

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: P545291

Luminaire Tested: **FMR-12-2-LD4-1HI-40-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: P545291
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-LD4-1HI-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

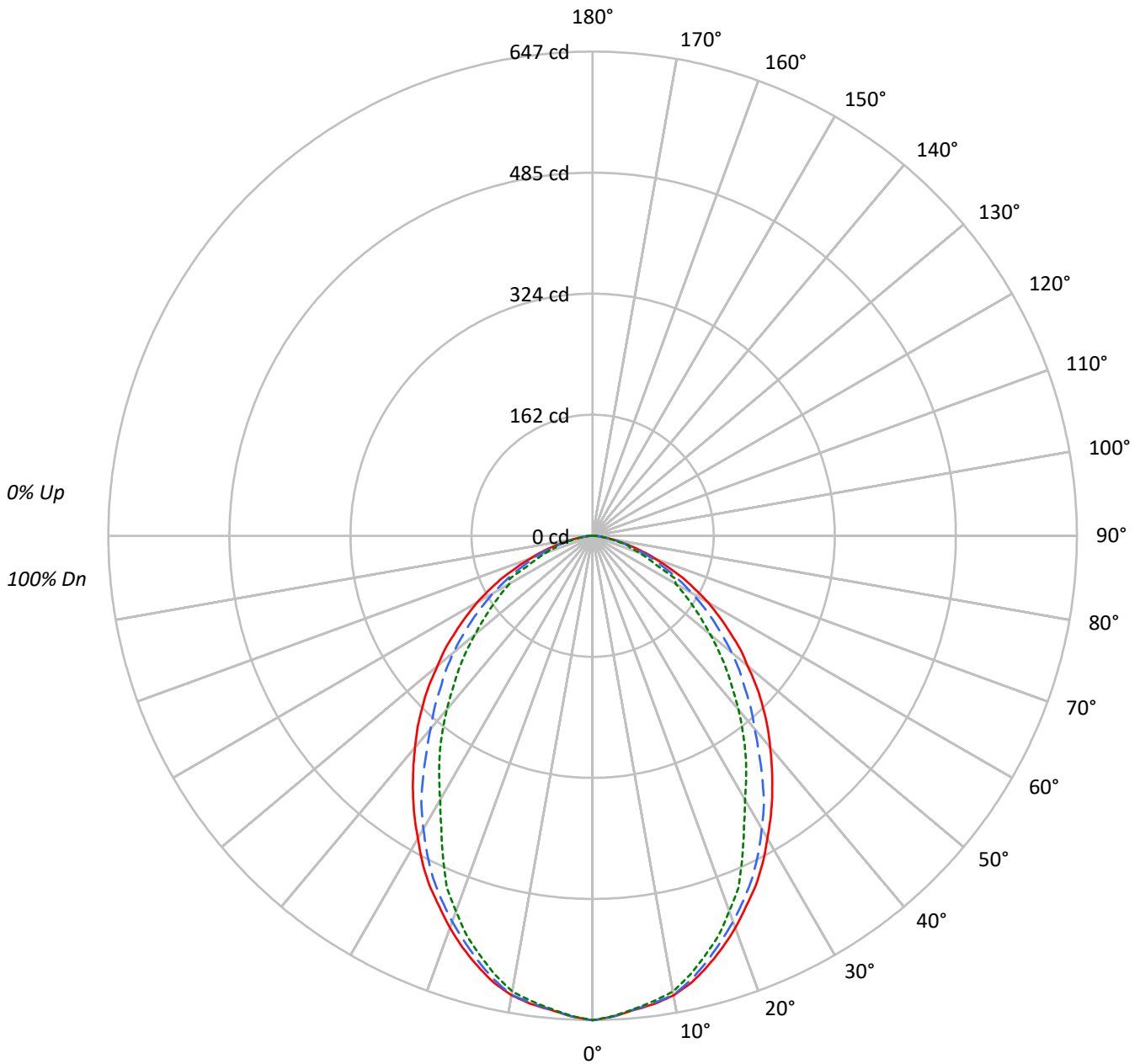
Lumens per Lamp: N/A
Luminaire Lumens: 1271.0 lumens
Efficiency: N/A
Efficacy: 58.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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°	3484	3484	3484
5°	3437	3433	3429
10°	3407	3403	3378
15°	3315	3282	3236
20°	3194	3142	3057
25°	3062	2996	2809
30°	2902	2810	2531
35°	2749	2597	2341
40°	2592	2366	2129
45°	2444	2187	1926
50°	2262	2030	1717
55°	2092	1840	1538
60°	1917	1644	1378
65°	1687	1439	1220
70°	1389	1260	1037
75°	1104	965	1013
80°	744	697	651
85°	463	556	648



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.3	4.7
10°-20°	165.4	13.0
20°-30°	229.0	18.0
30°-40°	244.2	19.2
40°-50°	222.8	17.5
50°-60°	174.5	13.7
60°-70°	113.7	8.9
70°-80°	50.4	4.0
80°-90°	10.8	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°	454.6	35.8
0°-40°	698.8	55.0
0°-60°	1096.1	86.2
0°-90°	1271.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1271.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	647	647	647	647	647	
5°	636	636	636	635	635	60
15°	595	595	589	583	581	167
25°	516	513	504	486	473	237
35°	418	415	395	365	356	262
45°	321	314	287	264	253	247
55°	223	216	196	173	164	200
65°	132	125	113	115	96	131
75°	53	49	46	44	49	57
85°	8	8	9	10	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	647.4	647.4	647.4	647.4	647.4
2.5°	642.9	642.9	642.9	642.2	642.2
5°	636.2	635.5	635.5	634.7	634.7
7.5°	631.0	630.2	629.5	628.7	627.2
10°	623.5	623.5	622.7	619.0	618.2
12.5°	611.5	610.8	607.8	602.5	601.0
15°	595.0	595.0	589.0	583.1	580.8
17.5°	577.1	576.3	568.8	562.9	559.9
20°	557.6	556.1	548.6	538.9	533.7
22.5°	535.9	535.9	526.9	514.2	509.0
25°	515.7	512.7	504.5	486.5	473.0
27.5°	492.5	488.0	479.0	453.6	437.9
30°	467.0	464.8	452.1	419.1	407.2
32.5°	443.1	439.4	425.9	391.5	381.7
35°	418.4	415.4	395.2	365.3	356.3
37.5°	393.7	390.0	364.5	340.6	329.3
40°	369.0	364.5	336.8	315.1	303.1
42.5°	345.8	339.8	312.9	289.7	276.2
45°	321.1	314.4	287.4	263.5	253.0
47.5°	296.4	290.4	265.7	241.0	229.0
50°	270.2	265.0	242.5	217.8	205.1
52.5°	248.5	240.3	218.6	193.9	183.4
55°	223.0	216.3	196.1	172.9	163.9
57.5°	199.8	193.1	174.4	152.7	145.2
60°	178.1	168.4	152.7	134.0	128.0
62.5°	154.2	146.7	133.2	117.5	125.0
65°	132.5	125.0	113.0	115.3	95.8
67.5°	108.5	104.8	94.3	83.8	80.8
70°	88.3	83.8	80.1	68.9	65.9
72.5°	70.4	65.9	60.6	54.6	52.4
75°	53.1	49.4	46.4	44.2	48.7
77.5°	36.7	35.2	32.9	30.7	29.9
80°	24.0	23.2	22.5	21.7	21.0
82.5°	14.2	14.2	14.2	14.2	14.2
85°	7.5	8.2	9.0	9.7	10.5
87.5°	4.5	4.5	5.2	6.0	6.7
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)