

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: P545676

Luminaire Tested: **FMR-12-2-LD4-2LO-40-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: P545676
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-40-UNV-82-94-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

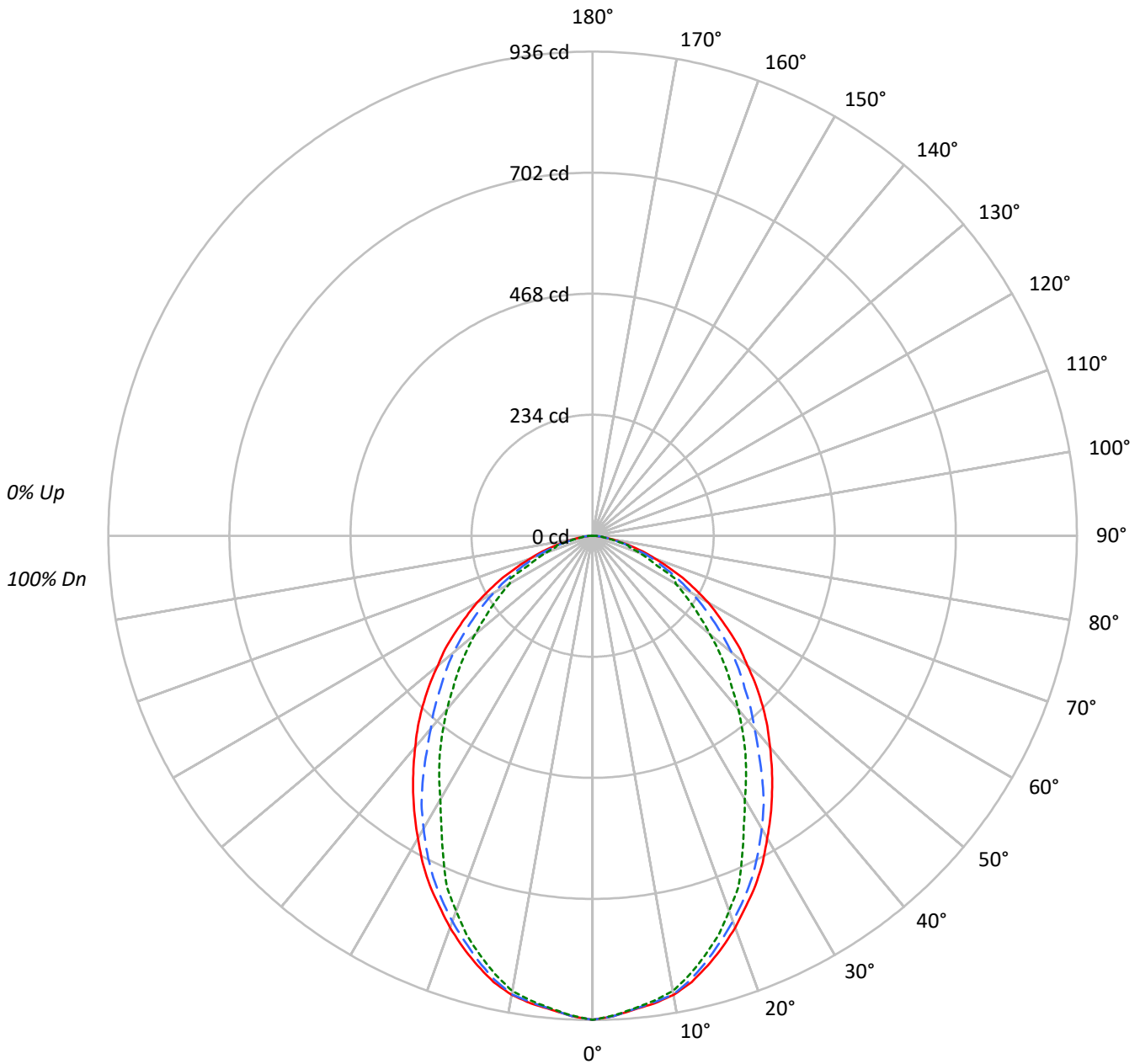
Lumens per Lamp: N/A
Luminaire Lumens: 1837.0 lumens
Efficiency: N/A
Efficacy: 78.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	5036	5036	5036
5°	4968	4962	4956
10°	4924	4918	4884
15°	4792	4744	4678
20°	4616	4541	4418
25°	4426	4330	4060
30°	4195	4061	3657
35°	3973	3753	3383
40°	3747	3420	3078
45°	3532	3162	2783
50°	3270	2935	2482
55°	3025	2659	2223
60°	2772	2376	1991
65°	2439	2080	1764
70°	2009	1822	1498
75°	1597	1395	1462
80°	1072	1007	939
85°	667	803	932



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.1	4.7
10°-20°	239.1	13.0
20°-30°	331.0	18.0
30°-40°	352.9	19.2
40°-50°	321.9	17.5
50°-60°	252.2	13.7
60°-70°	164.4	8.9
70°-80°	72.8	4.0
80°-90°	15.7	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°	657.1	35.8
0°-40°	1010.0	55.0
0°-60°	1584.2	86.2
0°-90°	1837.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1837.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	936	936	936	936	936	
5°	920	918	918	917	917	87
15°	860	860	851	843	840	242
25°	745	741	729	703	684	342
35°	605	600	571	528	515	378
45°	464	454	415	381	366	357
55°	322	313	283	250	237	289
65°	192	181	163	167	138	189
75°	77	71	67	64	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°	935.7	935.7	935.7	935.7	935.7
2.5°	929.3	929.3	929.3	928.2	928.2
5°	919.5	918.4	918.4	917.4	917.4
7.5°	911.9	910.9	909.8	908.7	906.5
10°	901.1	901.1	900.0	894.6	893.6
12.5°	883.8	882.7	878.4	870.8	868.7
15°	860.0	860.0	851.4	842.7	839.5
17.5°	834.1	833.0	822.2	813.5	809.2
20°	805.9	803.8	792.9	778.9	771.3
22.5°	774.6	774.6	761.6	743.2	735.6
25°	745.3	741.0	729.1	703.2	683.7
27.5°	711.8	705.3	692.3	655.6	632.8
30°	675.0	671.8	653.4	605.8	588.5
32.5°	640.4	635.0	615.5	565.8	551.7
35°	604.7	600.4	571.2	527.9	514.9
37.5°	569.0	563.6	526.8	492.2	476.0
40°	533.3	526.8	486.8	455.4	438.1
42.5°	499.8	491.1	452.2	418.7	399.2
45°	464.1	454.3	415.4	380.8	365.6
47.5°	428.4	419.7	384.0	348.3	331.0
50°	390.5	383.0	350.5	314.8	296.4
52.5°	359.2	347.3	315.9	280.2	265.0
55°	322.4	312.6	283.4	249.9	236.9
57.5°	288.8	279.1	252.1	220.7	209.9
60°	257.5	243.4	220.7	193.6	185.0
62.5°	222.8	212.0	192.6	169.8	180.7
65°	191.5	180.7	163.3	166.6	138.5
67.5°	156.9	151.4	136.3	121.2	116.8
70°	127.7	121.2	115.8	99.5	95.2
72.5°	101.7	95.2	87.6	79.0	75.7
75°	76.8	71.4	67.1	63.8	70.3
77.5°	53.0	50.8	47.6	44.4	43.3
80°	34.6	33.5	32.5	31.4	30.3
82.5°	20.6	20.6	20.6	20.6	20.6
85°	10.8	11.9	13.0	14.1	15.1
87.5°	6.5	6.5	7.6	8.7	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)