

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: P545671

Luminaire Tested: **FMR-12-2-LD4-2LO-40-UNV-82-84-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: P545671
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-82-84-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

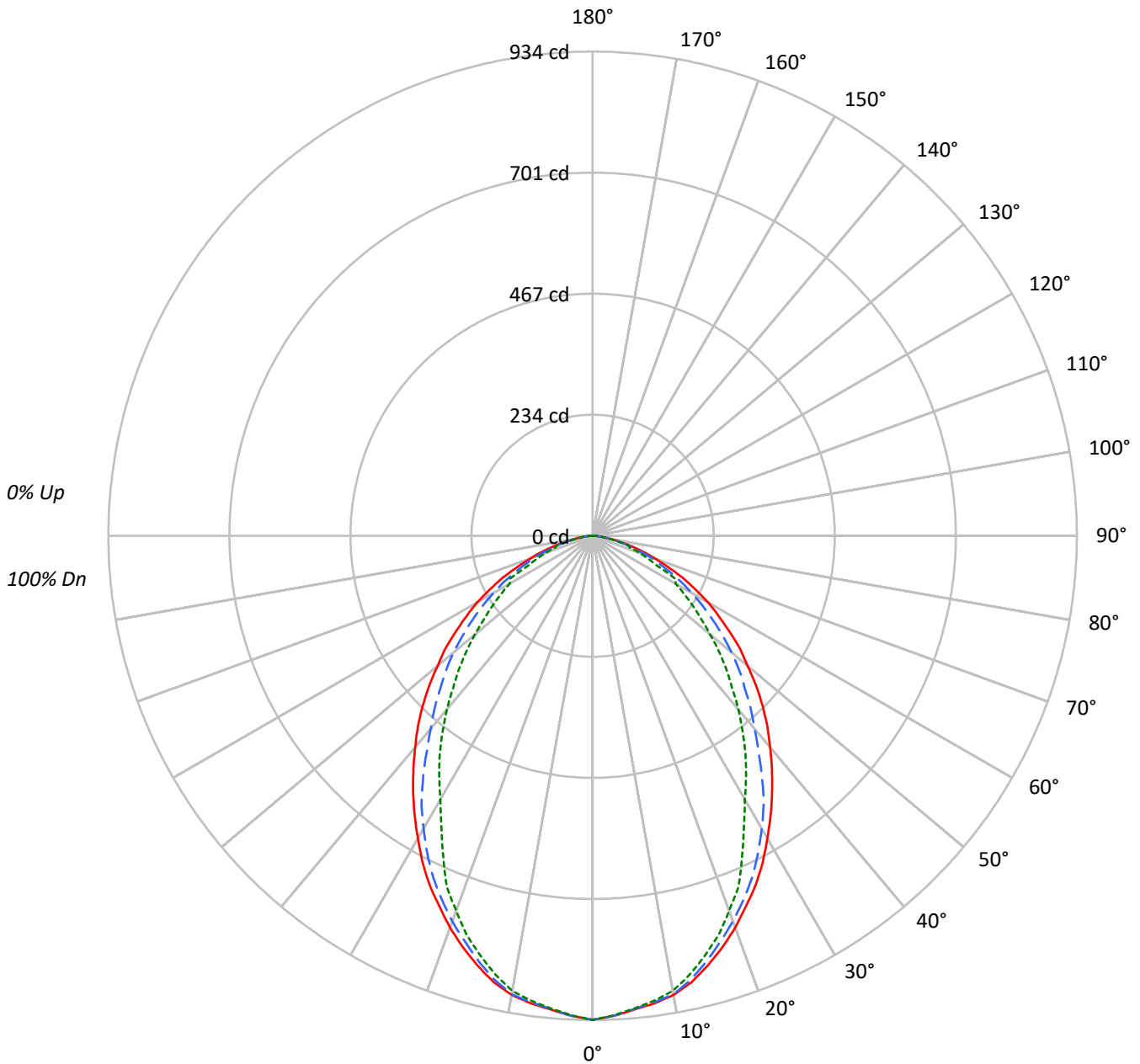
Lumens per Lamp: N/A
Luminaire Lumens: 1833.0 lumens
Efficiency: N/A
Efficacy: 78.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	5025	5025	5025
5°	4957	4951	4945
10°	4914	4908	4873
15°	4781	4733	4667
20°	4606	4531	4408
25°	4416	4320	4051
30°	4186	4052	3649
35°	3964	3744	3376
40°	3739	3412	3072
45°	3525	3155	2777
50°	3263	2928	2477
55°	3019	2654	2218
60°	2765	2370	1987
65°	2434	2076	1760
70°	2005	1817	1495
75°	1593	1391	1460
80°	1069	1004	936
85°	667	803	932



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.9	4.7
10°-20°	238.5	13.0
20°-30°	330.2	18.0
30°-40°	352.1	19.2
40°-50°	321.2	17.5
50°-60°	251.7	13.7
60°-70°	164.0	8.9
70°-80°	72.7	4.0
80°-90°	15.6	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°	655.7	35.8
0°-40°	1007.8	55.0
0°-60°	1580.7	86.2
0°-90°	1833.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1833.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	934	934	934	934	934	
5°	918	916	916	915	915	87
15°	858	858	850	841	838	241
25°	744	739	728	702	682	341
35°	603	599	570	527	514	377
45°	463	453	414	380	365	357
55°	322	312	283	249	236	289
65°	191	180	163	166	138	188
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°	933.7	933.7	933.7	933.7	933.7
2.5°	927.2	927.2	927.2	926.1	926.1
5°	917.5	916.4	916.4	915.4	915.4
7.5°	910.0	908.9	907.8	906.7	904.6
10°	899.2	899.2	898.1	892.7	891.6
12.5°	881.9	880.8	876.5	868.9	866.8
15°	858.1	858.1	849.5	840.9	837.6
17.5°	832.2	831.2	820.4	811.7	807.4
20°	804.2	802.0	791.2	777.2	769.6
22.5°	772.9	772.9	759.9	741.6	734.0
25°	743.7	739.4	727.5	701.6	682.2
27.5°	710.3	703.8	690.8	654.1	631.5
30°	673.6	670.3	652.0	604.5	587.2
32.5°	639.0	633.6	614.2	564.5	550.5
35°	603.4	599.1	569.9	526.8	513.8
37.5°	567.8	562.4	525.7	491.1	474.9
40°	532.2	525.7	485.7	454.4	437.2
42.5°	498.7	490.1	451.2	417.7	398.3
45°	463.1	453.4	414.5	380.0	364.8
47.5°	427.5	418.8	383.2	347.6	330.3
50°	389.7	382.1	349.7	314.1	295.8
52.5°	358.4	346.5	315.2	279.6	264.5
55°	321.7	312.0	282.8	249.3	236.4
57.5°	288.2	278.5	251.5	220.2	209.4
60°	256.9	242.9	220.2	193.2	184.6
62.5°	222.4	211.6	192.1	169.5	180.3
65°	191.1	180.3	163.0	166.2	138.2
67.5°	156.5	151.1	136.0	120.9	116.6
70°	127.4	120.9	115.5	99.3	95.0
72.5°	101.5	95.0	87.4	78.8	75.6
75°	76.6	71.2	66.9	63.7	70.2
77.5°	52.9	50.7	47.5	44.3	43.2
80°	34.5	33.5	32.4	31.3	30.2
82.5°	20.5	20.5	20.5	20.5	20.5
85°	10.8	11.9	13.0	14.0	15.1
87.5°	6.5	6.5	7.6	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)