

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: P545800

Luminaire Tested: **FMR-12-2-LD4-2STD-50-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: P545800
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-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

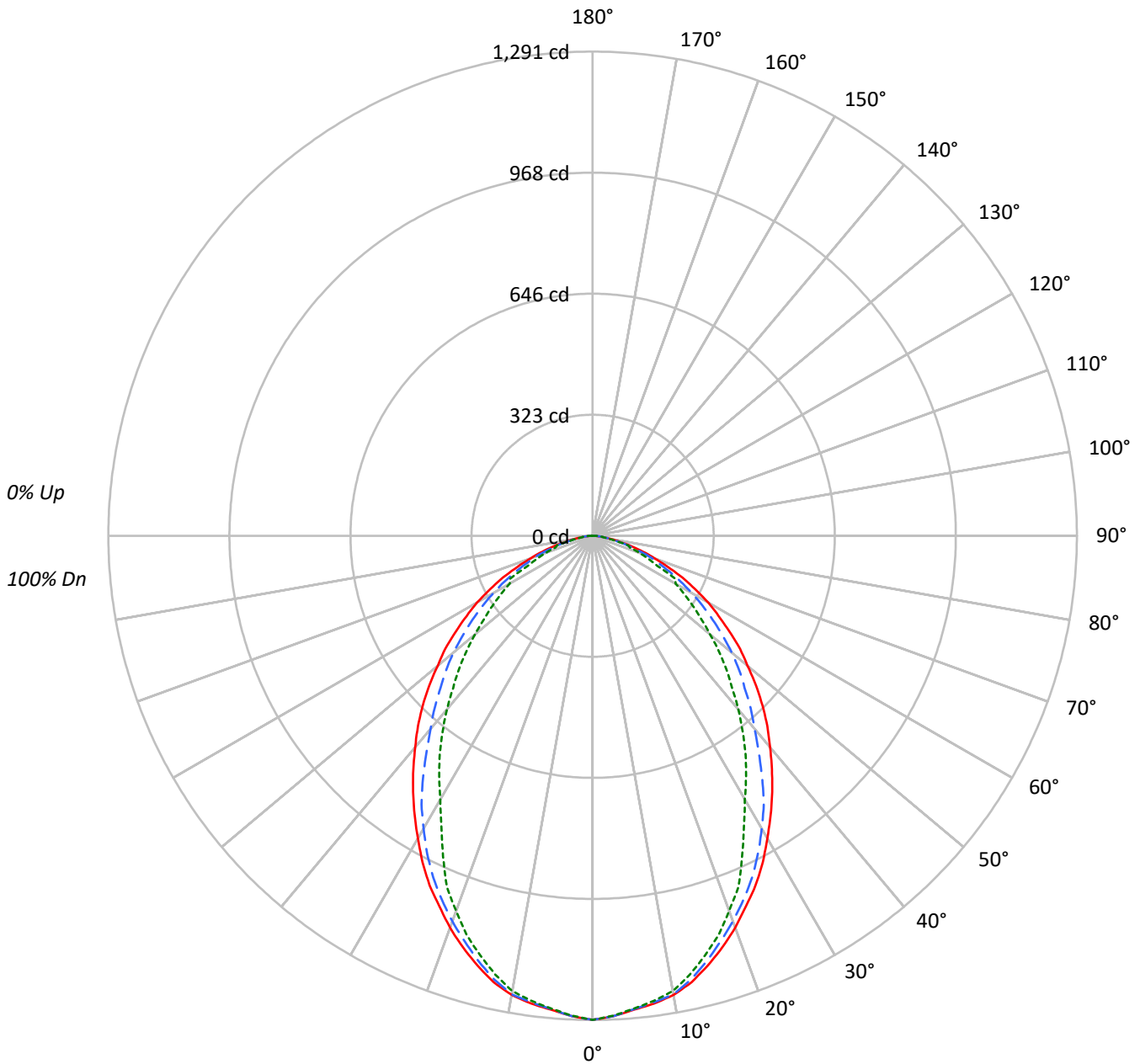
Lumens per Lamp: N/A
Luminaire Lumens: 2534.0 lumens
Efficiency: N/A
Efficacy: 76.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (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: P545800

CATALOG NUMBER: FMR-12-2-LD4-2STD-50-UNV-82-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545800

CATALOG NUMBER: FMR-12-2-LD4-2STD-50-UNV-82-85-EDD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6947	6947	6947
5°	6853	6844	6836
10°	6793	6785	6736
15°	6610	6544	6452
20°	6367	6265	6094
25°	6106	5973	5600
30°	5787	5601	5045
35°	5481	5177	4667
40°	5169	4718	4246
45°	4873	4361	3839
50°	4510	4048	3424
55°	4173	3669	3066
60°	3823	3277	2747
65°	3363	2869	2432
70°	2771	2513	2066
75°	2202	1923	2017
80°	1481	1389	1296
85°	920	1105	1291



TEST NUMBER: P545800

CATALOG NUMBER: FMR-12-2-LD4-2STD-50-UNV-82-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.2	4.7
10°-20°	329.8	13.0
20°-30°	456.5	18.0
30°-40°	486.8	19.2
40°-50°	444.1	17.5
50°-60°	347.9	13.7
60°-70°	226.7	8.9
70°-80°	100.5	4.0
80°-90°	21.6	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°	906.4	35.8
0°-40°	1393.2	55.0
0°-60°	2185.2	86.2
0°-90°	2534.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2534.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1291	1291	1291	1291	1291	
5°	1268	1267	1267	1265	1265	120
15°	1186	1186	1174	1162	1158	334
25°	1028	1022	1006	970	943	472
35°	834	828	788	728	710	522
45°	640	627	573	525	504	493
55°	445	431	391	345	327	399
65°	264	249	225	230	191	260
75°	106	98	92	88	97	114
85°	15	16	18	19	21	21
90°	0	0	0	0	0	



TEST NUMBER: P545800

CATALOG NUMBER: FMR-12-2-LD4-2STD-50-UNV-82-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1290.8	1290.8	1290.8	1290.8	1290.8
2.5°	1281.8	1281.8	1281.8	1280.3	1280.3
5°	1268.4	1266.9	1266.9	1265.4	1265.4
7.5°	1258.0	1256.5	1255.0	1253.5	1250.5
10°	1243.0	1243.0	1241.5	1234.1	1232.6
12.5°	1219.2	1217.7	1211.7	1201.3	1198.3
15°	1186.3	1186.3	1174.4	1162.5	1158.0
17.5°	1150.5	1149.0	1134.1	1122.2	1116.2
20°	1111.7	1108.7	1093.8	1074.4	1064.0
22.5°	1068.4	1068.4	1050.5	1025.2	1014.7
25°	1028.2	1022.2	1005.8	970.0	943.1
27.5°	981.9	972.9	955.0	904.3	873.0
30°	931.2	926.7	901.3	835.7	811.8
32.5°	883.4	875.9	849.1	780.4	761.0
35°	834.2	828.2	787.9	728.2	710.3
37.5°	784.9	777.5	726.7	679.0	656.6
40°	735.7	726.7	671.5	628.2	604.4
42.5°	689.4	677.5	623.8	577.5	550.6
45°	640.2	626.7	573.0	525.3	504.4
47.5°	590.9	579.0	529.7	480.5	456.6
50°	538.7	528.3	483.5	434.2	408.9
52.5°	495.4	479.0	435.7	386.5	365.6
55°	444.7	431.3	391.0	344.7	326.8
57.5°	398.4	385.0	347.7	304.4	289.5
60°	355.2	335.8	304.4	267.1	255.2
62.5°	307.4	292.5	265.6	234.3	249.2
65°	264.1	249.2	225.3	229.8	191.0
67.5°	216.4	208.9	188.0	167.1	161.2
70°	176.1	167.1	159.7	137.3	131.3
72.5°	140.3	131.3	120.9	108.9	104.5
75°	105.9	98.5	92.5	88.0	97.0
77.5°	73.1	70.1	65.7	61.2	59.7
80°	47.8	46.3	44.8	43.3	41.8
82.5°	28.4	28.4	28.4	28.4	28.4
85°	14.9	16.4	17.9	19.4	20.9
87.5°	9.0	9.0	10.4	11.9	13.4
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)