

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: P545647

Luminaire Tested: **FMR-12-2-LD4-2LO-35-UNV-93-84-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: P545647
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-LD4-2LO-35-UNV-93-84-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

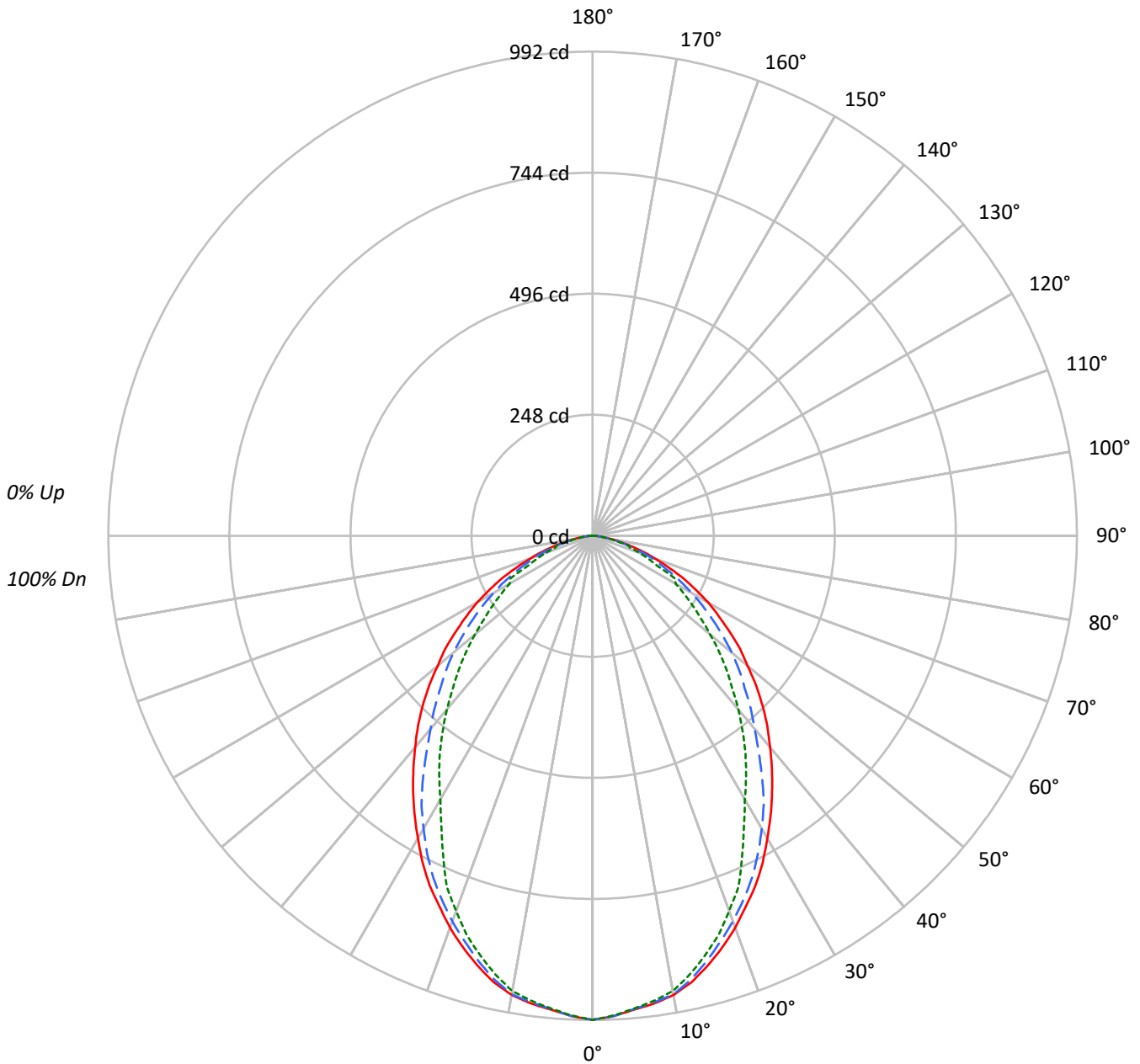
Lumens per Lamp: N/A
Luminaire Lumens: 1947.0 lumens
Efficiency: N/A
Efficacy: 83.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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: P545647

CATALOG NUMBER: FMR-12-2-LD4-2LO-35-UNV-93-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545647

CATALOG NUMBER: FMR-12-2-LD4-2LO-35-UNV-93-84-EDD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5338	5338	5338
5°	5265	5259	5253
10°	5220	5213	5176
15°	5079	5027	4957
20°	4892	4813	4682
25°	4691	4589	4303
30°	4447	4304	3876
35°	4211	3978	3586
40°	3972	3625	3263
45°	3744	3351	2949
50°	3466	3111	2631
55°	3206	2819	2356
60°	2937	2518	2111
65°	2584	2204	1869
70°	2129	1931	1588
75°	1693	1478	1549
80°	1137	1066	995
85°	710	852	994



TEST NUMBER: P545647

CATALOG NUMBER: FMR-12-2-LD4-2LO-35-UNV-93-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.3	4.7
10°-20°	253.4	13.0
20°-30°	350.8	18.0
30°-40°	374.0	19.2
40°-50°	341.2	17.5
50°-60°	267.3	13.7
60°-70°	174.2	8.9
70°-80°	77.2	4.0
80°-90°	16.6	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°	696.5	35.8
0°-40°	1070.5	55.0
0°-60°	1679.0	86.2
0°-90°	1947.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1947.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	992	992	992	992	992	
5°	975	973	973	972	972	93
15°	912	912	902	893	890	256
25°	790	785	773	745	725	363
35°	641	636	605	560	546	401
45°	492	482	440	404	388	379
55°	342	331	300	265	251	306
65°	203	192	173	177	147	200
75°	81	76	71	68	74	87
85°	12	13	14	15	16	16
90°	0	0	0	0	0	



TEST NUMBER: P545647

CATALOG NUMBER: FMR-12-2-LD4-2LO-35-UNV-93-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	991.8	991.8	991.8	991.8	991.8
2.5°	984.9	984.9	984.9	983.7	983.7
5°	974.6	973.4	973.4	972.3	972.3
7.5°	966.6	965.4	964.3	963.1	960.8
10°	955.1	955.1	953.9	948.2	947.1
12.5°	936.7	935.6	931.0	923.0	920.7
15°	911.5	911.5	902.3	893.2	889.7
17.5°	884.0	882.9	871.4	862.2	857.6
20°	854.2	851.9	840.4	825.5	817.5
22.5°	820.9	820.9	807.2	787.7	779.7
25°	790.0	785.4	772.8	745.3	724.6
27.5°	754.4	747.6	733.8	694.8	670.7
30°	715.5	712.0	692.5	642.1	623.7
32.5°	678.8	673.0	652.4	599.7	584.7
35°	640.9	636.3	605.4	559.5	545.8
37.5°	603.1	597.4	558.4	521.7	504.5
40°	565.3	558.4	516.0	482.7	464.4
42.5°	529.7	520.5	479.3	443.7	423.1
45°	491.9	481.6	440.3	403.6	387.5
47.5°	454.0	444.9	407.0	369.2	350.8
50°	413.9	405.9	371.5	333.6	314.2
52.5°	380.7	368.0	334.8	297.0	280.9
55°	341.7	331.4	300.4	264.9	251.1
57.5°	306.1	295.8	267.1	233.9	222.4
60°	272.9	258.0	233.9	205.2	196.1
62.5°	236.2	224.7	204.1	180.0	191.5
65°	202.9	191.5	173.1	176.6	146.8
67.5°	166.3	160.5	144.5	128.4	123.8
70°	135.3	128.4	122.7	105.5	100.9
72.5°	107.8	100.9	92.9	83.7	80.3
75°	81.4	75.7	71.1	67.6	74.5
77.5°	56.2	53.9	50.4	47.0	45.9
80°	36.7	35.5	34.4	33.3	32.1
82.5°	21.8	21.8	21.8	21.8	21.8
85°	11.5	12.6	13.8	14.9	16.1
87.5°	6.9	6.9	8.0	9.2	10.3
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)