

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: P545697

Luminaire Tested: **FMR-12-2-LD4-2LO-50-UNV-81-86-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: P545697
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-12-2-LD4-2LO-50-UNV-81-86-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

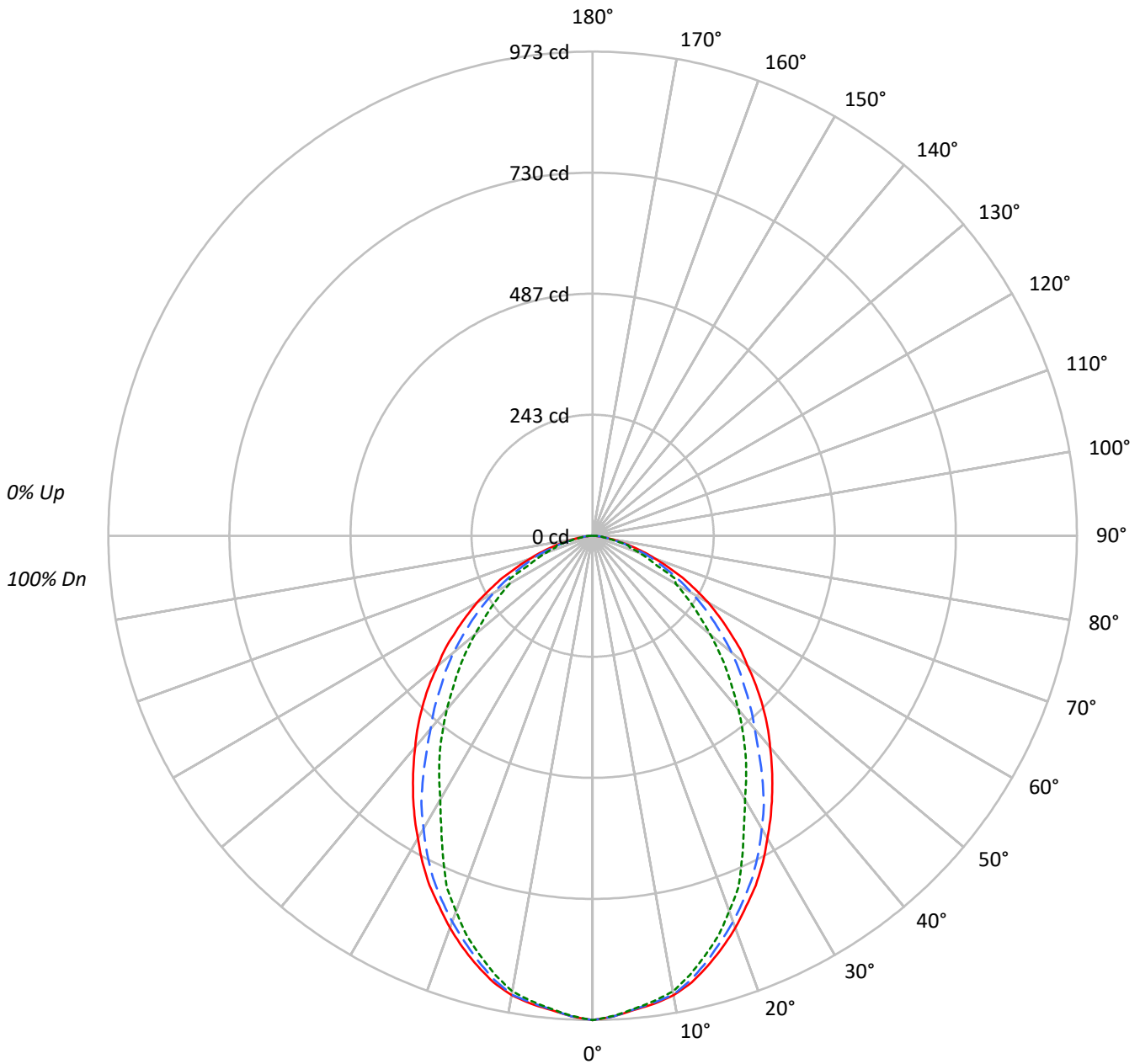
Lumens per Lamp: N/A
Luminaire Lumens: 1911.0 lumens
Efficiency: N/A
Efficacy: 81.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	5239	5239	5239
5°	5168	5162	5156
10°	5123	5117	5080
15°	4985	4935	4866
20°	4802	4724	4596
25°	4605	4504	4223
30°	4364	4224	3805
35°	4133	3904	3520
40°	3898	3558	3202
45°	3675	3289	2895
50°	3402	3053	2581
55°	3147	2766	2313
60°	2883	2471	2071
65°	2537	2164	1834
70°	2090	1895	1558
75°	1661	1451	1520
80°	1116	1048	976
85°	698	834	976



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.6	4.7
10°-20°	248.7	13.0
20°-30°	344.3	18.0
30°-40°	367.1	19.2
40°-50°	334.9	17.5
50°-60°	262.4	13.7
60°-70°	171.0	8.9
70°-80°	75.8	4.0
80°-90°	16.3	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°	683.6	35.8
0°-40°	1050.7	55.0
0°-60°	1648.0	86.2
0°-90°	1911.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1911.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	973	973	973	973	973	
5°	957	955	955	954	954	91
15°	895	895	886	877	873	252
25°	775	771	758	732	711	356
35°	629	625	594	549	536	393
45°	483	473	432	396	380	372
55°	335	325	295	260	246	301
65°	199	188	170	173	144	196
75°	80	74	70	66	73	86
85°	11	12	14	15	16	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	973.4	973.4	973.4	973.4	973.4
2.5°	966.7	966.7	966.7	965.6	965.6
5°	956.6	955.4	955.4	954.3	954.3
7.5°	948.7	947.6	946.4	945.3	943.1
10°	937.4	937.4	936.3	930.7	929.5
12.5°	919.4	918.3	913.8	905.9	903.7
15°	894.7	894.7	885.7	876.7	873.3
17.5°	867.7	866.5	855.3	846.3	841.8
20°	838.4	836.1	824.9	810.3	802.4
22.5°	805.8	805.8	792.3	773.1	765.2
25°	775.4	770.9	758.5	731.5	711.2
27.5°	740.5	733.7	720.2	682.0	658.3
30°	702.2	698.8	679.7	630.2	612.2
32.5°	666.2	660.6	640.3	588.6	573.9
35°	629.1	624.6	594.2	549.2	535.7
37.5°	591.9	586.3	548.1	512.0	495.2
40°	554.8	548.1	506.4	473.8	455.8
42.5°	519.9	510.9	470.4	435.5	415.3
45°	482.8	472.7	432.1	396.1	380.4
47.5°	445.6	436.6	399.5	362.4	344.4
50°	406.3	398.4	364.6	327.5	308.3
52.5°	373.6	361.2	328.6	291.5	275.7
55°	335.4	325.2	294.8	260.0	246.5
57.5°	300.5	290.3	262.2	229.6	218.3
60°	267.8	253.2	229.6	201.4	192.4
62.5°	231.8	220.6	200.3	176.7	187.9
65°	199.2	187.9	169.9	173.3	144.0
67.5°	163.2	157.6	141.8	126.0	121.5
70°	132.8	126.0	120.4	103.5	99.0
72.5°	105.8	99.0	91.2	82.2	78.8
75°	79.9	74.3	69.8	66.4	73.1
77.5°	55.1	52.9	49.5	46.1	45.0
80°	36.0	34.9	33.8	32.6	31.5
82.5°	21.4	21.4	21.4	21.4	21.4
85°	11.3	12.4	13.5	14.6	15.8
87.5°	6.8	6.8	7.9	9.0	10.1
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)