

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: P545571

Luminaire Tested: **FMR-12-2-LD4-2HI-40-UNV-81-88-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: P545571
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-12-2-LD4-2HI-40-UNV-81-88-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

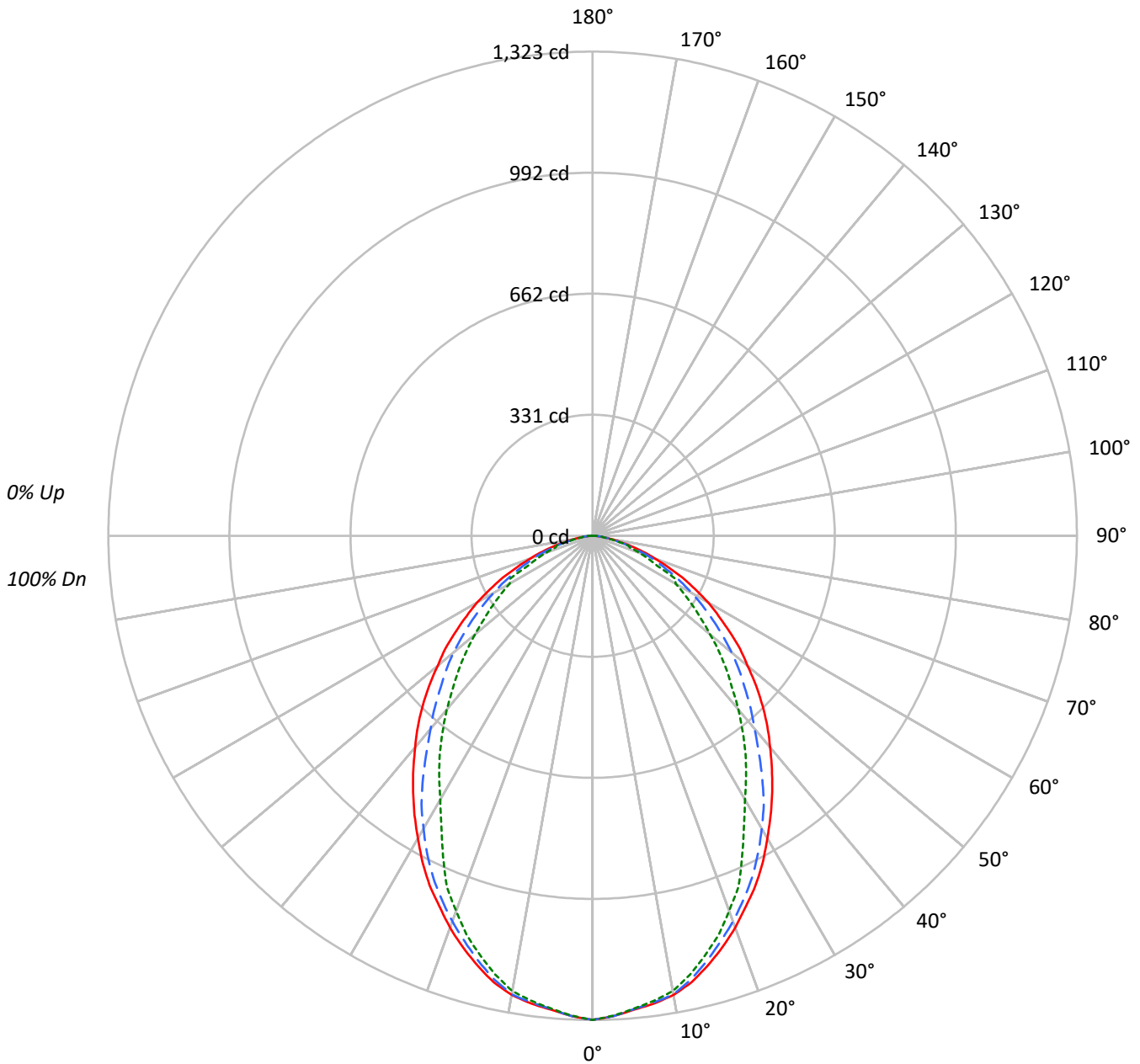
Lumens per Lamp: N/A
Luminaire Lumens: 2597.0 lumens
Efficiency: N/A
Efficacy: 60.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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: P545571

CATALOG NUMBER: FMR-12-2-LD4-2HI-40-UNV-81-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545571

CATALOG NUMBER: FMR-12-2-LD4-2HI-40-UNV-81-88-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°	7120	7120	7120
5°	7023	7015	7007
10°	6962	6954	6903
15°	6774	6706	6613
20°	6526	6420	6245
25°	6257	6121	5739
30°	5931	5740	5171
35°	5617	5305	4783
40°	5297	4835	4352
45°	4994	4470	3934
50°	4623	4149	3508
55°	4276	3760	3142
60°	3918	3358	2815
65°	3447	2940	2493
70°	2840	2574	2118
75°	2258	1971	2067
80°	1516	1423	1327
85°	945	1136	1321



TEST NUMBER: P545571

CATALOG NUMBER: FMR-12-2-LD4-2HI-40-UNV-81-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.1	4.7
10°-20°	338.0	13.0
20°-30°	467.9	18.0
30°-40°	498.9	19.2
40°-50°	455.1	17.5
50°-60°	356.6	13.7
60°-70°	232.4	8.9
70°-80°	103.0	4.0
80°-90°	22.1	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°	929.0	35.8
0°-40°	1427.9	55.0
0°-60°	2239.6	86.2
0°-90°	2597.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2597.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1323	1323	1323	1323	1323	
5°	1300	1298	1298	1297	1297	123
15°	1216	1216	1204	1191	1187	342
25°	1054	1048	1031	994	966	484
35°	855	849	808	746	728	534
45°	656	642	587	538	517	505
55°	456	442	401	353	335	409
65°	271	255	231	236	196	267
75°	109	101	95	90	99	116
85°	15	17	18	20	21	21
90°	0	0	0	0	0	



TEST NUMBER: P545571

CATALOG NUMBER: FMR-12-2-LD4-2HI-40-UNV-81-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1322.9	1322.9	1322.9	1322.9	1322.9
2.5°	1313.7	1313.7	1313.7	1312.2	1312.2
5°	1299.9	1298.4	1298.4	1296.9	1296.9
7.5°	1289.2	1287.7	1286.2	1284.6	1281.6
10°	1273.9	1273.9	1272.4	1264.8	1263.2
12.5°	1249.5	1247.9	1241.8	1231.1	1228.1
15°	1215.8	1215.8	1203.6	1191.4	1186.8
17.5°	1179.1	1177.6	1162.3	1150.1	1143.9
20°	1139.4	1136.3	1121.0	1101.1	1090.4
22.5°	1095.0	1095.0	1076.7	1050.7	1039.9
25°	1053.7	1047.6	1030.8	994.1	966.5
27.5°	1006.3	997.1	978.8	926.8	894.7
30°	954.3	949.7	923.7	856.4	832.0
32.5°	905.4	897.7	870.2	799.8	780.0
35°	854.9	848.8	807.5	746.3	728.0
37.5°	804.4	796.8	744.8	695.8	672.9
40°	754.0	744.8	688.2	643.9	619.4
42.5°	706.6	694.3	639.3	591.9	564.3
45°	656.1	642.3	587.3	538.3	516.9
47.5°	605.6	593.4	542.9	492.4	468.0
50°	552.1	541.4	495.5	445.0	419.0
52.5°	507.7	490.9	446.6	396.1	374.7
55°	455.7	442.0	400.7	353.3	334.9
57.5°	408.3	394.6	356.3	312.0	296.7
60°	364.0	344.1	312.0	273.8	261.5
62.5°	315.0	299.8	272.2	240.1	255.4
65°	270.7	255.4	230.9	235.5	195.8
67.5°	221.8	214.1	192.7	171.3	165.2
70°	180.5	171.3	163.6	140.7	134.6
72.5°	143.8	134.6	123.9	111.6	107.1
75°	108.6	100.9	94.8	90.2	99.4
77.5°	74.9	71.9	67.3	62.7	61.2
80°	48.9	47.4	45.9	44.4	42.8
82.5°	29.1	29.1	29.1	29.1	29.1
85°	15.3	16.8	18.4	19.9	21.4
87.5°	9.2	9.2	10.7	12.2	13.8
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)