

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: P545776

Luminaire Tested: **FMR-12-2-LD4-2STD-40-UNV-93-85-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: P545776
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-LD4-2STD-40-UNV-93-85-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

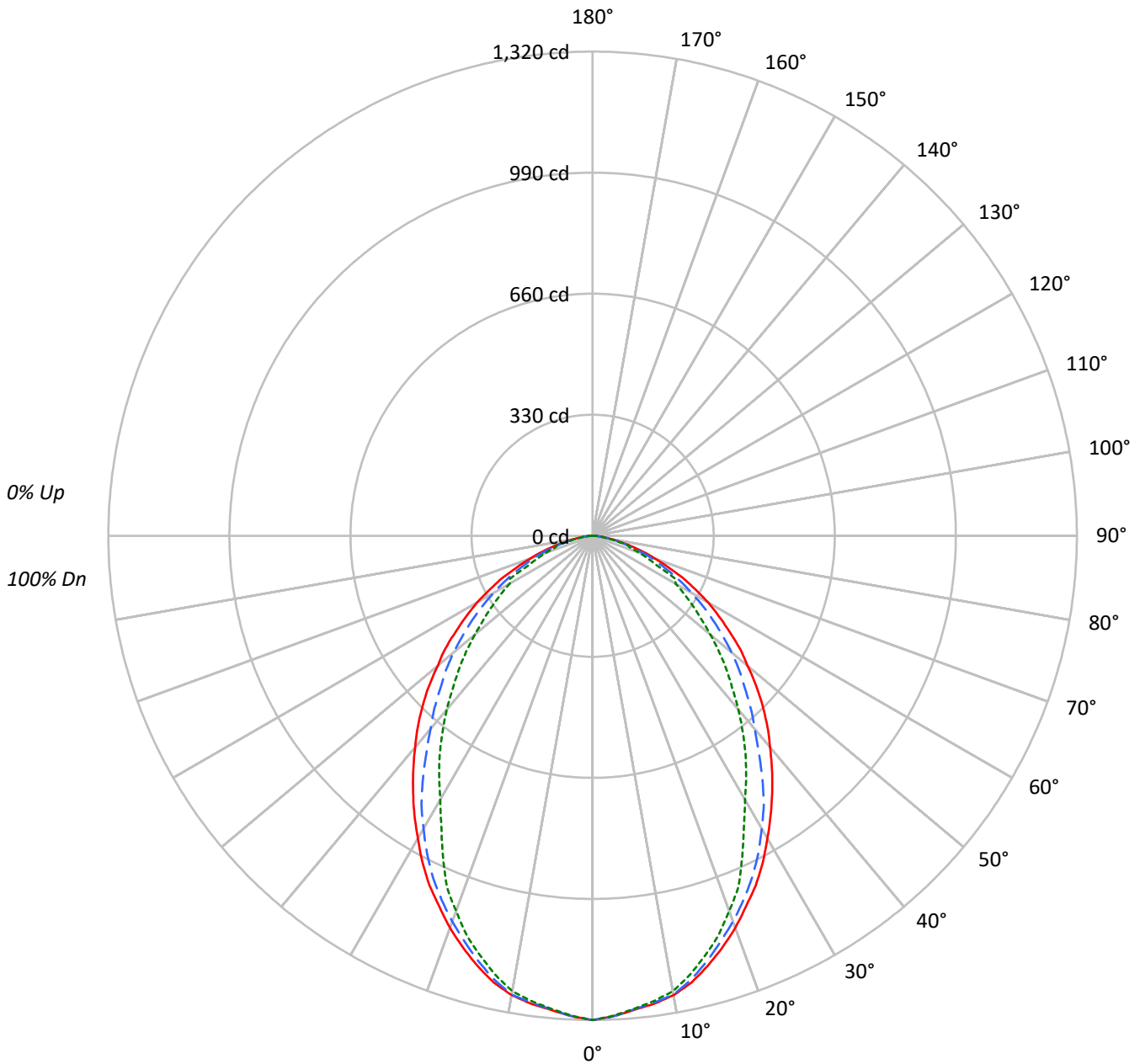
Lumens per Lamp: N/A
Luminaire Lumens: 2592.0 lumens
Efficiency: N/A
Efficacy: 77.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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: P545776

CATALOG NUMBER: FMR-12-2-LD4-2STD-40-UNV-93-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545776

CATALOG NUMBER: FMR-12-2-LD4-2STD-40-UNV-93-85-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°	7106	7106	7106
5°	7009	7001	6993
10°	6949	6941	6890
15°	6761	6693	6600
20°	6513	6408	6233
25°	6245	6109	5729
30°	5919	5729	5161
35°	5606	5295	4774
40°	5287	4826	4343
45°	4984	4461	3927
50°	4613	4141	3502
55°	4268	3752	3137
60°	3911	3352	2809
65°	3441	2935	2488
70°	2834	2570	2113
75°	2254	1967	2063
80°	1512	1420	1323
85°	945	1130	1321



TEST NUMBER: P545776

CATALOG NUMBER: FMR-12-2-LD4-2STD-40-UNV-93-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.9	4.7
10°-20°	337.3	13.0
20°-30°	467.0	18.0
30°-40°	497.9	19.2
40°-50°	454.3	17.5
50°-60°	355.9	13.7
60°-70°	231.9	8.9
70°-80°	102.8	4.0
80°-90°	22.1	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°	927.2	35.8
0°-40°	1425.1	55.0
0°-60°	2235.2	86.2
0°-90°	2592.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2592.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1320	1320	1320	1320	1320	
5°	1297	1296	1296	1294	1294	123
15°	1214	1214	1201	1189	1184	341
25°	1052	1046	1029	992	965	483
35°	853	847	806	745	727	533
45°	655	641	586	537	516	504
55°	455	441	400	353	334	408
65°	270	255	230	235	195	266
75°	108	101	95	90	99	116
85°	15	17	18	20	21	21
90°	0	0	0	0	0	



TEST NUMBER: P545776

CATALOG NUMBER: FMR-12-2-LD4-2STD-40-UNV-93-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1320.3	1320.3	1320.3	1320.3	1320.3
2.5°	1311.2	1311.2	1311.2	1309.6	1309.6
5°	1297.4	1295.9	1295.9	1294.4	1294.4
7.5°	1286.7	1285.2	1283.7	1282.2	1279.1
10°	1271.5	1271.5	1270.0	1262.3	1260.8
12.5°	1247.1	1245.5	1239.4	1228.7	1225.7
15°	1213.5	1213.5	1201.3	1189.1	1184.5
17.5°	1176.8	1175.3	1160.1	1147.8	1141.7
20°	1137.2	1134.1	1118.8	1099.0	1088.3
22.5°	1092.9	1092.9	1074.6	1048.6	1037.9
25°	1051.7	1045.6	1028.8	992.2	964.7
27.5°	1004.4	995.2	976.9	925.0	892.9
30°	952.5	947.9	921.9	854.8	830.4
32.5°	903.6	896.0	868.5	798.3	778.5
35°	853.3	847.1	805.9	744.9	726.6
37.5°	802.9	795.3	743.4	694.5	671.6
40°	752.5	743.4	686.9	642.6	618.2
42.5°	705.2	693.0	638.0	590.7	563.2
45°	654.8	641.1	586.1	537.3	515.9
47.5°	604.5	592.2	541.9	491.5	467.1
50°	551.0	540.3	494.6	444.2	418.2
52.5°	506.8	490.0	445.7	395.3	374.0
55°	454.9	441.1	399.9	352.6	334.3
57.5°	407.5	393.8	355.6	311.4	296.1
60°	363.3	343.4	311.4	273.2	261.0
62.5°	314.4	299.2	271.7	239.6	254.9
65°	270.2	254.9	230.5	235.1	195.4
67.5°	221.3	213.7	192.3	171.0	164.9
70°	180.1	171.0	163.3	140.4	134.3
72.5°	143.5	134.3	123.6	111.4	106.8
75°	108.4	100.7	94.6	90.1	99.2
77.5°	74.8	71.7	67.2	62.6	61.1
80°	48.8	47.3	45.8	44.3	42.7
82.5°	29.0	29.0	29.0	29.0	29.0
85°	15.3	16.8	18.3	19.8	21.4
87.5°	9.2	9.2	10.7	12.2	13.7
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)