

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: P545036

Luminaire Tested: **FMR-12-1-LD4-2HI-50-UNV-82-94-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: P545036
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-82-94-EDD
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

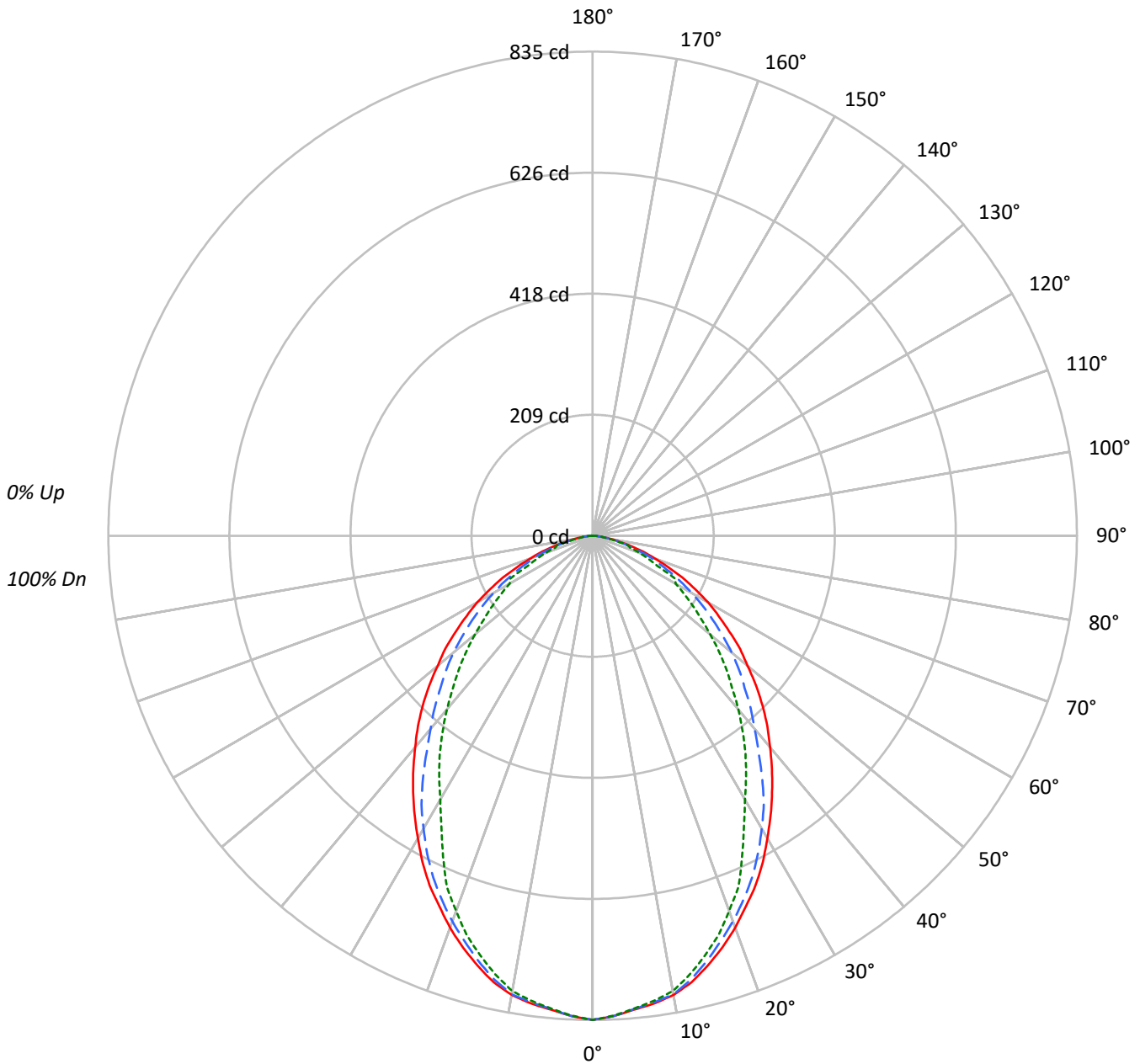
Lumens per Lamp: N/A
Luminaire Lumens: 1639.0 lumens
Efficiency: N/A
Efficacy: 75.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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°	8987	8987	8987
5°	8864	8854	8844
10°	8788	8777	8713
15°	8551	8465	8347
20°	8237	8104	7883
25°	7898	7726	7245
30°	7486	7246	6527
35°	7089	6696	6037
40°	6686	6102	5493
45°	6304	5641	4966
50°	5834	5236	4429
55°	5397	4746	3967
60°	4945	4239	3552
65°	4350	3711	3145
70°	3585	3251	2672
75°	2849	2487	2608
80°	1915	1798	1674
85°	1198	1433	1667



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.7	4.7
10°-20°	213.3	13.0
20°-30°	295.3	18.0
30°-40°	314.9	19.2
40°-50°	287.2	17.5
50°-60°	225.0	13.7
60°-70°	146.7	8.9
70°-80°	65.0	4.0
80°-90°	13.9	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°	586.3	35.8
0°-40°	901.1	55.0
0°-60°	1413.4	86.2
0°-90°	1639.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1639.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	835	835	835	835	835	
5°	820	819	819	818	818	78
15°	767	767	760	752	749	216
25°	665	661	650	627	610	305
35°	540	536	510	471	459	337
45°	414	405	371	340	326	319
55°	288	279	253	223	211	258
65°	171	161	146	149	124	168
75°	68	64	60	57	63	73
85°	10	11	12	12	14	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	834.9	834.9	834.9	834.9	834.9
2.5°	829.1	829.1	829.1	828.1	828.1
5°	820.4	819.4	819.4	818.5	818.5
7.5°	813.7	812.7	811.7	810.8	808.8
10°	804.0	804.0	803.0	798.2	797.2
12.5°	788.6	787.6	783.7	777.0	775.0
15°	767.3	767.3	759.6	751.9	749.0
17.5°	744.2	743.2	733.5	725.8	722.0
20°	719.1	717.1	707.5	694.9	688.2
22.5°	691.1	691.1	679.5	663.1	656.3
25°	665.0	661.2	650.5	627.4	610.0
27.5°	635.1	629.3	617.7	584.9	564.6
30°	602.3	599.4	583.0	540.5	525.1
32.5°	571.4	566.6	549.2	504.8	492.2
35°	539.5	535.7	509.6	471.0	459.4
37.5°	507.7	502.9	470.0	439.2	424.7
40°	475.8	470.0	434.3	406.3	390.9
42.5°	445.9	438.2	403.4	373.5	356.2
45°	414.1	405.4	370.6	339.7	326.2
47.5°	382.2	374.5	342.6	310.8	295.3
50°	348.4	341.7	312.7	280.9	264.5
52.5°	320.4	309.8	281.8	250.0	236.5
55°	287.6	278.9	252.9	223.0	211.4
57.5°	257.7	249.0	224.9	196.9	187.2
60°	229.7	217.2	196.9	172.8	165.0
62.5°	198.8	189.2	171.8	151.5	161.2
65°	170.8	161.2	145.7	148.6	123.5
67.5°	140.0	135.1	121.6	108.1	104.2
70°	113.9	108.1	103.3	88.8	84.9
72.5°	90.7	84.9	78.2	70.5	67.6
75°	68.5	63.7	59.8	56.9	62.7
77.5°	47.3	45.4	42.5	39.6	38.6
80°	30.9	29.9	29.0	28.0	27.0
82.5°	18.3	18.3	18.3	18.3	18.3
85°	9.7	10.6	11.6	12.5	13.5
87.5°	5.8	5.8	6.8	7.7	8.7
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)