

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: P547515

Luminaire Tested: **FMR-24-4-LD4-4STD-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: P547515
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-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

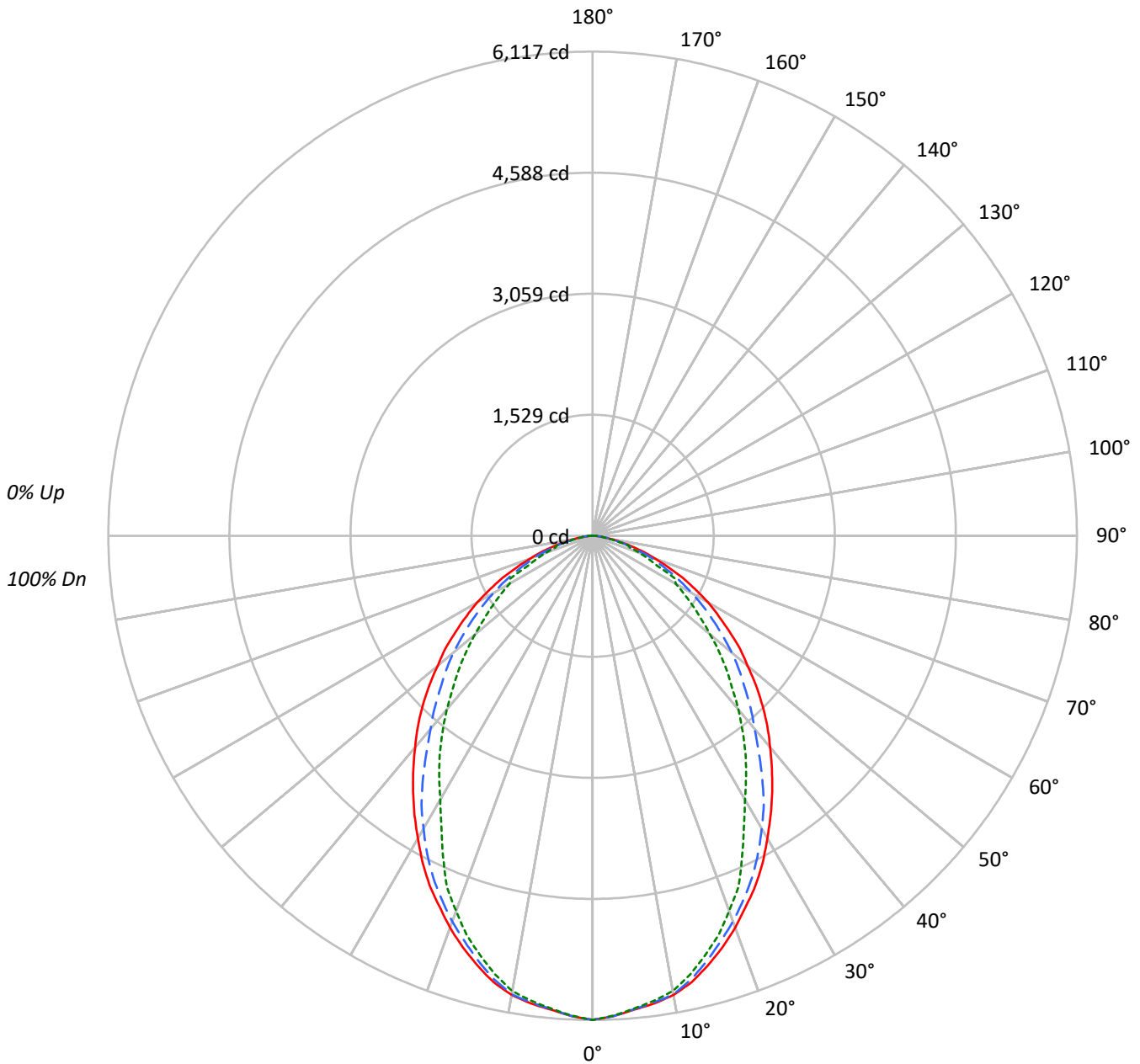
Lumens per Lamp: N/A
Luminaire Lumens: 12008.0 lumens
Efficiency: N/A
Efficacy: 90.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	8230	8230	8230
5°	8118	8109	8099
10°	8048	8038	7980
15°	7831	7752	7644
20°	7543	7422	7219
25°	7233	7076	6635
30°	6855	6636	5977
35°	6493	6133	5529
40°	6123	5589	5030
45°	5772	5167	4548
50°	5344	4796	4056
55°	4943	4346	3633
60°	4529	3882	3254
65°	3985	3400	2882
70°	3282	2976	2448
75°	2610	2279	2389
80°	1753	1643	1534
85°	1091	1311	1528



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	569.4	4.7
10°-20°	1562.6	13.0
20°-30°	2163.4	18.0
30°-40°	2306.8	19.2
40°-50°	2104.4	17.5
50°-60°	1648.7	13.7
60°-70°	1074.5	8.9
70°-80°	476.1	4.0
80°-90°	102.2	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°	4295.4	35.8
0°-40°	6602.1	55.0
0°-60°	10355.2	86.2
0°-90°	12008.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12008.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6117	6117	6117	6117	6117	
5°	6011	6004	6004	5996	5996	571
15°	5622	5622	5565	5509	5487	1580
25°	4872	4844	4766	4596	4469	2237
35°	3953	3925	3734	3451	3366	2471
45°	3034	2970	2715	2489	2390	2337
55°	2107	2044	1853	1634	1549	1890
65°	1252	1181	1068	1089	905	1233
75°	502	467	438	417	460	538
85°	71	78	85	92	99	98
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6116.7	6116.7	6116.7	6116.7	6116.7
2.5°	6074.3	6074.3	6074.3	6067.2	6067.2
5°	6010.6	6003.6	6003.6	5996.5	5996.5
7.5°	5961.1	5954.1	5947.0	5939.9	5925.8
10°	5890.4	5890.4	5883.4	5848.0	5840.9
12.5°	5777.3	5770.2	5741.9	5692.4	5678.3
15°	5621.7	5621.7	5565.1	5508.6	5487.4
17.5°	5452.0	5444.9	5374.2	5317.7	5289.4
20°	5268.2	5254.0	5183.3	5091.4	5041.9
22.5°	5063.1	5063.1	4978.2	4858.0	4808.5
25°	4872.2	4843.9	4766.1	4596.4	4469.1
27.5°	4652.9	4610.5	4525.7	4285.2	4136.7
30°	4412.5	4391.3	4271.1	3960.0	3846.8
32.5°	4186.2	4150.9	4023.6	3698.3	3606.4
35°	3952.9	3924.6	3733.7	3450.8	3366.0
37.5°	3719.5	3684.2	3443.7	3217.5	3111.4
40°	3486.2	3443.7	3182.1	2977.0	2863.9
42.5°	3267.0	3210.4	2955.8	2736.6	2609.3
45°	3033.6	2970.0	2715.4	2489.1	2390.1
47.5°	2800.3	2743.7	2510.3	2277.0	2163.8
50°	2552.8	2503.3	2291.1	2057.8	1937.5
52.5°	2347.7	2269.9	2064.8	1831.5	1732.5
55°	2107.3	2043.6	1852.7	1633.5	1548.6
57.5°	1888.0	1824.4	1647.6	1442.6	1371.8
60°	1683.0	1591.1	1442.6	1265.8	1209.2
62.5°	1456.7	1386.0	1258.7	1110.2	1180.9
65°	1251.6	1180.9	1067.8	1089.0	905.1
67.5°	1025.3	990.0	891.0	792.0	763.7
70°	834.4	792.0	756.6	650.6	622.3
72.5°	664.7	622.3	572.8	516.2	495.0
75°	502.1	466.7	438.4	417.2	459.6
77.5°	346.5	332.4	311.1	289.9	282.9
80°	226.3	219.2	212.1	205.1	198.0
82.5°	134.4	134.4	134.4	134.4	134.4
85°	70.7	77.8	84.9	91.9	99.0
87.5°	42.4	42.4	49.5	56.6	63.6
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)