

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: P545030

Luminaire Tested: **FMR-12-1-LD4-2HI-50-UNV-81-97-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: P545030
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-12-1-LD4-2HI-50-UNV-81-97-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

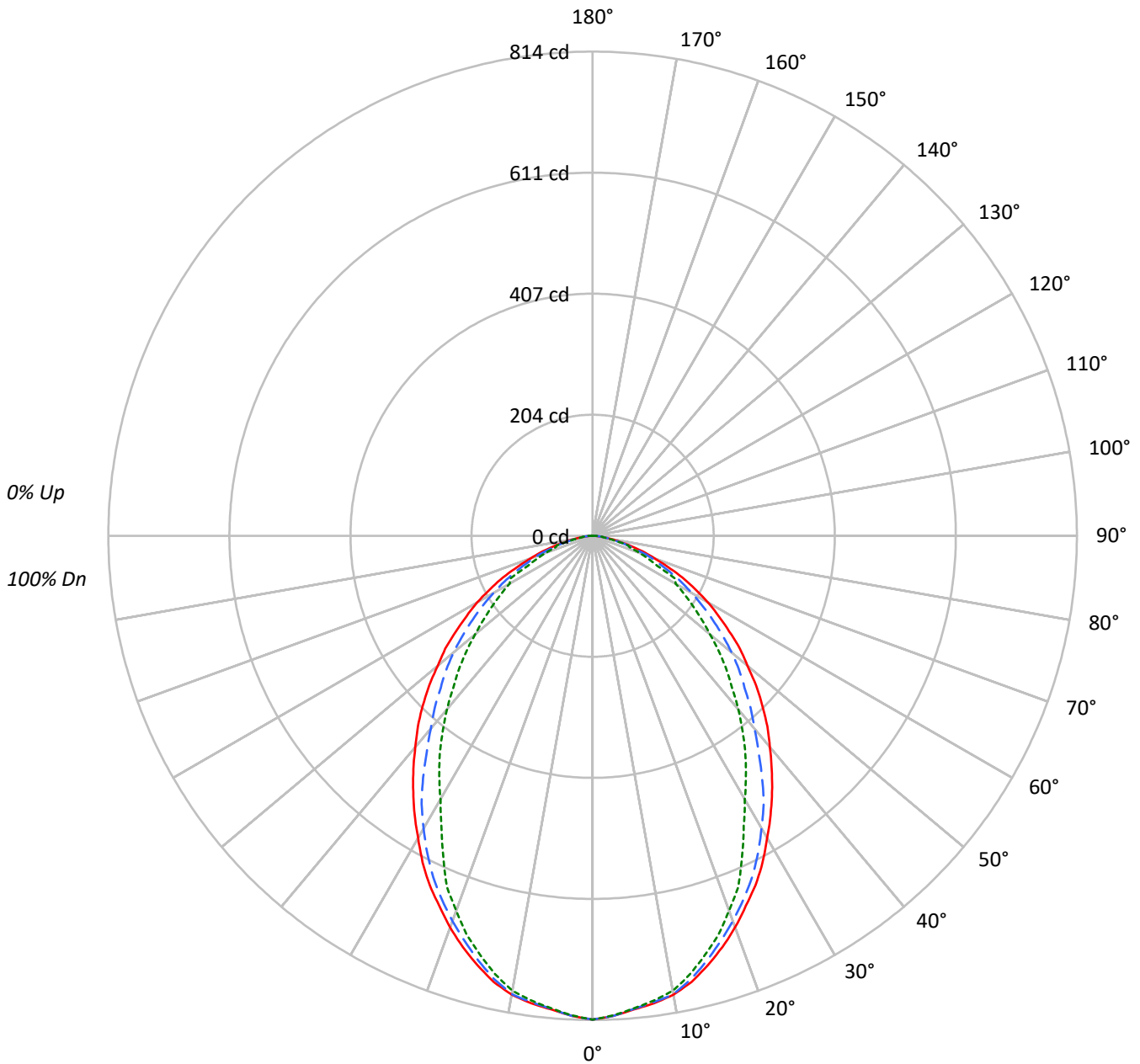
Lumens per Lamp: N/A
Luminaire Lumens: 1597.0 lumens
Efficiency: N/A
Efficacy: 73.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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°	8756	8756	8756
5°	8638	8627	8617
10°	8563	8553	8490
15°	8332	8247	8133
20°	8025	7897	7680
25°	7696	7529	7059
30°	7293	7060	6359
35°	6908	6525	5883
40°	6514	5947	5352
45°	6142	5497	4839
50°	5685	5102	4315
55°	5260	4624	3866
60°	4818	4131	3462
65°	4241	3617	3067
70°	3493	3166	2606
75°	2778	2425	2541
80°	1866	1748	1630
85°	1161	1396	1630



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.7	4.7
10°-20°	207.8	13.0
20°-30°	287.7	18.0
30°-40°	306.8	19.2
40°-50°	279.9	17.5
50°-60°	219.3	13.7
60°-70°	142.9	8.9
70°-80°	63.3	4.0
80°-90°	13.6	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°	571.3	35.8
0°-40°	878.1	55.0
0°-60°	1377.2	86.2
0°-90°	1597.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1597.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	814	814	814	814	814	
5°	799	798	798	798	798	76
15°	748	748	740	733	730	210
25°	648	644	634	611	594	297
35°	526	522	497	459	448	329
45°	404	395	361	331	318	311
55°	280	272	246	217	206	251
65°	166	157	142	145	120	164
75°	67	62	58	56	61	72
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	813.5	813.5	813.5	813.5	813.5
2.5°	807.8	807.8	807.8	806.9	806.9
5°	799.4	798.4	798.4	797.5	797.5
7.5°	792.8	791.9	790.9	790.0	788.1
10°	783.4	783.4	782.5	777.8	776.8
12.5°	768.3	767.4	763.6	757.1	755.2
15°	747.7	747.7	740.1	732.6	729.8
17.5°	725.1	724.1	714.7	707.2	703.5
20°	700.6	698.8	689.4	677.1	670.5
22.5°	673.4	673.4	662.1	646.1	639.5
25°	648.0	644.2	633.9	611.3	594.4
27.5°	618.8	613.2	601.9	569.9	550.2
30°	586.8	584.0	568.0	526.7	511.6
32.5°	556.7	552.0	535.1	491.9	479.6
35°	525.7	522.0	496.6	458.9	447.7
37.5°	494.7	490.0	458.0	427.9	413.8
40°	463.6	458.0	423.2	395.9	380.9
42.5°	434.5	427.0	393.1	364.0	347.0
45°	403.5	395.0	361.1	331.0	317.9
47.5°	372.4	364.9	333.9	302.8	287.8
50°	339.5	332.9	304.7	273.7	257.7
52.5°	312.2	301.9	274.6	243.6	230.4
55°	280.3	271.8	246.4	217.2	206.0
57.5°	251.1	242.6	219.1	191.9	182.4
60°	223.8	211.6	191.9	168.3	160.8
62.5°	193.7	184.3	167.4	147.7	157.1
65°	166.5	157.1	142.0	144.8	120.4
67.5°	136.4	131.7	118.5	105.3	101.6
70°	111.0	105.3	100.6	86.5	82.8
72.5°	88.4	82.8	76.2	68.7	65.8
75°	66.8	62.1	58.3	55.5	61.1
77.5°	46.1	44.2	41.4	38.6	37.6
80°	30.1	29.2	28.2	27.3	26.3
82.5°	17.9	17.9	17.9	17.9	17.9
85°	9.4	10.3	11.3	12.2	13.2
87.5°	5.6	5.6	6.6	7.5	8.5
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)