1	5098.5	5032.3	4979.3	4952.8
20°	4933.0	4919.7	4853.5	4767.4	4721.1
22.5°	4740.9	4740.9	4661.5	4548.9	4502.6
25°	4562.2	4535.7	4462.8	4303.9	4184.7
27.5°	4356.9	4317.2	4237.7	4012.6	3873.5
30°	4131.8	4111.9	3999.3	3708.0	3602.1
32.5°	3919.9	3886.8	3767.6	3463.0	3376.9
35°	3701.4	3674.9	3496.1	3231.3	3151.8
37.5°	3482.9	3449.8	3224.6	3012.8	2913.4
40°	3264.4	3224.6	2979.6	2787.6	2681.7
42.5°	3059.1	3006.1	2767.8	2562.5	2443.3
45°	2840.6	2781.0	2542.6	2330.7	2238.0
47.5°	2622.1	2569.1	2350.6	2132.1	2026.2
50°	2390.3	2344.0	2145.3	1926.8	1814.3
52.5°	2198.3	2125.5	1933.5	1715.0	1622.3
55°	1973.2	1913.6	1734.8	1529.6	1450.1
57.5°	1767.9	1708.3	1542.8	1350.8	1284.6
60°	1575.9	1489.8	1350.8	1185.2	1132.3
62.5°	1364.0	1297.8	1178.6	1039.6	1105.8
65°	1172.0	1105.8	999.8	1019.7	847.5
67.5°	960.1	927.0	834.3	741.6	715.1
70°	781.3	741.6	708.5	609.2	582.7
72.5°	622.4	582.7	536.3	483.4	463.5
75°	470.1	437.0	410.5	390.7	430.4
77.5°	324.5	311.2	291.3	271.5	264.9
80°	211.9	205.3	198.6	192.0	185.4
82.5°	125.8	125.8	125.8	125.8	125.8
85°	66.2	72.8	79.5	86.1	92.7
87.5°	39.7	39.7	46.4	53.0	59.6
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)