

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: P545485

Luminaire Tested: **FMR-12-2-LD4-1STD-40-UNV-82-96-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: P545485
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-LD4-1STD-40-UNV-82-96-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

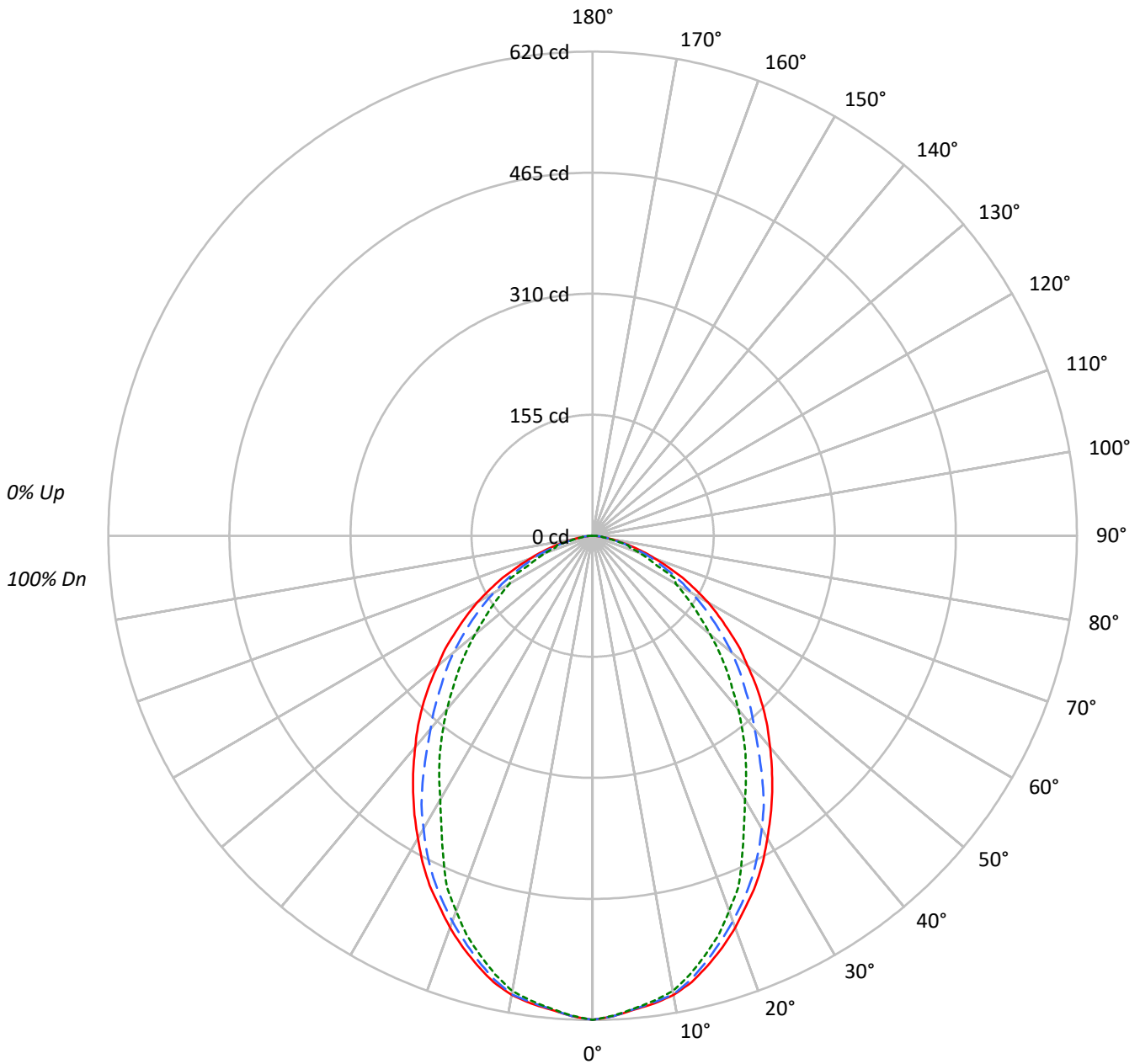
Lumens per Lamp: N/A
Luminaire Lumens: 1217.0 lumens
Efficiency: N/A
Efficacy: 73.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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: P545485

CATALOG NUMBER: FMR-12-2-LD4-1STD-40-UNV-82-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545485

CATALOG NUMBER: FMR-12-2-LD4-1STD-40-UNV-82-96-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°	3336	3336	3336
5°	3291	3287	3283
10°	3263	3259	3235
15°	3175	3143	3098
20°	3058	3009	2927
25°	2932	2868	2689
30°	2779	2690	2423
35°	2632	2486	2241
40°	2482	2266	2040
45°	2340	2095	1843
50°	2166	1944	1644
55°	2004	1762	1473
60°	1836	1574	1320
65°	1616	1378	1168
70°	1331	1207	993
75°	1058	923	969
80°	710	666	623
85°	445	531	618



TEST NUMBER: P545485

CATALOG NUMBER: FMR-12-2-LD4-1STD-40-UNV-82-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.7	4.7
10°-20°	158.4	13.0
20°-30°	219.3	18.0
30°-40°	233.8	19.2
40°-50°	213.3	17.5
50°-60°	167.1	13.7
60°-70°	108.9	8.9
70°-80°	48.3	4.0
80°-90°	10.4	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°	435.3	35.8
0°-40°	669.1	55.0
0°-60°	1049.5	86.2
0°-90°	1217.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1217.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	620	620	620	620	620	
5°	609	608	608	608	608	58
15°	570	570	564	558	556	160
25°	494	491	483	466	453	227
35°	401	398	378	350	341	250
45°	308	301	275	252	242	237
55°	214	207	188	166	157	192
65°	127	120	108	110	92	125
75°	51	47	44	42	47	55
85°	7	8	9	9	10	10
90°	0	0	0	0	0	



TEST NUMBER: P545485

CATALOG NUMBER: FMR-12-2-LD4-1STD-40-UNV-82-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	619.9	619.9	619.9	619.9	619.9
2.5°	615.6	615.6	615.6	614.9	614.9
5°	609.2	608.5	608.5	607.7	607.7
7.5°	604.2	603.4	602.7	602.0	600.6
10°	597.0	597.0	596.3	592.7	592.0
12.5°	585.5	584.8	581.9	576.9	575.5
15°	569.8	569.8	564.0	558.3	556.1
17.5°	552.6	551.8	544.7	538.9	536.1
20°	533.9	532.5	525.3	516.0	511.0
22.5°	513.1	513.1	504.5	492.4	487.3
25°	493.8	490.9	483.0	465.8	452.9
27.5°	471.6	467.3	458.7	434.3	419.3
30°	447.2	445.1	432.9	401.3	389.9
32.5°	424.3	420.7	407.8	374.8	365.5
35°	400.6	397.8	378.4	349.7	341.1
37.5°	377.0	373.4	349.0	326.1	315.3
40°	353.3	349.0	322.5	301.7	290.3
42.5°	331.1	325.4	299.6	277.4	264.5
45°	307.5	301.0	275.2	252.3	242.2
47.5°	283.8	278.1	254.4	230.8	219.3
50°	258.7	253.7	232.2	208.6	196.4
52.5°	237.9	230.1	209.3	185.6	175.6
55°	213.6	207.1	187.8	165.6	157.0
57.5°	191.4	184.9	167.0	146.2	139.0
60°	170.6	161.3	146.2	128.3	122.6
62.5°	147.6	140.5	127.6	112.5	119.7
65°	126.9	119.7	108.2	110.4	91.7
67.5°	103.9	100.3	90.3	80.3	77.4
70°	84.6	80.3	76.7	65.9	63.1
72.5°	67.4	63.1	58.1	52.3	50.2
75°	50.9	47.3	44.4	42.3	46.6
77.5°	35.1	33.7	31.5	29.4	28.7
80°	22.9	22.2	21.5	20.8	20.1
82.5°	13.6	13.6	13.6	13.6	13.6
85°	7.2	7.9	8.6	9.3	10.0
87.5°	4.3	4.3	5.0	5.7	6.5
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)