

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: P546569

Luminaire Tested: **FMR-24-4-LD4-1LO-50-UNV-82-86-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: P546569
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-24-4-LD4-1LO-50-UNV-82-86-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

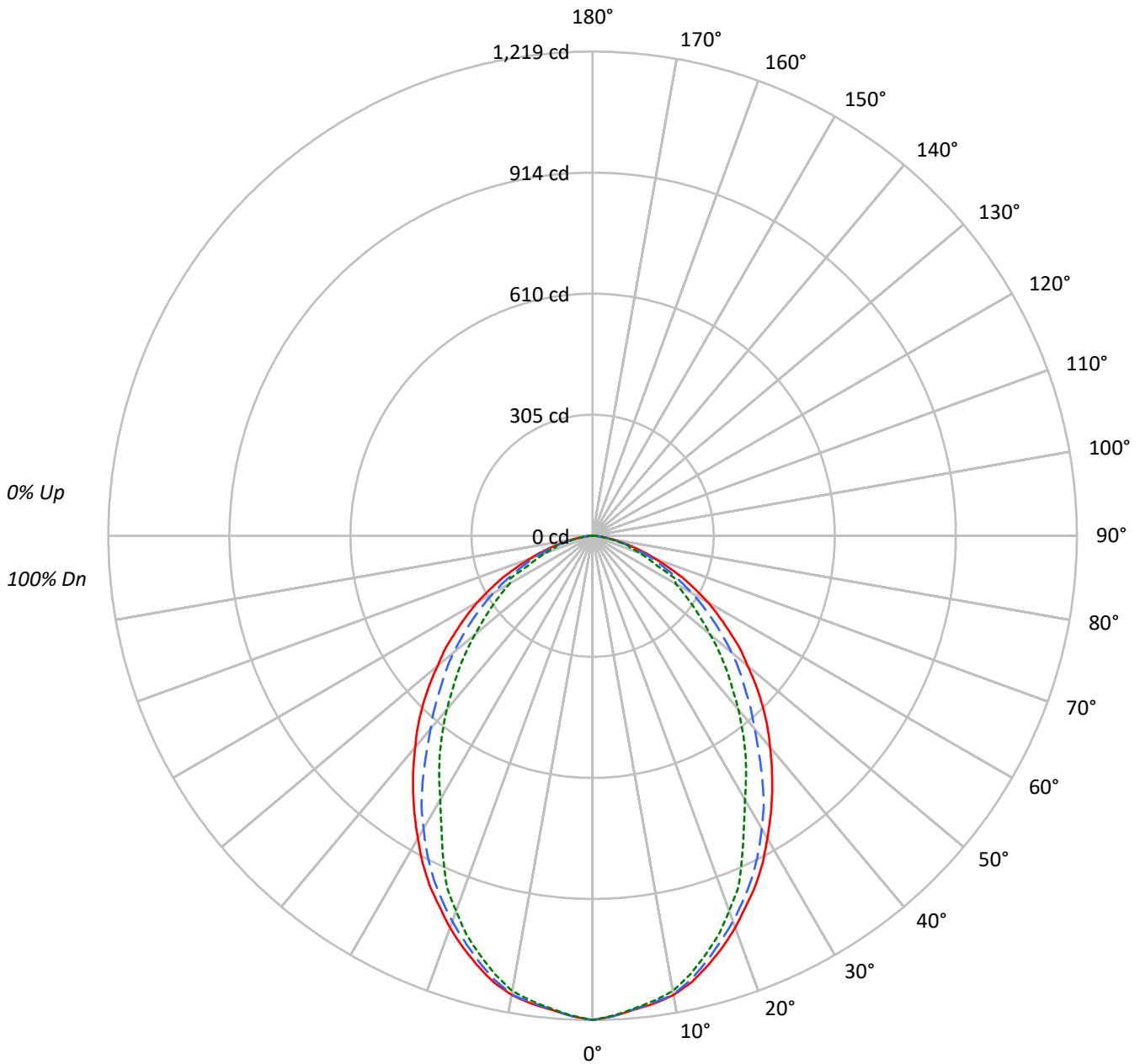
Lumens per Lamp: N/A
Luminaire Lumens: 2393.0 lumens
Efficiency: N/A
Efficacy: 102.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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: P546569

CATALOG NUMBER: FMR-24-4-LD4-1LO-50-UNV-82-86-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P546569

CATALOG NUMBER: FMR-24-4-LD4-1LO-50-UNV-82-86-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°	1640	1640	1640
5°	1618	1616	1614
10°	1604	1602	1590
15°	1561	1545	1523
20°	1503	1479	1439
25°	1441	1410	1322
30°	1366	1322	1191
35°	1294	1222	1102
40°	1220	1114	1002
45°	1150	1030	906
50°	1065	956	808
55°	985	866	724
60°	903	774	649
65°	794	677	574
70°	654	593	488
75°	520	454	476
80°	349	328	306
85°	218	261	304



TEST NUMBER: P546569

CATALOG NUMBER: FMR-24-4-LD4-1LO-50-UNV-82-86-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.5	4.7
10°-20°	311.4	13.0
20°-30°	431.1	18.0
30°-40°	459.7	19.2
40°-50°	419.4	17.5
50°-60°	328.6	13.7
60°-70°	214.1	8.9
70°-80°	94.9	4.0
80°-90°	20.4	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°	856.0	35.8
0°-40°	1315.7	55.0
0°-60°	2063.6	86.2
0°-90°	2393.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2393.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1219	1219	1219	1219	1219	
5°	1198	1196	1196	1195	1195	114
15°	1120	1120	1109	1098	1094	315
25°	971	965	950	916	891	446
35°	788	782	744	688	671	492
45°	604	592	541	496	476	466
55°	420	407	369	326	309	377
65°	249	235	213	217	180	246
75°	100	93	87	83	92	107
85°	14	16	17	18	20	20
90°	0	0	0	0	0	



TEST NUMBER: P546569

CATALOG NUMBER: FMR-24-4-LD4-1LO-50-UNV-82-86-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1219.0	1219.0	1219.0	1219.0	1219.0
2.5°	1210.5	1210.5	1210.5	1209.1	1209.1
5°	1197.8	1196.4	1196.4	1195.0	1195.0
7.5°	1188.0	1186.6	1185.1	1183.7	1180.9
10°	1173.9	1173.9	1172.5	1165.4	1164.0
12.5°	1151.3	1149.9	1144.3	1134.4	1131.6
15°	1120.3	1120.3	1109.0	1097.8	1093.5
17.5°	1086.5	1085.1	1071.0	1059.7	1054.1
20°	1049.9	1047.0	1032.9	1014.6	1004.8
22.5°	1009.0	1009.0	992.1	968.1	958.3
25°	970.9	965.3	949.8	916.0	890.6
27.5°	927.3	918.8	901.9	854.0	824.4
30°	879.3	875.1	851.2	789.2	766.6
32.5°	834.2	827.2	801.8	737.0	718.7
35°	787.7	782.1	744.1	687.7	670.8
37.5°	741.2	734.2	686.3	641.2	620.1
40°	694.7	686.3	634.1	593.3	570.7
42.5°	651.1	639.8	589.0	545.4	520.0
45°	604.5	591.9	541.1	496.0	476.3
47.5°	558.0	546.8	500.3	453.8	431.2
50°	508.7	498.9	456.6	410.1	386.1
52.5°	467.9	452.4	411.5	365.0	345.3
55°	419.9	407.3	369.2	325.5	308.6
57.5°	376.3	363.6	328.3	287.5	273.4
60°	335.4	317.1	287.5	252.2	241.0
62.5°	290.3	276.2	250.8	221.2	235.3
65°	249.4	235.3	212.8	217.0	180.4
67.5°	204.3	197.3	177.6	157.8	152.2
70°	166.3	157.8	150.8	129.6	124.0
72.5°	132.5	124.0	114.1	102.9	98.6
75°	100.1	93.0	87.4	83.1	91.6
77.5°	69.1	66.2	62.0	57.8	56.4
80°	45.1	43.7	42.3	40.9	39.5
82.5°	26.8	26.8	26.8	26.8	26.8
85°	14.1	15.5	16.9	18.3	19.7
87.5°	8.5	8.5	9.9	11.3	12.7
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)