

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: P545375

Luminaire Tested: **FMR-12-2-LD4-1LO-40-UNV-81-84-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: P545375
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-40-UNV-81-84-EDD
Description: 1X2 FMR TROFFER WITH .156 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

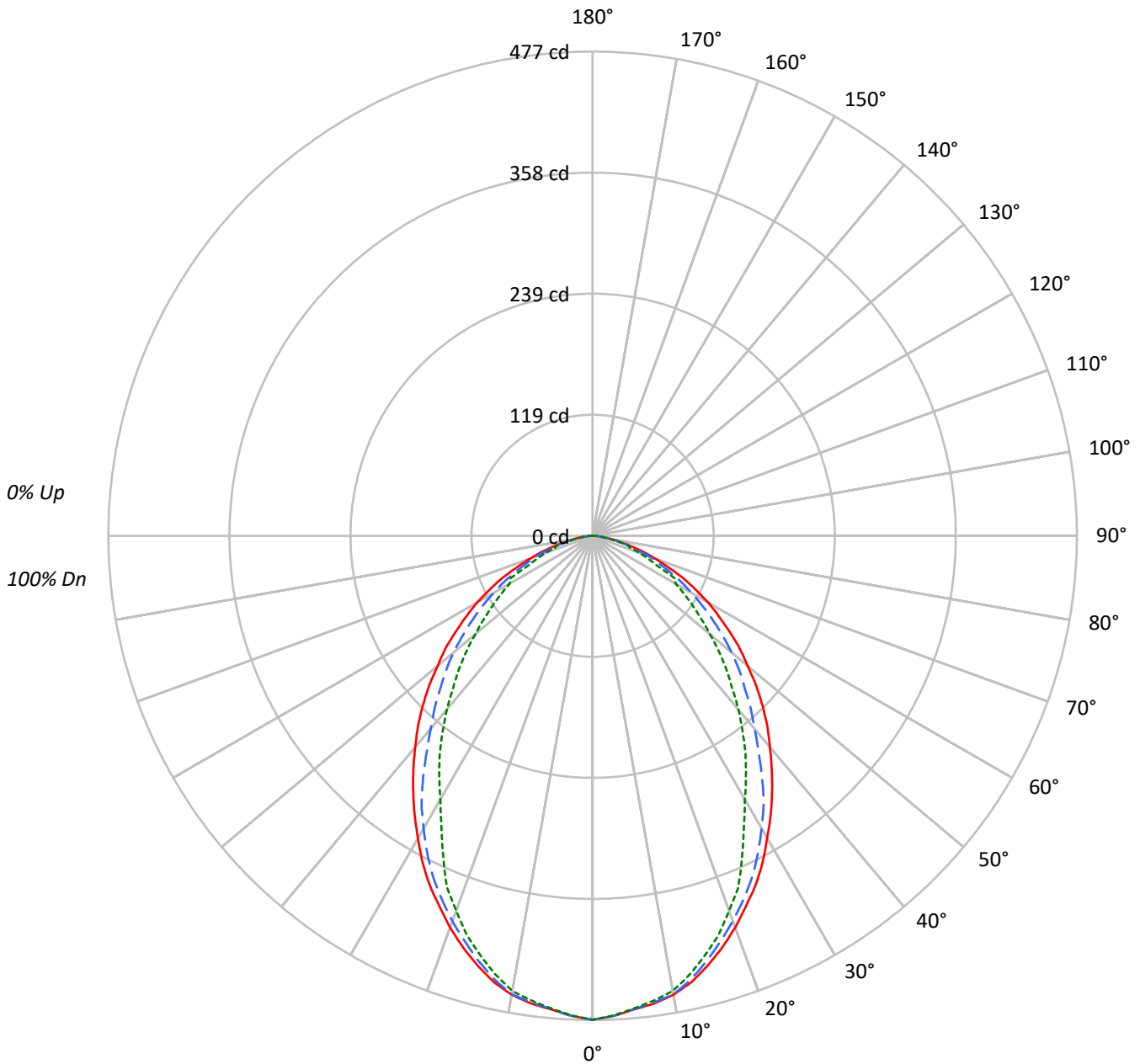
Lumens per Lamp: N/A
Luminaire Lumens: 936.0 lumens
Efficiency: N/A
Efficacy: 80.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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: P545375

CATALOG NUMBER: FMR-12-2-LD4-1LO-40-UNV-81-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545375

CATALOG NUMBER: FMR-12-2-LD4-1LO-40-UNV-81-84-EDD

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°	2566	2566	2566
5°	2531	2528	2525
10°	2509	2506	2488
15°	2442	2417	2383
20°	2352	2314	2251
25°	2255	2206	2069
30°	2137	2069	1864
35°	2024	1912	1724
40°	1909	1742	1568
45°	1800	1611	1418
50°	1666	1495	1264
55°	1542	1355	1133
60°	1412	1210	1015
65°	1243	1060	899
70°	1023	928	763
75°	813	711	744
80°	545	511	477
85°	340	408	475



TEST NUMBER: P545375

CATALOG NUMBER: FMR-12-2-LD4-1LO-40-UNV-81-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.4	4.7
10°-20°	121.8	13.0
20°-30°	168.6	18.0
30°-40°	179.8	19.2
40°-50°	164.0	17.5
50°-60°	128.5	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°	334.8	35.8
0°-40°	514.6	55.0
0°-60°	807.2	86.2
0°-90°	936.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	936.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	477	477	477	477	477	
5°	468	468	468	467	467	44
15°	438	438	434	429	428	123
25°	380	378	372	358	348	174
35°	308	306	291	269	262	193
45°	236	232	212	194	186	182
55°	164	159	144	127	121	147
65°	98	92	83	85	71	96
75°	39	36	34	32	36	42
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



TEST NUMBER: P545375

CATALOG NUMBER: FMR-12-2-LD4-1LO-40-UNV-81-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	476.8	476.8	476.8	476.8	476.8
2.5°	473.5	473.5	473.5	472.9	472.9
5°	468.5	468.0	468.0	467.4	467.4
7.5°	464.7	464.1	463.6	463.0	461.9
10°	459.1	459.1	458.6	455.8	455.3
12.5°	450.3	449.8	447.6	443.7	442.6
15°	438.2	438.2	433.8	429.4	427.7
17.5°	425.0	424.4	418.9	414.5	412.3
20°	410.6	409.5	404.0	396.9	393.0
22.5°	394.7	394.7	388.0	378.7	374.8
25°	379.8	377.6	371.5	358.3	348.4
27.5°	362.7	359.4	352.8	334.0	322.5
30°	343.9	342.3	332.9	308.7	299.9
32.5°	326.3	323.6	313.6	288.3	281.1
35°	308.1	305.9	291.0	269.0	262.4
37.5°	289.9	287.2	268.4	250.8	242.5
40°	271.7	268.4	248.0	232.1	223.2
42.5°	254.7	250.2	230.4	213.3	203.4
45°	236.5	231.5	211.7	194.0	186.3
47.5°	218.3	213.9	195.7	177.5	168.7
50°	199.0	195.1	178.6	160.4	151.0
52.5°	183.0	176.9	160.9	142.8	135.0
55°	164.3	159.3	144.4	127.3	120.7
57.5°	147.2	142.2	128.4	112.4	106.9
60°	131.2	124.0	112.4	98.7	94.3
62.5°	113.5	108.0	98.1	86.5	92.0
65°	97.6	92.0	83.2	84.9	70.6
67.5°	79.9	77.2	69.5	61.7	59.5
70°	65.0	61.7	59.0	50.7	48.5
72.5°	51.8	48.5	44.6	40.2	38.6
75°	39.1	36.4	34.2	32.5	35.8
77.5°	27.0	25.9	24.3	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)