

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: P545948

Luminaire Tested: **FMR-12-4-LD4-1LO-40-UNV-80-94-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: P545948
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-40-UNV-80-94-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

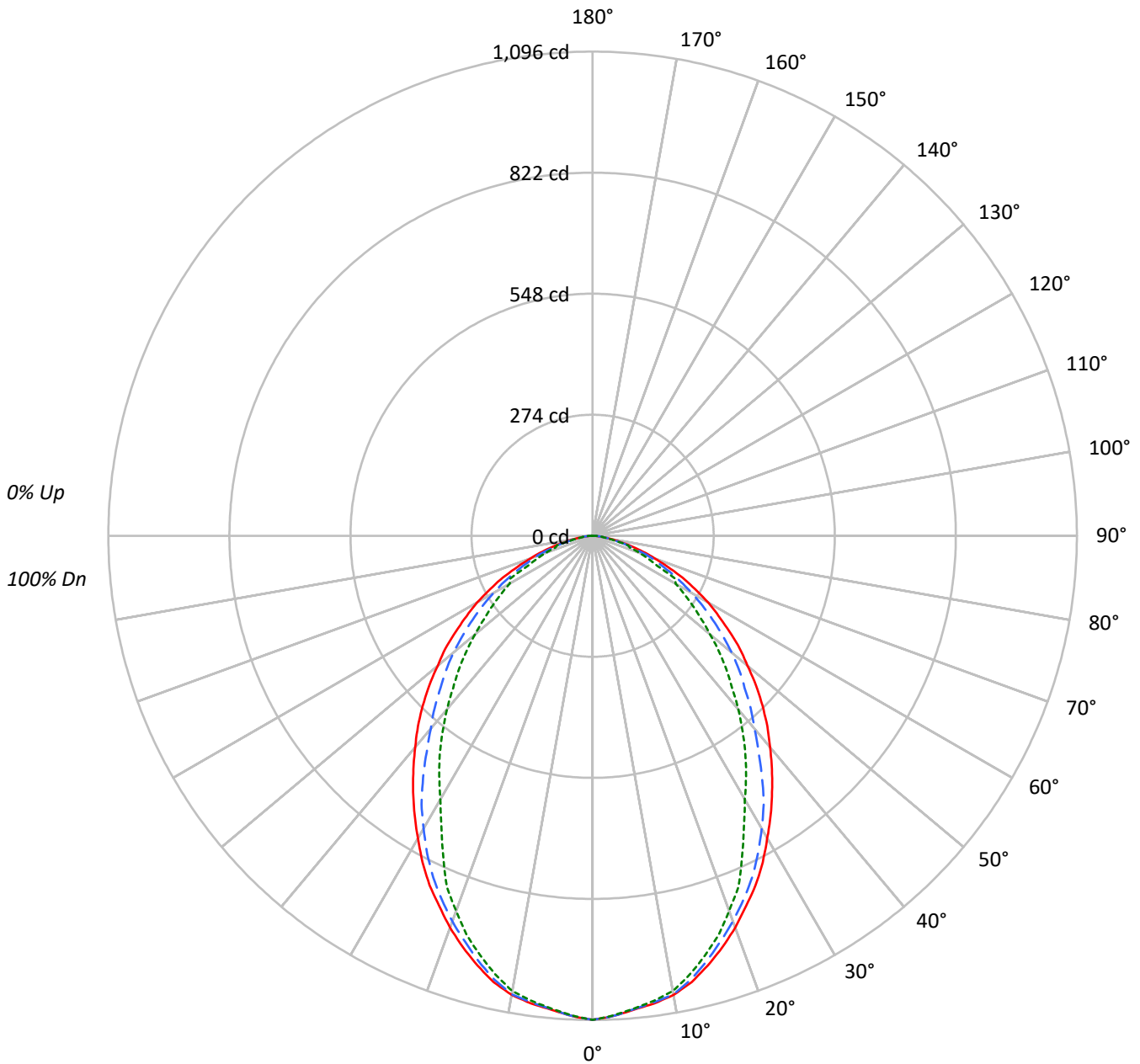
Lumens per Lamp: N/A
Luminaire Lumens: 2151.0 lumens
Efficiency: N/A
Efficacy: 91.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (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: P545948

CATALOG NUMBER: FMR-12-4-LD4-1LO-40-UNV-80-94-EDD

Luminous Intensity Polar Plot





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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°	2949	2949	2949
5°	2908	2905	2902
10°	2883	2880	2859
15°	2805	2777	2739
20°	2702	2659	2586
25°	2591	2535	2377
30°	2456	2377	2141
35°	2326	2197	1981
40°	2194	2002	1802
45°	2068	1851	1629
50°	1914	1718	1453
55°	1771	1557	1301
60°	1623	1391	1166
65°	1428	1218	1032
70°	1176	1066	877
75°	935	816	856
80°	628	589	550
85°	392	469	546



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.0	4.7
10°-20°	279.9	13.0
20°-30°	387.5	18.0
30°-40°	413.2	19.2
40°-50°	377.0	17.5
50°-60°	295.3	13.7
60°-70°	192.5	8.9
70°-80°	85.3	4.0
80°-90°	18.3	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°	769.4	35.8
0°-40°	1182.6	55.0
0°-60°	1854.9	86.2
0°-90°	2151.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2151.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1096	1096	1096	1096	1096	
5°	1077	1075	1075	1074	1074	102
15°	1007	1007	997	987	983	283
25°	873	868	854	823	801	401
35°	708	703	669	618	603	443
45°	543	532	486	446	428	419
55°	378	366	332	293	277	339
65°	224	212	191	195	162	221
75°	90	84	78	75	82	96
85°	13	14	15	16	18	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1095.7	1095.7	1095.7	1095.7	1095.7
2.5°	1088.1	1088.1	1088.1	1086.8	1086.8
5°	1076.7	1075.4	1075.4	1074.2	1074.2
7.5°	1067.8	1066.6	1065.3	1064.0	1061.5
10°	1055.2	1055.2	1053.9	1047.6	1046.3
12.5°	1034.9	1033.6	1028.6	1019.7	1017.2
15°	1007.0	1007.0	996.9	986.8	983.0
17.5°	976.6	975.4	962.7	952.6	947.5
20°	943.7	941.2	928.5	912.0	903.2
22.5°	907.0	907.0	891.8	870.2	861.4
25°	872.8	867.7	853.8	823.4	800.6
27.5°	833.5	825.9	810.7	767.6	741.0
30°	790.4	786.6	765.1	709.3	689.1
32.5°	749.9	743.5	720.7	662.5	646.0
35°	708.1	703.0	668.8	618.1	602.9
37.5°	666.3	659.9	616.9	576.3	557.3
40°	624.5	616.9	570.0	533.3	513.0
42.5°	585.2	575.1	529.5	490.2	467.4
45°	543.4	532.0	486.4	445.9	428.1
47.5°	501.6	491.5	449.7	407.9	387.6
50°	457.3	448.4	410.4	368.6	347.1
52.5°	420.5	406.6	369.9	328.1	310.3
55°	377.5	366.1	331.9	292.6	277.4
57.5°	338.2	326.8	295.1	258.4	245.7
60°	301.5	285.0	258.4	226.7	216.6
62.5°	260.9	248.3	225.5	198.9	211.5
65°	224.2	211.5	191.3	195.1	162.1
67.5°	183.7	177.3	159.6	141.9	136.8
70°	149.5	141.9	135.5	116.5	111.5
72.5°	119.1	111.5	102.6	92.5	88.7
75°	89.9	83.6	78.5	74.7	82.3
77.5°	62.1	59.5	55.7	51.9	50.7
80°	40.5	39.3	38.0	36.7	35.5
82.5°	24.1	24.1	24.1	24.1	24.1
85°	12.7	13.9	15.2	16.5	17.7
87.5°	7.6	7.6	8.9	10.1	11.4
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)