

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: P546237

Luminaire Tested: **FMR-12-4-LD4-2LO-40-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: P546237
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-LD4-2LO-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

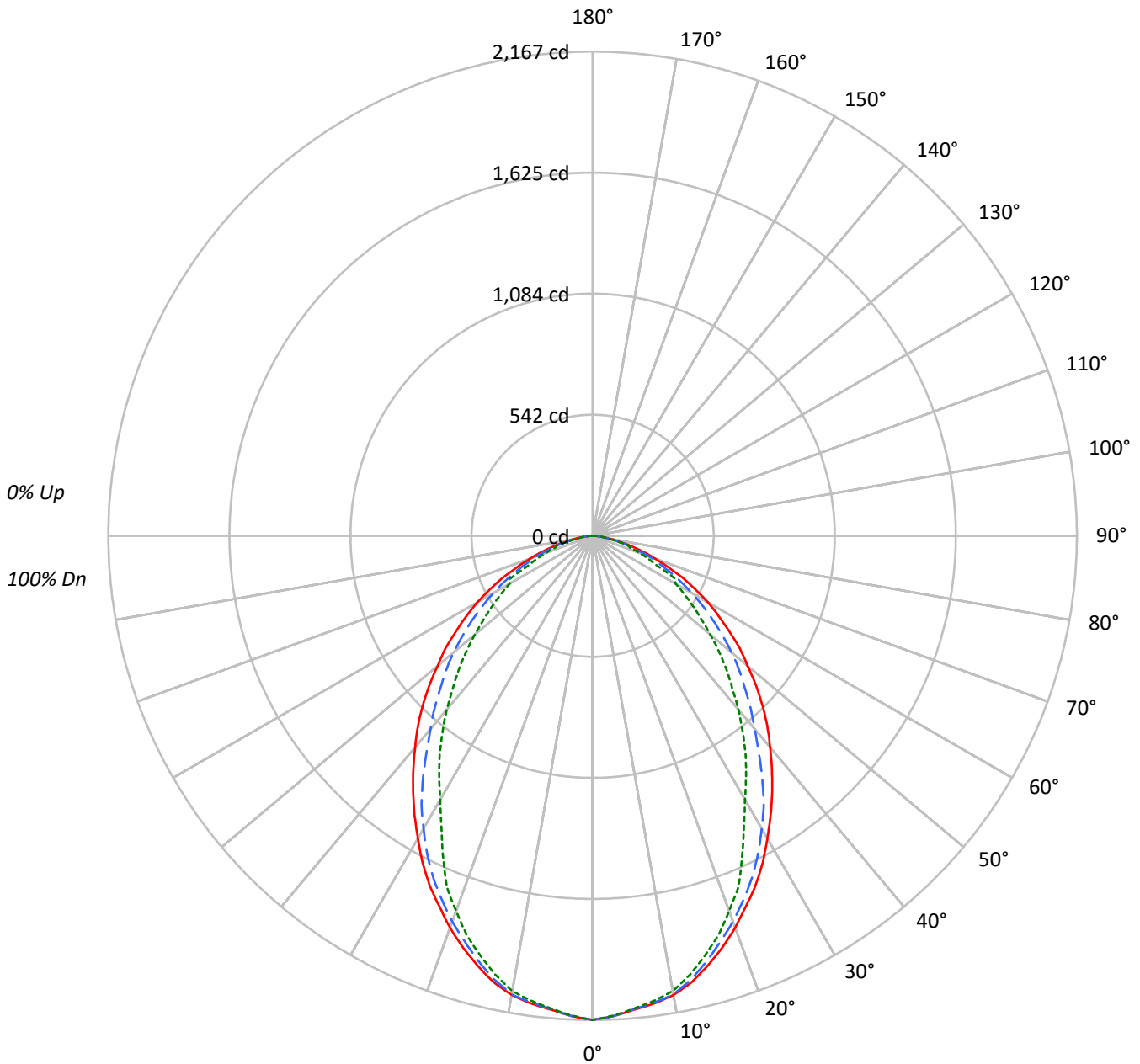
Lumens per Lamp: N/A
Luminaire Lumens: 4254.0 lumens
Efficiency: N/A
Efficacy: 90.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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: P546237

CATALOG NUMBER: FMR-12-4-LD4-2LO-40-UNV-80-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P546237

CATALOG NUMBER: FMR-12-4-LD4-2LO-40-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°	5831	5831	5831
5°	5752	5745	5738
10°	5702	5695	5654
15°	5548	5492	5416
20°	5344	5259	5115
25°	5125	5013	4701
30°	4857	4702	4235
35°	4600	4345	3917
40°	4338	3960	3564
45°	4090	3661	3222
50°	3786	3398	2874
55°	3502	3079	2574
60°	3209	2750	2306
65°	2823	2409	2042
70°	2326	2109	1735
75°	1850	1615	1693
80°	1243	1165	1086
85°	775	929	1084



TEST NUMBER: P546237

CATALOG NUMBER: FMR-12-4-LD4-2LO-40-UNV-80-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	201.7	4.7
10°-20°	553.6	13.0
20°-30°	766.4	18.0
30°-40°	817.2	19.2
40°-50°	745.5	17.5
50°-60°	584.1	13.7
60°-70°	380.7	8.9
70°-80°	168.7	4.0
80°-90°	36.2	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°	1521.7	35.8
0°-40°	2338.9	55.0
0°-60°	3668.5	86.2
0°-90°	4254.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4254.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2167	2167	2167	2167	2167	
5°	2129	2127	2127	2124	2124	202
15°	1992	1992	1972	1952	1944	560
25°	1726	1716	1688	1628	1583	792
35°	1400	1390	1323	1222	1192	875
45°	1075	1052	962	882	847	828
55°	746	724	656	579	549	670
65°	443	418	378	386	321	437
75°	178	165	155	148	163	191
85°	25	28	30	33	35	35
90°	0	0	0	0	0	



TEST NUMBER: P546237

CATALOG NUMBER: FMR-12-4-LD4-2LO-40-UNV-80-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2166.9	2166.9	2166.9	2166.9	2166.9
2.5°	2151.9	2151.9	2151.9	2149.4	2149.4
5°	2129.4	2126.8	2126.8	2124.3	2124.3
7.5°	2111.8	2109.3	2106.8	2104.3	2099.3
10°	2086.8	2086.8	2084.3	2071.7	2069.2
12.5°	2046.7	2044.2	2034.2	2016.6	2011.6
15°	1991.6	1991.6	1971.5	1951.5	1944.0
17.5°	1931.4	1928.9	1903.9	1883.9	1873.8
20°	1866.3	1861.3	1836.3	1803.7	1786.2
22.5°	1793.7	1793.7	1763.6	1721.0	1703.5
25°	1726.0	1716.0	1688.5	1628.3	1583.2
27.5°	1648.4	1633.3	1603.3	1518.1	1465.5
30°	1563.2	1555.7	1513.1	1402.9	1362.8
32.5°	1483.0	1470.5	1425.4	1310.2	1277.6
35°	1400.4	1390.3	1322.7	1222.5	1192.4
37.5°	1317.7	1305.2	1220.0	1139.8	1102.3
40°	1235.0	1220.0	1127.3	1054.7	1014.6
42.5°	1157.4	1137.3	1047.1	969.5	924.4
45°	1074.7	1052.2	962.0	881.8	846.7
47.5°	992.0	972.0	889.3	806.6	766.6
50°	904.3	886.8	811.7	729.0	686.4
52.5°	831.7	804.1	731.5	648.8	613.8
55°	746.5	724.0	656.3	578.7	548.6
57.5°	668.9	646.3	583.7	511.0	486.0
60°	596.2	563.7	511.0	448.4	428.4
62.5°	516.1	491.0	445.9	393.3	418.4
65°	443.4	418.4	378.3	385.8	320.7
67.5°	363.2	350.7	315.6	280.6	270.6
70°	295.6	280.6	268.0	230.5	220.5
72.5°	235.5	220.5	202.9	182.9	175.4
75°	177.9	165.3	155.3	147.8	162.8
77.5°	122.8	117.7	110.2	102.7	100.2
80°	80.2	77.7	75.2	72.6	70.1
82.5°	47.6	47.6	47.6	47.6	47.6
85°	25.1	27.6	30.1	32.6	35.1
87.5°	15.0	15.0	17.5	20.0	22.5
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)