

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: P546365

Luminaire Tested: **FMR-12-4-LD4-2STD-50-UNV-80-96-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: P546365
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-LD4-2STD-50-UNV-80-96-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

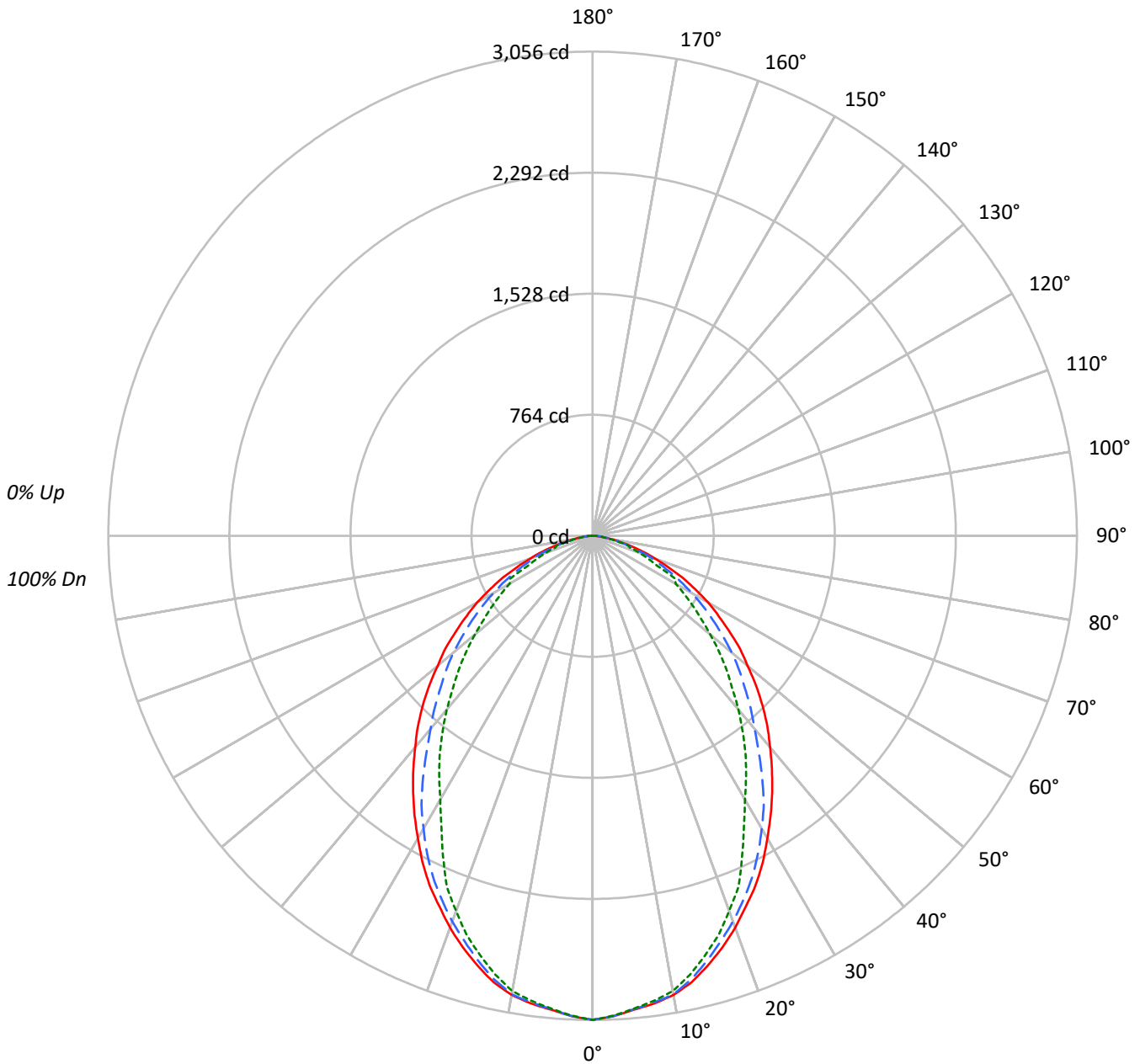
Lumens per Lamp: N/A
Luminaire Lumens: 5999.0 lumens
Efficiency: N/A
Efficacy: 90.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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: P546365

CATALOG NUMBER: FMR-12-4-LD4-2STD-50-UNV-80-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P546365

CATALOG NUMBER: FMR-12-4-LD4-2STD-50-UNV-80-96-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°	8223	8223	8223
5°	8111	8102	8092
10°	8041	8031	7973
15°	7824	7746	7637
20°	7537	7415	7213
25°	7227	7070	6629
30°	6850	6630	5972
35°	6487	6128	5524
40°	6118	5584	5026
45°	5767	5163	4544
50°	5339	4792	4052
55°	4939	4343	3630
60°	4525	3879	3251
65°	3982	3396	2879
70°	3280	2974	2446
75°	2608	2277	2387
80°	1751	1643	1533
85°	1090	1309	1528



TEST NUMBER: P546365

CATALOG NUMBER: FMR-12-4-LD4-2STD-50-UNV-80-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	284.5	4.7
10°-20°	780.7	13.0
20°-30°	1080.8	18.0
30°-40°	1152.4	19.2
40°-50°	1051.3	17.5
50°-60°	823.7	13.7
60°-70°	536.8	8.9
70°-80°	237.8	4.0
80°-90°	51.1	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°	2145.9	35.8
0°-40°	3298.3	55.0
0°-60°	5173.3	86.2
0°-90°	5999.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5999.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3056	3056	3056	3056	3056	
5°	3003	2999	2999	2996	2996	285
15°	2808	2808	2780	2752	2741	790
25°	2434	2420	2381	2296	2233	1117
35°	1975	1961	1865	1724	1682	1235
45°	1516	1484	1357	1244	1194	1167
55°	1053	1021	926	816	774	944
65°	625	590	533	544	452	616
75°	251	233	219	208	230	269
85°	35	39	42	46	50	49
90°	0	0	0	0	0	



TEST NUMBER: P546365

CATALOG NUMBER: FMR-12-4-LD4-2STD-50-UNV-80-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3055.8	3055.8	3055.8	3055.8	3055.8
2.5°	3034.6	3034.6	3034.6	3031.1	3031.1
5°	3002.8	2999.3	2999.3	2995.8	2995.8
7.5°	2978.1	2974.6	2971.0	2967.5	2960.4
10°	2942.8	2942.8	2939.2	2921.6	2918.0
12.5°	2886.2	2882.7	2868.6	2843.8	2836.8
15°	2808.5	2808.5	2780.3	2752.0	2741.4
17.5°	2723.7	2720.2	2684.9	2656.6	2642.5
20°	2631.9	2624.8	2589.5	2543.6	2518.8
22.5°	2529.4	2529.4	2487.0	2427.0	2402.3
25°	2434.1	2419.9	2381.1	2296.3	2232.7
27.5°	2324.5	2303.3	2260.9	2140.8	2066.6
30°	2204.4	2193.8	2133.8	1978.3	1921.8
32.5°	2091.4	2073.7	2010.1	1847.6	1801.7
35°	1974.8	1960.7	1865.3	1724.0	1681.6
37.5°	1858.2	1840.6	1720.4	1607.4	1554.4
40°	1741.6	1720.4	1589.7	1487.3	1430.8
42.5°	1632.1	1603.9	1476.7	1367.2	1303.6
45°	1515.5	1483.7	1356.6	1243.5	1194.1
47.5°	1399.0	1370.7	1254.1	1137.5	1081.0
50°	1275.3	1250.6	1144.6	1028.0	968.0
52.5°	1172.9	1134.0	1031.6	915.0	865.5
55°	1052.8	1021.0	925.6	816.1	773.7
57.5°	943.2	911.4	823.1	720.7	685.3
60°	840.8	794.9	720.7	632.4	604.1
62.5°	727.7	692.4	628.8	554.6	590.0
65°	625.3	590.0	533.4	544.0	452.2
67.5°	512.2	494.6	445.1	395.7	381.5
70°	416.9	395.7	378.0	325.0	310.9
72.5°	332.1	310.9	286.2	257.9	247.3
75°	250.8	233.2	219.0	208.4	229.6
77.5°	173.1	166.0	155.4	144.8	141.3
80°	113.0	109.5	106.0	102.4	98.9
82.5°	67.1	67.1	67.1	67.1	67.1
85°	35.3	38.9	42.4	45.9	49.5
87.5°	21.2	21.2	24.7	28.3	31.8
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)