

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: P545611

Luminaire Tested: **FMR-12-2-LD4-2HI-50-UNV-82-88-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: P545611
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-LD4-2HI-50-UNV-82-88-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

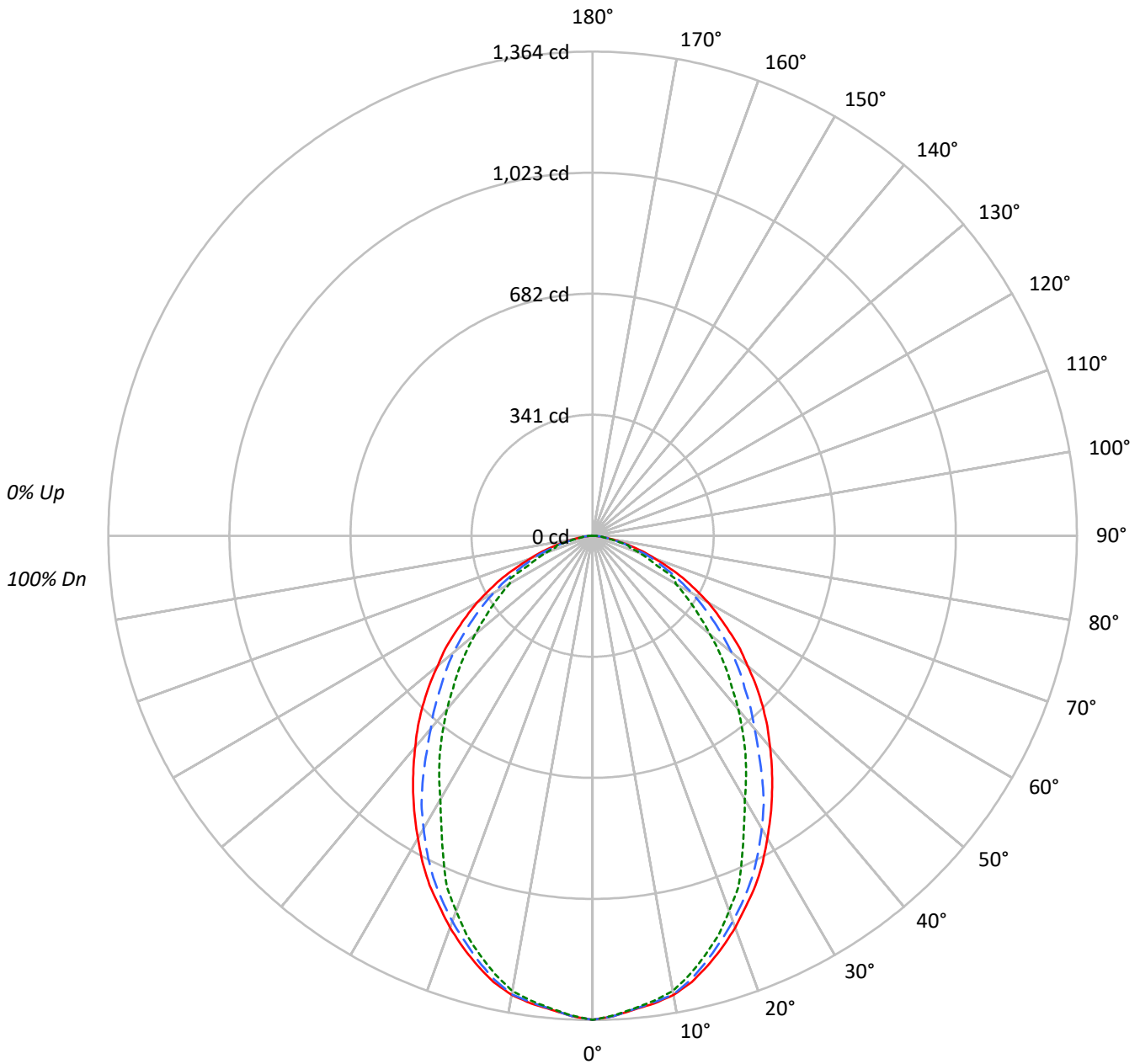
Lumens per Lamp: N/A
Luminaire Lumens: 2677.0 lumens
Efficiency: N/A
Efficacy: 62.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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°	7339	7339	7339
5°	7239	7231	7222
10°	7177	7168	7116
15°	6983	6913	6816
20°	6727	6618	6438
25°	6450	6309	5916
30°	6113	5917	5330
35°	5790	5469	4930
40°	5460	4984	4486
45°	5147	4608	4055
50°	4765	4277	3616
55°	4408	3875	3239
60°	4039	3462	2902
65°	3553	3031	2570
70°	2927	2655	2183
75°	2327	2032	2131
80°	1562	1466	1367
85°	976	1167	1365



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.9	4.7
10°-20°	348.4	13.0
20°-30°	482.3	18.0
30°-40°	514.3	19.2
40°-50°	469.2	17.5
50°-60°	367.5	13.7
60°-70°	239.6	8.9
70°-80°	106.1	4.0
80°-90°	22.8	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°	957.6	35.8
0°-40°	1471.8	55.0
0°-60°	2308.5	86.2
0°-90°	2677.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2677.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1364	1364	1364	1364	1364	
5°	1340	1338	1338	1337	1337	127
15°	1253	1253	1241	1228	1223	352
25°	1086	1080	1062	1025	996	499
35°	881	875	832	769	750	551
45°	676	662	605	555	533	521
55°	470	456	413	364	345	421
65°	279	263	238	243	202	275
75°	112	104	98	93	102	120
85°	16	17	19	20	22	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1363.6	1363.6	1363.6	1363.6	1363.6
2.5°	1354.2	1354.2	1354.2	1352.6	1352.6
5°	1340.0	1338.4	1338.4	1336.8	1336.8
7.5°	1328.9	1327.4	1325.8	1324.2	1321.1
10°	1313.2	1313.2	1311.6	1303.7	1302.1
12.5°	1288.0	1286.4	1280.1	1269.0	1265.9
15°	1253.3	1253.3	1240.7	1228.1	1223.3
17.5°	1215.4	1213.9	1198.1	1185.5	1179.2
20°	1174.5	1171.3	1155.5	1135.0	1124.0
22.5°	1128.7	1128.7	1109.8	1083.0	1072.0
25°	1086.2	1079.9	1062.5	1024.7	996.3
27.5°	1037.3	1027.8	1008.9	955.3	922.2
30°	983.7	979.0	952.2	882.8	857.6
32.5°	933.3	925.4	897.0	824.5	804.0
35°	881.2	874.9	832.4	769.3	750.4
37.5°	829.2	821.3	767.7	717.3	693.6
40°	777.2	767.7	709.4	663.7	638.5
42.5°	728.3	715.7	659.0	610.1	581.7
45°	676.3	662.1	605.4	554.9	532.8
47.5°	624.3	611.7	559.6	507.6	482.4
50°	569.1	558.1	510.8	458.7	431.9
52.5°	523.4	506.0	460.3	408.3	386.2
55°	469.8	455.6	413.0	364.2	345.2
57.5°	420.9	406.7	367.3	321.6	305.8
60°	375.2	354.7	321.6	282.2	269.6
62.5°	324.7	309.0	280.6	247.5	263.3
65°	279.0	263.3	238.0	242.8	201.8
67.5°	228.6	220.7	198.6	176.6	170.3
70°	186.0	176.6	168.7	145.0	138.7
72.5°	148.2	138.7	127.7	115.1	110.4
75°	111.9	104.0	97.7	93.0	102.5
77.5°	77.2	74.1	69.4	64.6	63.1
80°	50.4	48.9	47.3	45.7	44.1
82.5°	30.0	30.0	30.0	30.0	30.0
85°	15.8	17.3	18.9	20.5	22.1
87.5°	9.5	9.5	11.0	12.6	14.2
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)