

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: P545650

Luminaire Tested: **FMR-12-2-LD4-2LO-35-UNV-93-87-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: P545650
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-35-UNV-93-87-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

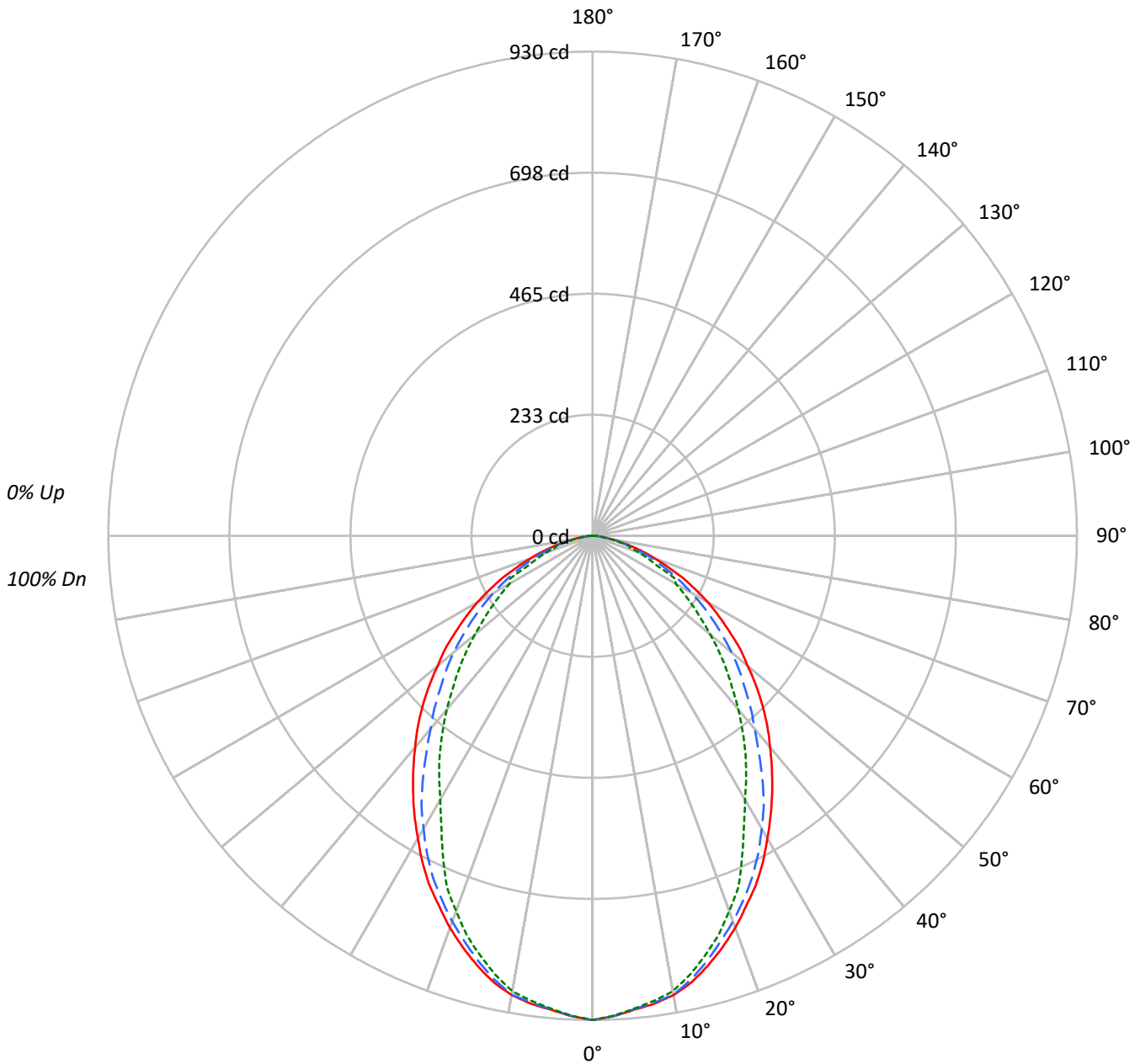
Lumens per Lamp: N/A
Luminaire Lumens: 1826.0 lumens
Efficiency: N/A
Efficacy: 78.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): 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°	5006	5006	5006
5°	4938	4932	4927
10°	4895	4890	4854
15°	4763	4715	4649
20°	4588	4514	4391
25°	4400	4304	4036
30°	4170	4036	3636
35°	3949	3731	3363
40°	3724	3400	3060
45°	3511	3143	2767
50°	3250	2917	2467
55°	3006	2643	2210
60°	2754	2362	1979
65°	2423	2068	1752
70°	1997	1811	1489
75°	1587	1387	1454
80°	1066	1001	933
85°	667	797	932



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.6	4.7
10°-20°	237.6	13.0
20°-30°	329.0	18.0
30°-40°	350.8	19.2
40°-50°	320.0	17.5
50°-60°	250.7	13.7
60°-70°	163.4	8.9
70°-80°	72.4	4.0
80°-90°	15.5	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°	653.2	35.8
0°-40°	1004.0	55.0
0°-60°	1574.7	86.2
0°-90°	1826.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1826.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	930	930	930	930	930	
5°	914	913	913	912	912	87
15°	855	855	846	838	834	240
25°	741	737	725	699	680	340
35°	601	597	568	525	512	376
45°	461	452	413	378	364	355
55°	320	311	282	248	236	287
65°	190	180	162	166	138	188
75°	76	71	67	63	70	82
85°	11	12	13	14	15	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	930.1	930.1	930.1	930.1	930.1
2.5°	923.7	923.7	923.7	922.6	922.6
5°	914.0	912.9	912.9	911.9	911.9
7.5°	906.5	905.4	904.3	903.3	901.1
10°	895.7	895.7	894.7	889.3	888.2
12.5°	878.5	877.4	873.1	865.6	863.5
15°	854.9	854.9	846.3	837.7	834.4
17.5°	829.1	828.0	817.2	808.6	804.3
20°	801.1	799.0	788.2	774.2	766.7
22.5°	769.9	769.9	757.0	738.7	731.2
25°	740.9	736.6	724.8	698.9	679.6
27.5°	707.6	701.1	688.2	651.6	629.1
30°	671.0	667.8	649.5	602.2	585.0
32.5°	636.6	631.2	611.8	562.4	548.4
35°	601.1	596.8	567.8	524.7	511.8
37.5°	565.6	560.2	523.7	489.3	473.1
40°	530.1	523.7	483.9	452.7	435.5
42.5°	496.8	488.2	449.5	416.1	396.8
45°	461.3	451.6	412.9	378.5	363.5
47.5°	425.8	417.2	381.7	346.2	329.0
50°	388.2	380.7	348.4	312.9	294.6
52.5°	357.0	345.2	314.0	278.5	263.5
55°	320.4	310.8	281.7	248.4	235.5
57.5°	287.1	277.4	250.5	219.4	208.6
60°	255.9	241.9	219.4	192.5	183.9
62.5°	221.5	210.8	191.4	168.8	179.6
65°	190.3	179.6	162.4	165.6	137.6
67.5°	155.9	150.5	135.5	120.4	116.1
70°	126.9	120.4	115.1	98.9	94.6
72.5°	101.1	94.6	87.1	78.5	75.3
75°	76.3	71.0	66.7	63.4	69.9
77.5°	52.7	50.5	47.3	44.1	43.0
80°	34.4	33.3	32.3	31.2	30.1
82.5°	20.4	20.4	20.4	20.4	20.4
85°	10.8	11.8	12.9	14.0	15.1
87.5°	6.5	6.5	7.5	8.6	9.7
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)