

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: P545975

Luminaire Tested: **FMR-12-4-LD4-1LO-50-UNV-80-84-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: P545975
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-12-4-LD4-1LO-50-UNV-80-84-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

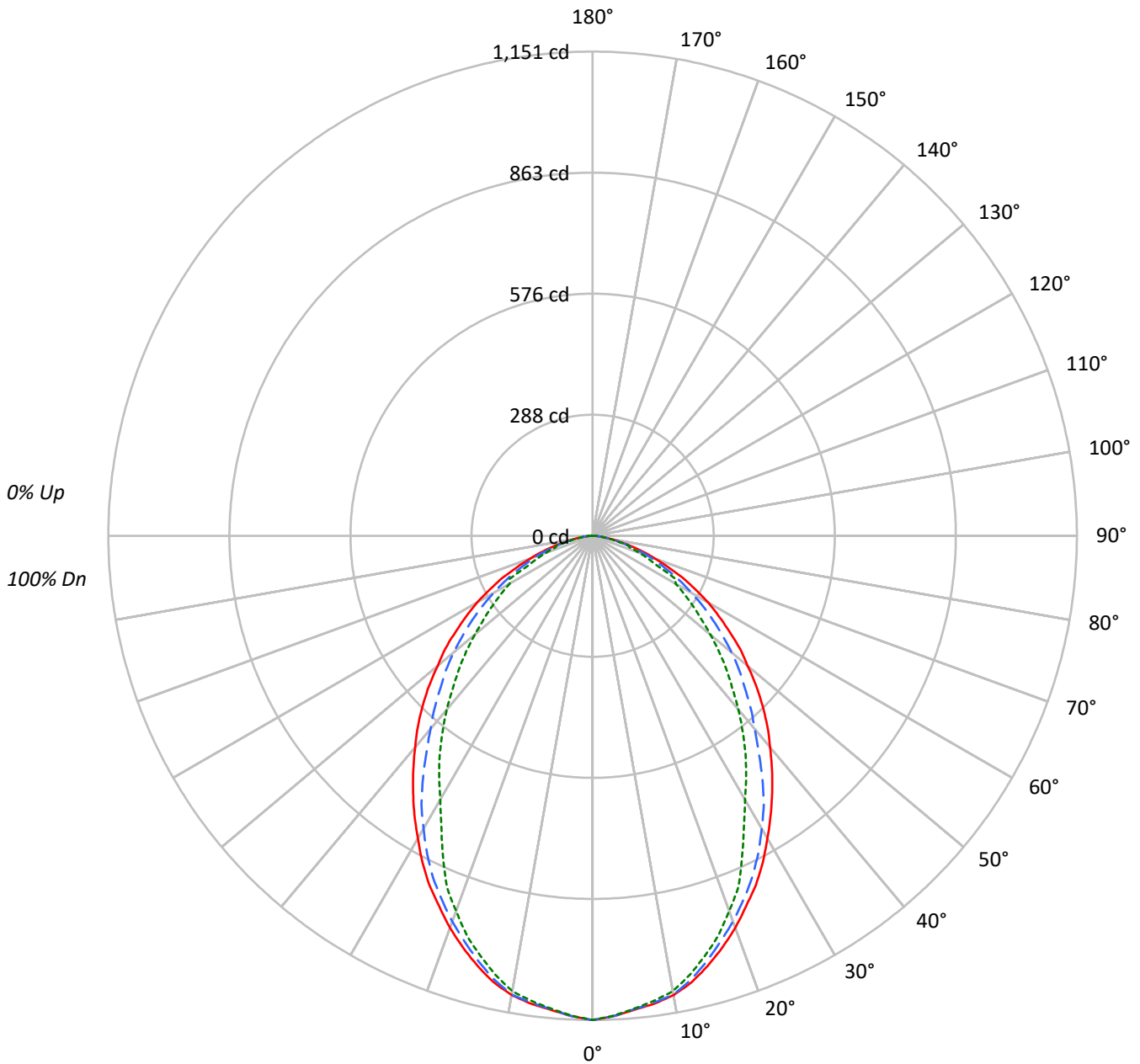
Lumens per Lamp: N/A
Luminaire Lumens: 2260.0 lumens
Efficiency: N/A
Efficacy: 96.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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: P545975

CATALOG NUMBER: FMR-12-4-LD4-1LO-50-UNV-80-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545975

CATALOG NUMBER: FMR-12-4-LD4-1LO-50-UNV-80-84-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°	3098	3098	3098
5°	3056	3052	3049
10°	3029	3026	3004
15°	2948	2918	2877
20°	2839	2794	2717
25°	2723	2663	2497
30°	2581	2498	2250
35°	2444	2308	2081
40°	2305	2104	1893
45°	2173	1945	1712
50°	2011	1805	1527
55°	1861	1636	1368
60°	1705	1461	1225
65°	1500	1280	1085
70°	1235	1120	921
75°	983	858	899
80°	660	618	578
85°	411	494	574



TEST NUMBER: P545975

CATALOG NUMBER: FMR-12-4-LD4-1LO-50-UNV-80-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.2	4.7
10°-20°	294.1	13.0
20°-30°	407.2	18.0
30°-40°	434.2	19.2
40°-50°	396.1	17.5
50°-60°	310.3	13.7
60°-70°	202.2	8.9
70°-80°	89.6	4.0
80°-90°	19.2	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°	808.4	35.8
0°-40°	1242.6	55.0
0°-60°	1948.9	86.2
0°-90°	2260.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2260.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1151	1151	1151	1151	1151	
5°	1131	1130	1130	1129	1129	107
15°	1058	1058	1047	1037	1033	297
25°	917	912	897	865	841	421
35°	744	739	703	650	634	465
45°	571	559	511	468	450	440
55°	397	385	349	307	292	356
65°	236	222	201	205	170	232
75°	94	88	82	78	86	101
85°	13	15	16	17	19	18
90°	0	0	0	0	0	



TEST NUMBER: P545975

CATALOG NUMBER: FMR-12-4-LD4-1LO-50-UNV-80-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1151.2	1151.2	1151.2	1151.2	1151.2
2.5°	1143.2	1143.2	1143.2	1141.9	1141.9
5°	1131.3	1129.9	1129.9	1128.6	1128.6
7.5°	1121.9	1120.6	1119.3	1117.9	1115.3
10°	1108.6	1108.6	1107.3	1100.6	1099.3
12.5°	1087.3	1086.0	1080.7	1071.4	1068.7
15°	1058.1	1058.1	1047.4	1036.8	1032.8
17.5°	1026.1	1024.8	1011.5	1000.8	995.5
20°	991.5	988.8	975.5	958.2	948.9
22.5°	952.9	952.9	936.9	914.3	905.0
25°	917.0	911.7	897.0	865.1	841.1
27.5°	875.7	867.7	851.8	806.5	778.6
30°	830.5	826.5	803.9	745.3	724.0
32.5°	787.9	781.2	757.3	696.1	678.8
35°	744.0	738.6	702.7	649.5	633.5
37.5°	700.0	693.4	648.1	605.6	585.6
40°	656.1	648.1	598.9	560.3	539.0
42.5°	614.9	604.2	556.3	515.1	491.1
45°	570.9	559.0	511.1	468.5	449.8
47.5°	527.0	516.4	472.5	428.5	407.3
50°	480.4	471.1	431.2	387.3	364.7
52.5°	441.9	427.2	388.6	344.7	326.1
55°	396.6	384.6	348.7	307.4	291.5
57.5°	355.3	343.4	310.1	271.5	258.2
60°	316.8	299.4	271.5	238.2	227.6
62.5°	274.2	260.9	236.9	208.9	222.3
65°	235.6	222.3	201.0	205.0	170.4
67.5°	193.0	186.3	167.7	149.1	143.7
70°	157.0	149.1	142.4	122.4	117.1
72.5°	125.1	117.1	107.8	97.2	93.2
75°	94.5	87.8	82.5	78.5	86.5
77.5°	65.2	62.6	58.6	54.6	53.2
80°	42.6	41.3	39.9	38.6	37.3
82.5°	25.3	25.3	25.3	25.3	25.3
85°	13.3	14.6	16.0	17.3	18.6
87.5°	8.0	8.0	9.3	10.6	12.0
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)