

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: P545184

Luminaire Tested: **FMR-12-1-LD4-2STD-40-UNV-81-85-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: P545184
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-12-1-LD4-2STD-40-UNV-81-85-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

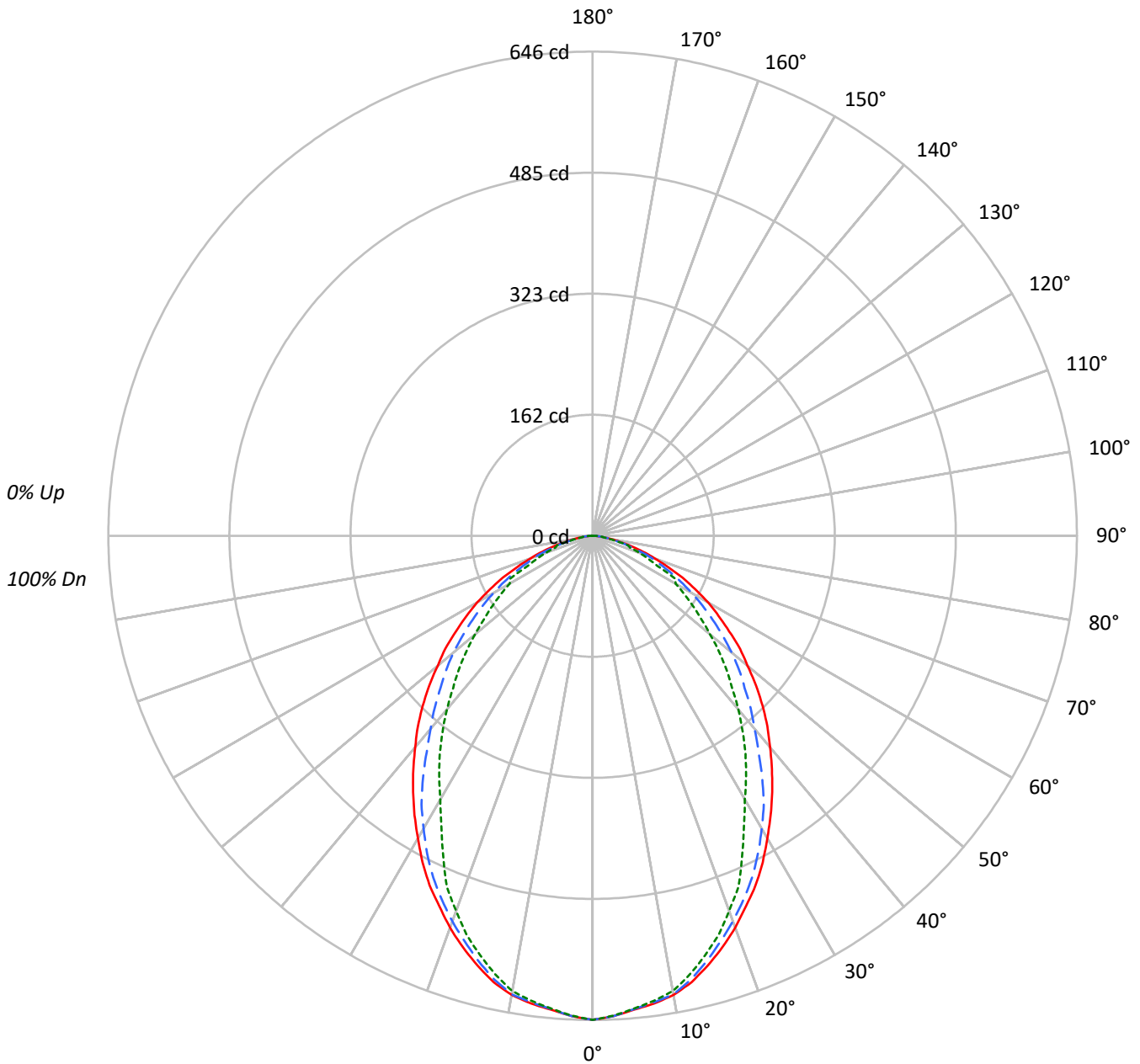
Lumens per Lamp: N/A
Luminaire Lumens: 1268.0 lumens
Efficiency: N/A
Efficacy: 76.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
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

TEST NUMBER: P545184

CATALOG NUMBER: FMR-12-1-LD4-2STD-40-UNV-81-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545184

CATALOG NUMBER: FMR-12-1-LD4-2STD-40-UNV-81-85-EDD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					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°	6952	6952	6952
5°	6858	6850	6842
10°	6798	6791	6742
15°	6615	6549	6457
20°	6372	6269	6098
25°	6111	5978	5605
30°	5791	5606	5049
35°	5485	5181	4670
40°	5172	4721	4249
45°	4876	4364	3842
50°	4515	4051	3426
55°	4176	3671	3068
60°	3825	3279	2749
65°	3367	2873	2435
70°	2773	2515	2068
75°	2204	1926	2017
80°	1481	1389	1296
85°	926	1112	1297



TEST NUMBER: P545184

CATALOG NUMBER: FMR-12-1-LD4-2STD-40-UNV-81-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.1	4.7
10°-20°	165.0	13.0
20°-30°	228.4	18.0
30°-40°	243.6	19.2
40°-50°	222.2	17.5
50°-60°	174.1	13.7
60°-70°	113.5	8.9
70°-80°	50.3	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°	453.6	35.8
0°-40°	697.2	55.0
0°-60°	1093.5	86.2
0°-90°	1268.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1268.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	646	646	646	646	646	
5°	635	634	634	633	633	60
15°	594	594	588	582	579	167
25°	514	512	503	485	472	236
35°	417	414	394	364	355	261
45°	320	314	287	263	252	247
55°	222	216	196	172	164	200
65°	132	125	113	115	96	130
75°	53	49	46	44	48	57
85°	8	8	9	10	10	10
90°	0	0	0	0	0	



TEST NUMBER: P545184

CATALOG NUMBER: FMR-12-1-LD4-2STD-40-UNV-81-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	645.9	645.9	645.9	645.9	645.9
2.5°	641.4	641.4	641.4	640.7	640.7
5°	634.7	634.0	634.0	633.2	633.2
7.5°	629.5	628.7	628.0	627.2	625.7
10°	622.0	622.0	621.3	617.5	616.8
12.5°	610.1	609.3	606.3	601.1	599.6
15°	593.6	593.6	587.7	581.7	579.4
17.5°	575.7	575.0	567.5	561.5	558.5
20°	556.3	554.8	547.3	537.6	532.4
22.5°	534.6	534.6	525.7	513.0	507.8
25°	514.5	511.5	503.3	485.4	471.9
27.5°	491.3	486.9	477.9	452.5	436.8
30°	465.9	463.7	451.0	418.2	406.2
32.5°	442.1	438.3	424.9	390.5	380.8
35°	417.4	414.4	394.3	364.4	355.4
37.5°	392.8	389.0	363.6	339.8	328.6
40°	368.1	363.6	336.0	314.4	302.4
42.5°	345.0	339.0	312.1	289.0	275.5
45°	320.3	313.6	286.7	262.8	252.4
47.5°	295.7	289.7	265.1	240.4	228.5
50°	269.6	264.3	241.9	217.3	204.6
52.5°	247.9	239.7	218.0	193.4	182.9
55°	222.5	215.8	195.6	172.5	163.5
57.5°	199.4	192.7	174.0	152.3	144.9
60°	177.7	168.0	152.3	133.7	127.7
62.5°	153.8	146.4	132.9	117.2	124.7
65°	132.2	124.7	112.8	115.0	95.6
67.5°	108.3	104.5	94.1	83.6	80.6
70°	88.1	83.6	79.9	68.7	65.7
72.5°	70.2	65.7	60.5	54.5	52.3
75°	53.0	49.3	46.3	44.1	48.5
77.5°	36.6	35.1	32.9	30.6	29.9
80°	23.9	23.1	22.4	21.7	20.9
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)