

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: P545288

Luminaire Tested: **FMR-12-2-LD4-1HI-40-UNV-82-85-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: P545288
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-82-85-EDD
Description: 1X2 FMR TROFFER WITH .187 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

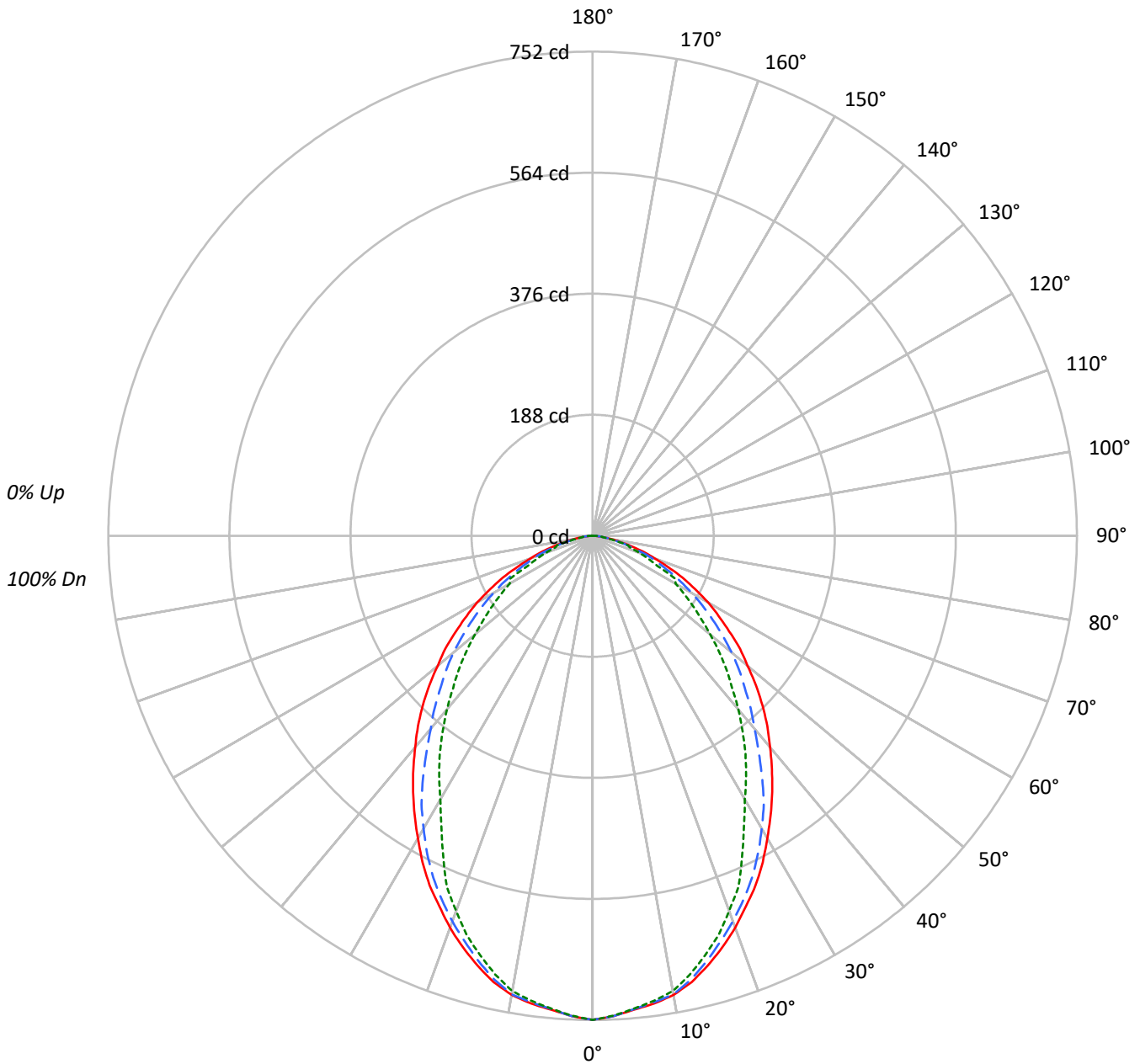
Lumens per Lamp: N/A
Luminaire Lumens: 1476.0 lumens
Efficiency: N/A
Efficacy: 68.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P545288

CATALOG NUMBER: FMR-12-2-LD4-1HI-40-UNV-82-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545288

CATALOG NUMBER: FMR-12-2-LD4-1HI-40-UNV-82-85-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°	4047	4047	4047
5°	3991	3987	3982
10°	3957	3952	3924
15°	3850	3812	3758
20°	3709	3649	3549
25°	3556	3479	3262
30°	3371	3263	2938
35°	3192	3015	2718
40°	3010	2748	2473
45°	2838	2541	2236
50°	2627	2358	1994
55°	2430	2137	1787
60°	2227	1908	1600
65°	1959	1671	1417
70°	1614	1463	1204
75°	1283	1121	1175
80°	862	809	753
85°	537	642	753



TEST NUMBER: P545288

CATALOG NUMBER: FMR-12-2-LD4-1HI-40-UNV-82-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.0	4.7
10°-20°	192.1	13.0
20°-30°	265.9	18.0
30°-40°	283.5	19.2
40°-50°	258.7	17.5
50°-60°	202.7	13.7
60°-70°	132.1	8.9
70°-80°	58.5	4.0
80°-90°	12.6	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°	528.0	35.8
0°-40°	811.5	55.0
0°-60°	1272.8	86.2
0°-90°	1476.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1476.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	752	752	752	752	752	
5°	739	738	738	737	737	70
15°	691	691	684	677	674	194
25°	599	595	586	565	549	275
35°	486	482	459	424	414	304
45°	373	365	334	306	294	287
55°	259	251	228	201	190	232
65°	154	145	131	134	111	152
75°	62	57	54	51	56	66
85°	9	10	10	11	12	12
90°	0	0	0	0	0	



TEST NUMBER: P545288

CATALOG NUMBER: FMR-12-2-LD4-1HI-40-UNV-82-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	751.9	751.9	751.9	751.9	751.9
2.5°	746.6	746.6	746.6	745.8	745.8
5°	738.8	737.9	737.9	737.1	737.1
7.5°	732.7	731.9	731.0	730.1	728.4
10°	724.0	724.0	723.2	718.8	718.0
12.5°	710.1	709.3	705.8	699.7	698.0
15°	691.0	691.0	684.1	677.1	674.5
17.5°	670.2	669.3	660.6	653.6	650.2
20°	647.6	645.8	637.1	625.8	619.7
22.5°	622.3	622.3	611.9	597.1	591.1
25°	598.9	595.4	585.8	565.0	549.3
27.5°	571.9	566.7	556.3	526.7	508.5
30°	542.4	539.8	525.0	486.7	472.8
32.5°	514.6	510.2	494.6	454.6	443.3
35°	485.9	482.4	458.9	424.2	413.7
37.5°	457.2	452.9	423.3	395.5	382.4
40°	428.5	423.3	391.1	365.9	352.0
42.5°	401.6	394.6	363.3	336.4	320.7
45°	372.9	365.1	333.8	306.0	293.8
47.5°	344.2	337.2	308.6	279.9	266.0
50°	313.8	307.7	281.6	252.9	238.2
52.5°	288.6	279.0	253.8	225.1	213.0
55°	259.0	251.2	227.7	200.8	190.4
57.5°	232.1	224.3	202.5	177.3	168.6
60°	206.9	195.6	177.3	155.6	148.6
62.5°	179.1	170.4	154.7	136.5	145.2
65°	153.8	145.2	131.2	133.9	111.3
67.5°	126.0	121.7	109.5	97.3	93.9
70°	102.6	97.3	93.0	80.0	76.5
72.5°	81.7	76.5	70.4	63.5	60.8
75°	61.7	57.4	53.9	51.3	56.5
77.5°	42.6	40.9	38.2	35.6	34.8
80°	27.8	26.9	26.1	25.2	24.3
82.5°	16.5	16.5	16.5	16.5	16.5
85°	8.7	9.6	10.4	11.3	12.2
87.5°	5.2	5.2	6.1	7.0	7.8
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)