

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: P546079

Luminaire Tested: **FMR-12-4-LD4-1STD-50-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: P546079
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-12-4-LD4-1STD-50-UNV-81-84-EDD
Description: 1X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

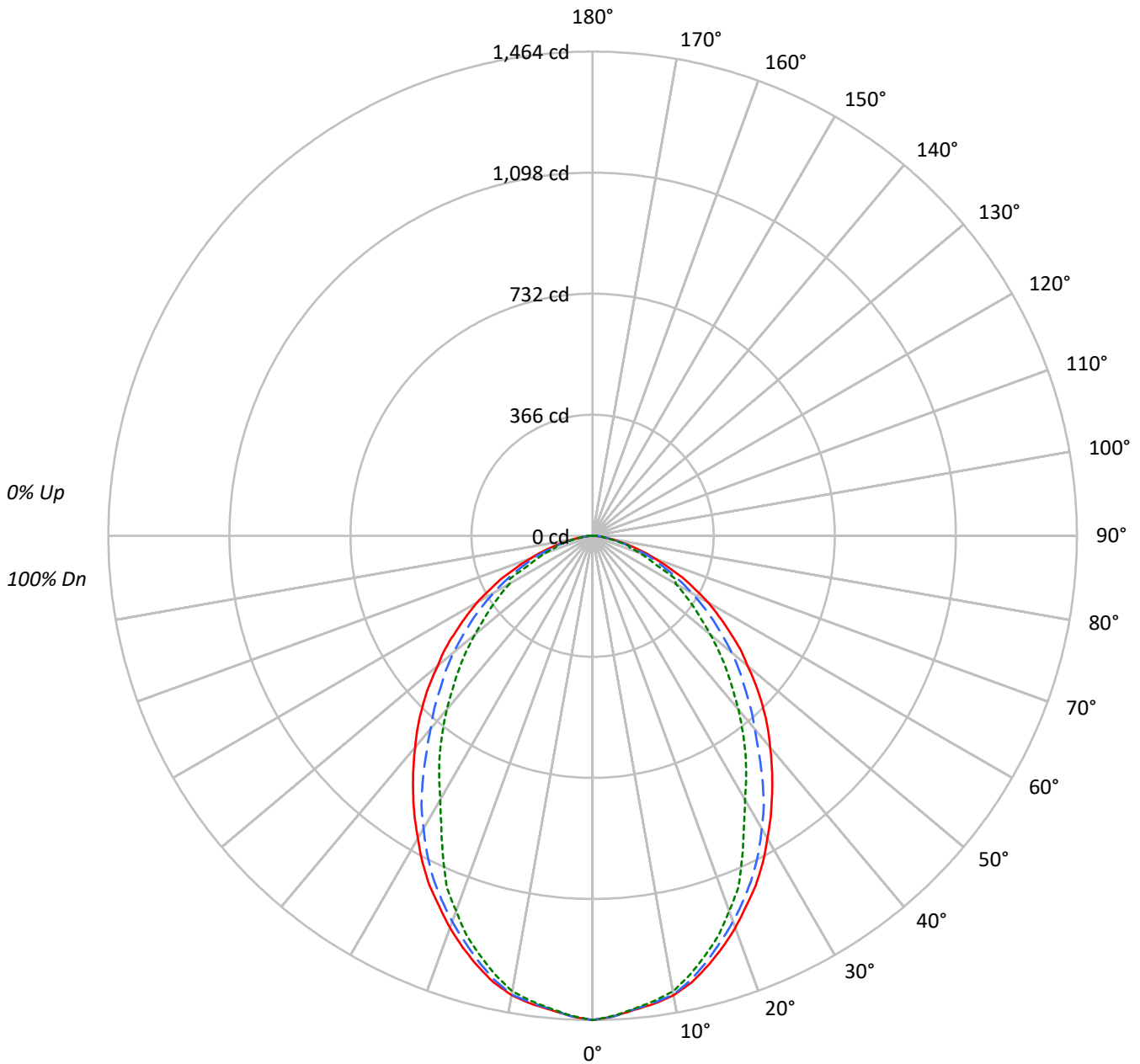
Lumens per Lamp: N/A
Luminaire Lumens: 2875.0 lumens
Efficiency: N/A
Efficacy: 86.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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: P546079

CATALOG NUMBER: FMR-12-4-LD4-1STD-50-UNV-81-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P546079

CATALOG NUMBER: FMR-12-4-LD4-1STD-50-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°	3941	3941	3941
5°	3887	3883	3878
10°	3854	3849	3821
15°	3750	3712	3660
20°	3612	3554	3457
25°	3464	3388	3177
30°	3283	3177	2862
35°	3109	2937	2647
40°	2932	2676	2409
45°	2764	2474	2178
50°	2559	2296	1942
55°	2367	2081	1740
60°	2168	1859	1558
65°	1908	1628	1380
70°	1572	1426	1172
75°	1250	1092	1144
80°	840	787	735
85°	522	627	732



TEST NUMBER: P546079

CATALOG NUMBER: FMR-12-4-LD4-1STD-50-UNV-81-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.3	4.7
10°-20°	374.1	13.0
20°-30°	518.0	18.0
30°-40°	552.3	19.2
40°-50°	503.9	17.5
50°-60°	394.7	13.7
60°-70°	257.3	8.9
70°-80°	114.0	4.0
80°-90°	24.5	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°	1028.4	35.8
0°-40°	1580.7	55.0
0°-60°	2479.3	86.2
0°-90°	2875.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2875.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1464	1464	1464	1464	1464	
5°	1439	1437	1437	1436	1436	137
15°	1346	1346	1332	1319	1314	378
25°	1166	1160	1141	1100	1070	536
35°	946	940	894	826	806	592
45°	726	711	650	596	572	559
55°	504	489	444	391	371	453
65°	300	283	256	261	217	295
75°	120	112	105	100	110	129
85°	17	19	20	22	24	23
90°	0	0	0	0	0	



TEST NUMBER: P546079

CATALOG NUMBER: FMR-12-4-LD4-1STD-50-UNV-81-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1464.5	1464.5	1464.5	1464.5	1464.5
2.5°	1454.3	1454.3	1454.3	1452.6	1452.6
5°	1439.1	1437.4	1437.4	1435.7	1435.7
7.5°	1427.2	1425.5	1423.9	1422.2	1418.8
10°	1410.3	1410.3	1408.6	1400.2	1398.5
12.5°	1383.2	1381.5	1374.8	1362.9	1359.5
15°	1346.0	1346.0	1332.4	1318.9	1313.8
17.5°	1305.3	1303.6	1286.7	1273.2	1266.4
20°	1261.3	1257.9	1241.0	1219.0	1207.1
22.5°	1212.2	1212.2	1191.9	1163.1	1151.3
25°	1166.5	1159.7	1141.1	1100.5	1070.0
27.5°	1114.0	1103.9	1083.6	1026.0	990.4
30°	1056.5	1051.4	1022.6	948.1	921.0
32.5°	1002.3	993.8	963.3	885.5	863.5
35°	946.4	939.6	893.9	826.2	805.9
37.5°	890.5	882.1	824.5	770.3	744.9
40°	834.7	824.5	761.9	712.8	685.7
42.5°	782.2	768.6	707.7	655.2	624.7
45°	726.3	711.1	650.1	596.0	572.3
47.5°	670.4	656.9	601.0	545.2	518.1
50°	611.2	599.3	548.5	492.7	463.9
52.5°	562.1	543.5	494.4	438.5	414.8
55°	504.5	489.3	443.6	391.1	370.8
57.5°	452.0	436.8	394.5	345.4	328.5
60°	402.9	380.9	345.4	303.1	289.5
62.5°	348.8	331.8	301.4	265.8	282.7
65°	299.7	282.7	255.7	260.7	216.7
67.5°	245.5	237.0	213.3	189.6	182.8
70°	199.8	189.6	181.2	155.8	149.0
72.5°	159.1	149.0	137.1	123.6	118.5
75°	120.2	111.7	105.0	99.9	110.0
77.5°	83.0	79.6	74.5	69.4	67.7
80°	54.2	52.5	50.8	49.1	47.4
82.5°	32.2	32.2	32.2	32.2	32.2
85°	16.9	18.6	20.3	22.0	23.7
87.5°	10.2	10.2	11.9	13.5	15.2
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)