

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: P545417

Luminaire Tested: **FMR-12-2-LD4-1LO-50-UNV-82-86-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: P545417
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-LD4-1LO-50-UNV-82-86-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

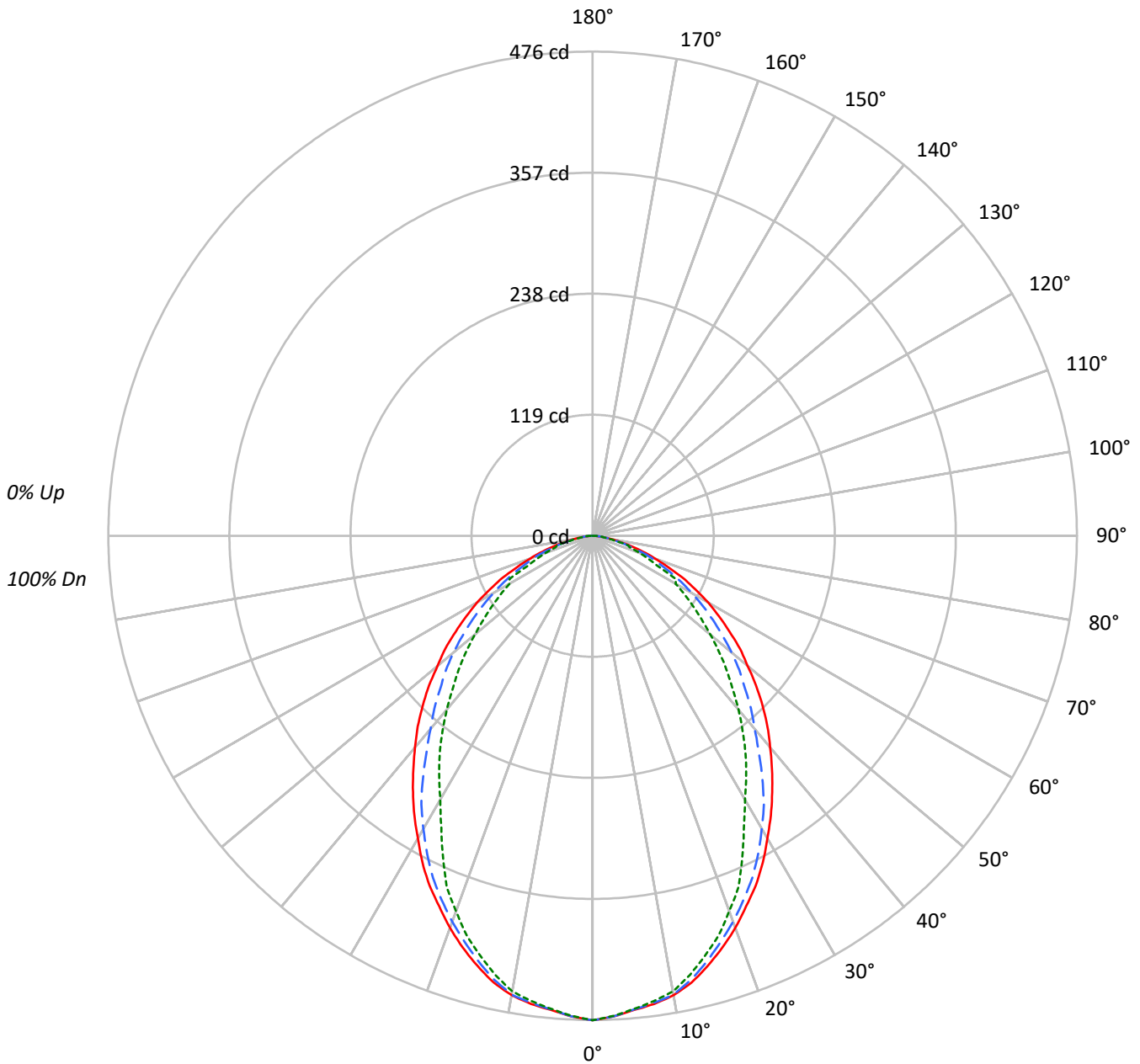
Lumens per Lamp: N/A
Luminaire Lumens: 935.0 lumens
Efficiency: N/A
Efficacy: 79.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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

TEST NUMBER: P545417

CATALOG NUMBER: FMR-12-2-LD4-1LO-50-UNV-82-86-EDD

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	47	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°	2563	2563	2563
5°	2528	2526	2522
10°	2507	2504	2485
15°	2439	2414	2381
20°	2349	2312	2249
25°	2253	2204	2067
30°	2135	2067	1861
35°	2022	1910	1722
40°	1907	1741	1567
45°	1798	1609	1416
50°	1665	1494	1263
55°	1540	1354	1132
60°	1410	1209	1014
65°	1242	1058	898
70°	1023	927	763
75°	813	709	744
80°	545	511	477
85°	340	408	475



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.3	4.7
10°-20°	121.7	13.0
20°-30°	168.4	18.0
30°-40°	179.6	19.2
40°-50°	163.9	17.5
50°-60°	128.4	13.7
60°-70°	83.7	8.9
70°-80°	37.1	4.0
80°-90°	8.0	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°	334.5	35.8
0°-40°	514.1	55.0
0°-60°	806.3	86.2
0°-90°	935.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	935.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	476	476	476	476	476	
5°	468	468	468	467	467	44
15°	438	438	433	429	427	123
25°	379	377	371	358	348	174
35°	308	306	291	269	262	192
45°	236	231	211	194	186	182
55°	164	159	144	127	121	147
65°	98	92	83	85	70	96
75°	39	36	34	32	36	42
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	476.3	476.3	476.3	476.3	476.3
2.5°	473.0	473.0	473.0	472.4	472.4
5°	468.0	467.5	467.5	466.9	466.9
7.5°	464.2	463.6	463.1	462.5	461.4
10°	458.7	458.7	458.1	455.4	454.8
12.5°	449.8	449.3	447.1	443.2	442.1
15°	437.7	437.7	433.3	428.9	427.3
17.5°	424.5	424.0	418.5	414.1	411.9
20°	410.2	409.1	403.6	396.4	392.6
22.5°	394.2	394.2	387.6	378.3	374.4
25°	379.4	377.2	371.1	357.9	348.0
27.5°	362.3	359.0	352.4	333.7	322.1
30°	343.6	341.9	332.6	308.3	299.5
32.5°	326.0	323.2	313.3	288.0	280.8
35°	307.8	305.6	290.7	268.7	262.1
37.5°	289.6	286.9	268.1	250.5	242.3
40°	271.5	268.1	247.8	231.8	223.0
42.5°	254.4	250.0	230.2	213.1	203.2
45°	236.2	231.3	211.4	193.8	186.1
47.5°	218.0	213.6	195.5	177.3	168.5
50°	198.8	194.9	178.4	160.2	150.9
52.5°	182.8	176.7	160.8	142.6	134.9
55°	164.1	159.1	144.3	127.2	120.6
57.5°	147.0	142.1	128.3	112.3	106.8
60°	131.0	123.9	112.3	98.6	94.2
62.5°	113.4	107.9	98.0	86.4	92.0
65°	97.5	92.0	83.1	84.8	70.5
67.5°	79.8	77.1	69.4	61.7	59.5
70°	65.0	61.7	58.9	50.7	48.5
72.5°	51.8	48.5	44.6	40.2	38.5
75°	39.1	36.3	34.1	32.5	35.8
77.5°	27.0	25.9	24.2	22.6	22.0
80°	17.6	17.1	16.5	16.0	15.4
82.5°	10.5	10.5	10.5	10.5	10.5
85°	5.5	6.1	6.6	7.2	7.7
87.5°	3.3	3.3	3.9	4.4	5.0
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)