

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: P547450

Luminaire Tested: **FMR-24-4-LD4-4STD-35-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: P547450
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-80-87-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

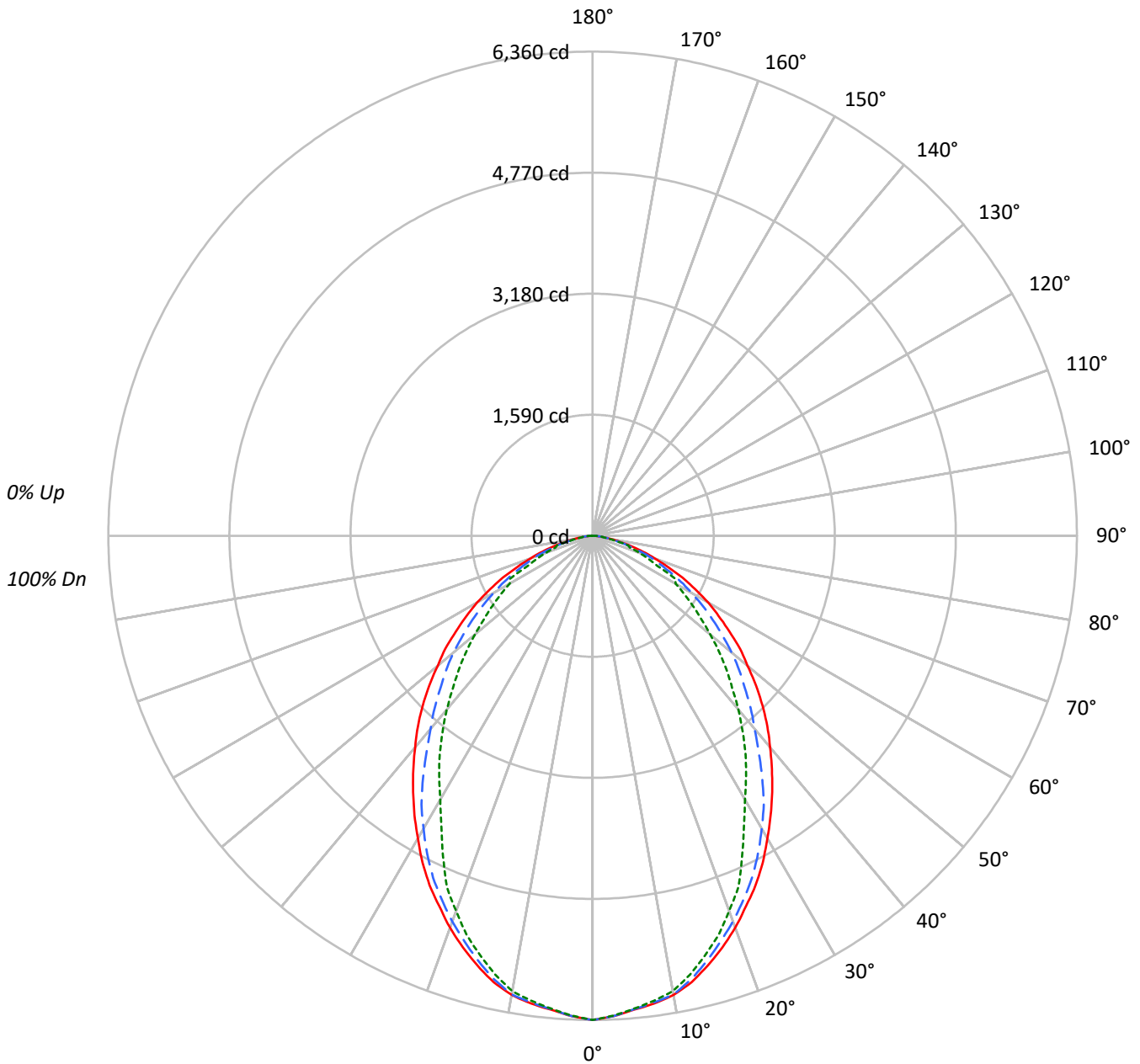
Lumens per Lamp: N/A
Luminaire Lumens: 12486.0 lumens
Efficiency: N/A
Efficacy: 93.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	8558	8558	8558
5°	8441	8431	8421
10°	8368	8358	8298
15°	8143	8061	7948
20°	7843	7717	7507
25°	7521	7357	6899
30°	7128	6900	6214
35°	6751	6377	5749
40°	6367	5812	5230
45°	6002	5373	4729
50°	5556	4987	4217
55°	5140	4519	3777
60°	4709	4036	3383
65°	4144	3535	2996
70°	3413	3095	2545
75°	2714	2370	2484
80°	1823	1709	1595
85°	1135	1362	1589



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	592.0	4.7
10°-20°	1624.8	13.0
20°-30°	2249.5	18.0
30°-40°	2398.6	19.2
40°-50°	2188.2	17.5
50°-60°	1714.3	13.7
60°-70°	1117.3	8.9
70°-80°	495.0	4.0
80°-90°	106.3	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°	4466.3	35.8
0°-40°	6864.9	55.0
0°-60°	10767.4	86.2
0°-90°	12486.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12486.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6360	6360	6360	6360	6360	
5°	6250	6243	6243	6235	6235	593
15°	5846	5846	5787	5728	5706	1643
25°	5066	5037	4956	4779	4647	2326
35°	4110	4081	3882	3588	3500	2570
45°	3154	3088	2824	2588	2485	2430
55°	2191	2125	1926	1698	1610	1965
65°	1302	1228	1110	1132	941	1283
75°	522	485	456	434	478	560
85°	74	81	88	96	103	102
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6360.2	6360.2	6360.2	6360.2	6360.2
2.5°	6316.1	6316.1	6316.1	6308.7	6308.7
5°	6249.9	6242.6	6242.6	6235.2	6235.2
7.5°	6198.4	6191.1	6183.7	6176.4	6161.7
10°	6124.9	6124.9	6117.6	6080.8	6073.4
12.5°	6007.3	5999.9	5970.5	5919.0	5904.3
15°	5845.5	5845.5	5786.7	5727.9	5705.8
17.5°	5669.0	5661.7	5588.2	5529.3	5499.9
20°	5477.9	5463.2	5389.6	5294.0	5242.6
22.5°	5264.6	5264.6	5176.4	5051.4	4999.9
25°	5066.1	5036.7	4955.8	4779.3	4647.0
27.5°	4838.2	4794.0	4705.8	4455.8	4301.4
30°	4588.2	4566.1	4441.1	4117.6	3999.9
32.5°	4352.9	4316.1	4183.8	3845.5	3749.9
35°	4110.2	4080.8	3882.3	3588.2	3499.9
37.5°	3867.6	3830.8	3580.8	3345.5	3235.2
40°	3624.9	3580.8	3308.8	3095.5	2977.9
42.5°	3397.0	3338.2	3073.5	2845.5	2713.2
45°	3154.4	3088.2	2823.5	2588.2	2485.3
47.5°	2911.7	2852.9	2610.3	2367.6	2250.0
50°	2654.4	2602.9	2382.3	2139.7	2014.7
52.5°	2441.1	2360.3	2147.0	1904.4	1801.4
55°	2191.1	2125.0	1926.4	1698.5	1610.3
57.5°	1963.2	1897.0	1713.2	1500.0	1426.4
60°	1750.0	1654.4	1500.0	1316.2	1257.3
62.5°	1514.7	1441.2	1308.8	1154.4	1227.9
65°	1301.5	1227.9	1110.3	1132.3	941.2
67.5°	1066.2	1029.4	926.5	823.5	794.1
70°	867.6	823.5	786.8	676.5	647.0
72.5°	691.2	647.0	595.6	536.8	514.7
75°	522.1	485.3	455.9	433.8	477.9
77.5°	360.3	345.6	323.5	301.5	294.1
80°	235.3	227.9	220.6	213.2	205.9
82.5°	139.7	139.7	139.7	139.7	139.7
85°	73.5	80.9	88.2	95.6	102.9
87.5°	44.1	44.1	51.5	58.8	66.2
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)