

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: P545469

Luminaire Tested: **FMR-12-2-LD4-1STD-40-UNV-80-96-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: P545469
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-80-96-EDD
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

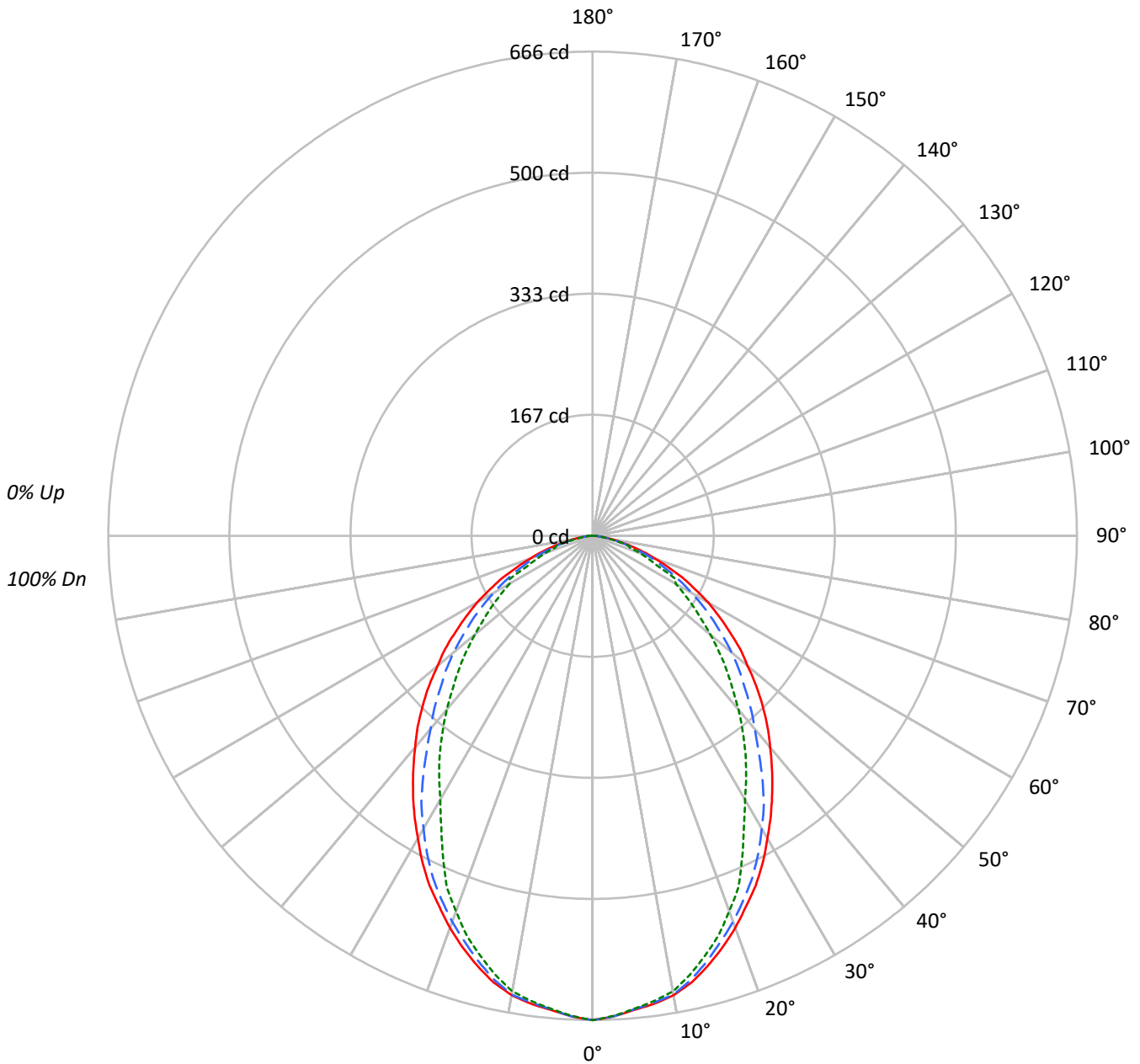
Lumens per Lamp: N/A
Luminaire Lumens: 1308.0 lumens
Efficiency: N/A
Efficacy: 78.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
Input Voltage (V): NR
Input Current (A_{in}): 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: P545469

CATALOG NUMBER: FMR-12-2-LD4-1STD-40-UNV-80-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545469

CATALOG NUMBER: FMR-12-2-LD4-1STD-40-UNV-80-96-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°	3586	3586	3586
5°	3537	3533	3529
10°	3506	3503	3477
15°	3412	3378	3330
20°	3286	3234	3145
25°	3151	3083	2891
30°	2987	2891	2604
35°	2829	2672	2409
40°	2668	2435	2192
45°	2515	2251	1981
50°	2328	2090	1768
55°	2153	1894	1583
60°	1973	1691	1418
65°	1736	1481	1256
70°	1430	1297	1067
75°	1137	994	1042
80°	762	716	669
85°	475	568	667



TEST NUMBER: P545469

CATALOG NUMBER: FMR-12-2-LD4-1STD-40-UNV-80-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.0	4.7
10°-20°	170.2	13.0
20°-30°	235.6	18.0
30°-40°	251.3	19.2
40°-50°	229.2	17.5
50°-60°	179.6	13.7
60°-70°	117.0	8.9
70°-80°	51.9	4.0
80°-90°	11.1	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°	467.9	35.8
0°-40°	719.1	55.0
0°-60°	1128.0	86.2
0°-90°	1308.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1308.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	666	666	666	666	666	
5°	655	654	654	653	653	62
15°	612	612	606	600	598	172
25°	531	528	519	501	487	244
35°	431	428	407	376	367	269
45°	330	324	296	271	260	255
55°	230	223	202	178	169	206
65°	136	129	116	119	99	134
75°	55	51	48	45	50	59
85°	8	8	9	10	11	11
90°	0	0	0	0	0	



TEST NUMBER: P545469

CATALOG NUMBER: FMR-12-2-LD4-1STD-40-UNV-80-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	666.3	666.3	666.3	666.3	666.3
2.5°	661.7	661.7	661.7	660.9	660.9
5°	654.7	654.0	654.0	653.2	653.2
7.5°	649.3	648.6	647.8	647.0	645.5
10°	641.6	641.6	640.9	637.0	636.2
12.5°	629.3	628.5	625.5	620.1	618.5
15°	612.4	612.4	606.2	600.0	597.7
17.5°	593.9	593.1	585.4	579.2	576.2
20°	573.8	572.3	564.6	554.6	549.2
22.5°	551.5	551.5	542.3	529.2	523.8
25°	530.7	527.6	519.2	500.7	486.8
27.5°	506.8	502.2	493.0	466.8	450.6
30°	480.6	478.3	465.2	431.3	419.0
32.5°	456.0	452.1	438.3	402.8	392.8
35°	430.6	427.5	406.7	375.9	366.6
37.5°	405.2	401.3	375.1	350.5	338.9
40°	379.7	375.1	346.6	324.3	312.0
42.5°	355.9	349.7	322.0	298.1	284.2
45°	330.4	323.5	295.8	271.1	260.3
47.5°	305.0	298.9	273.4	248.0	235.7
50°	278.1	272.7	249.6	224.1	211.1
52.5°	255.7	247.3	224.9	199.5	188.7
55°	229.5	222.6	201.8	177.9	168.7
57.5°	205.7	198.7	179.5	157.1	149.4
60°	183.3	173.3	157.1	137.9	131.7
62.5°	158.7	151.0	137.1	120.9	128.6
65°	136.3	128.6	116.3	118.6	98.6
67.5°	111.7	107.8	97.1	86.3	83.2
70°	90.9	86.3	82.4	70.9	67.8
72.5°	72.4	67.8	62.4	56.2	53.9
75°	54.7	50.8	47.8	45.4	50.1
77.5°	37.7	36.2	33.9	31.6	30.8
80°	24.6	23.9	23.1	22.3	21.6
82.5°	14.6	14.6	14.6	14.6	14.6
85°	7.7	8.5	9.2	10.0	10.8
87.5°	4.6	4.6	5.4	6.2	6.9
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)