

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: P545604

Luminaire Tested: **FMR-12-2-LD4-2HI-50-UNV-81-94-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: P545604
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-LD4-2HI-50-UNV-81-94-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

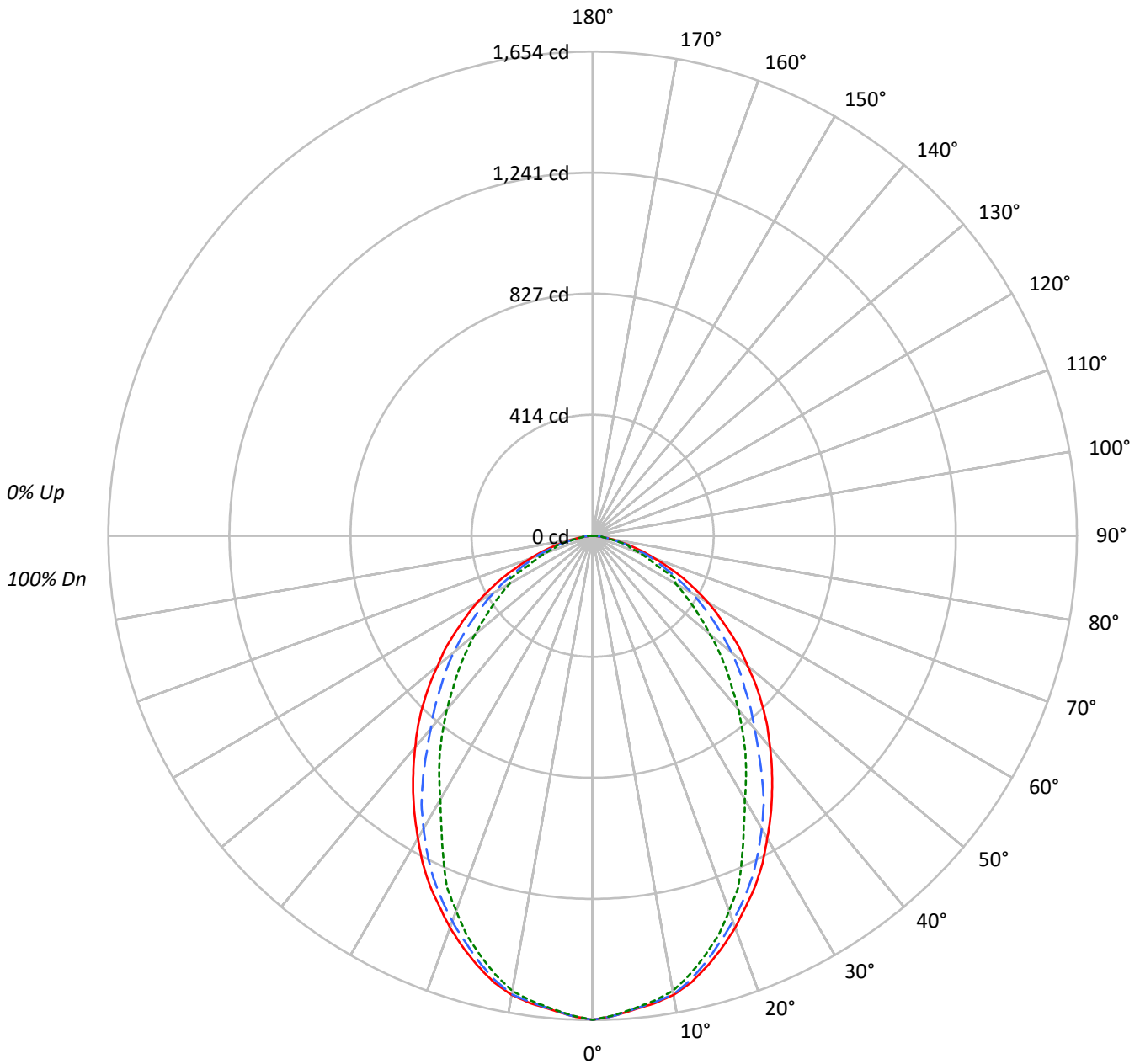
Lumens per Lamp: N/A
Luminaire Lumens: 3246.0 lumens
Efficiency: N/A
Efficacy: 75.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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: P545604

CATALOG NUMBER: FMR-12-2-LD4-2HI-50-UNV-81-94-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545604

CATALOG NUMBER: FMR-12-2-LD4-2HI-50-UNV-81-94-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°	8899	8899	8899
5°	8778	8768	8757
10°	8702	8692	8629
15°	8467	8382	8265
20°	8156	8025	7806
25°	7821	7651	7174
30°	7413	7175	6463
35°	7020	6631	5978
40°	6621	6043	5439
45°	6241	5587	4918
50°	5778	5185	4386
55°	5345	4699	3928
60°	4897	4198	3519
65°	4308	3675	3116
70°	3550	3218	2647
75°	2822	2464	2583
80°	1897	1776	1658
85°	1179	1414	1655



TEST NUMBER: P545604

CATALOG NUMBER: FMR-12-2-LD4-2HI-50-UNV-81-94-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.9	4.7
10°-20°	422.4	13.0
20°-30°	584.8	18.0
30°-40°	623.6	19.2
40°-50°	568.9	17.5
50°-60°	445.7	13.7
60°-70°	290.5	8.9
70°-80°	128.7	4.0
80°-90°	27.6	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°	1161.1	35.8
0°-40°	1784.7	55.0
0°-60°	2799.2	86.2
0°-90°	3246.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3246.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1654	1654	1654	1654	1654	
5°	1625	1623	1623	1621	1621	154
15°	1520	1520	1504	1489	1483	427
25°	1317	1309	1288	1242	1208	605
35°	1068	1061	1009	933	910	668
45°	820	803	734	673	646	632
55°	570	552	501	442	419	511
65°	338	319	289	294	245	333
75°	136	126	118	113	124	145
85°	19	21	23	25	27	27
90°	0	0	0	0	0	



TEST NUMBER: P545604

CATALOG NUMBER: FMR-12-2-LD4-2HI-50-UNV-81-94-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1653.5	1653.5	1653.5	1653.5	1653.5
2.5°	1642.0	1642.0	1642.0	1640.1	1640.1
5°	1624.8	1622.9	1622.9	1621.0	1621.0
7.5°	1611.4	1609.5	1607.6	1605.7	1601.9
10°	1592.3	1592.3	1590.4	1580.8	1578.9
12.5°	1561.7	1559.8	1552.2	1538.8	1535.0
15°	1519.7	1519.7	1504.4	1489.1	1483.3
17.5°	1473.8	1471.9	1452.8	1437.5	1429.8
20°	1424.1	1420.3	1401.1	1376.3	1362.9
22.5°	1368.7	1368.7	1345.7	1313.2	1299.8
25°	1317.0	1309.4	1288.4	1242.5	1208.1
27.5°	1257.8	1246.3	1223.4	1158.4	1118.2
30°	1192.8	1187.1	1154.6	1070.5	1039.9
32.5°	1131.6	1122.1	1087.7	999.7	974.9
35°	1068.5	1060.9	1009.3	932.8	909.9
37.5°	1005.5	995.9	930.9	869.7	841.1
40°	942.4	930.9	860.2	804.8	774.2
42.5°	883.1	867.8	799.0	739.8	705.4
45°	820.0	802.8	734.0	672.9	646.1
47.5°	757.0	741.7	678.6	615.5	584.9
50°	690.1	676.7	619.3	556.3	523.8
52.5°	634.6	613.6	558.2	495.1	468.3
55°	569.6	552.4	500.8	441.6	418.6
57.5°	510.4	493.2	445.4	390.0	370.8
60°	454.9	430.1	390.0	342.2	326.9
62.5°	393.8	374.7	340.3	300.1	319.2
65°	338.3	319.2	288.6	294.4	244.7
67.5°	277.2	267.6	240.9	214.1	206.4
70°	225.6	214.1	204.5	175.9	168.2
72.5°	179.7	168.2	154.8	139.5	133.8
75°	135.7	126.2	118.5	112.8	124.2
77.5°	93.7	89.8	84.1	78.4	76.5
80°	61.2	59.3	57.3	55.4	53.5
82.5°	36.3	36.3	36.3	36.3	36.3
85°	19.1	21.0	22.9	24.8	26.8
87.5°	11.5	11.5	13.4	15.3	17.2
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)