

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: P545283

Luminaire Tested: **FMR-12-2-LD4-1HI-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: P545283
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-LD4-1HI-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

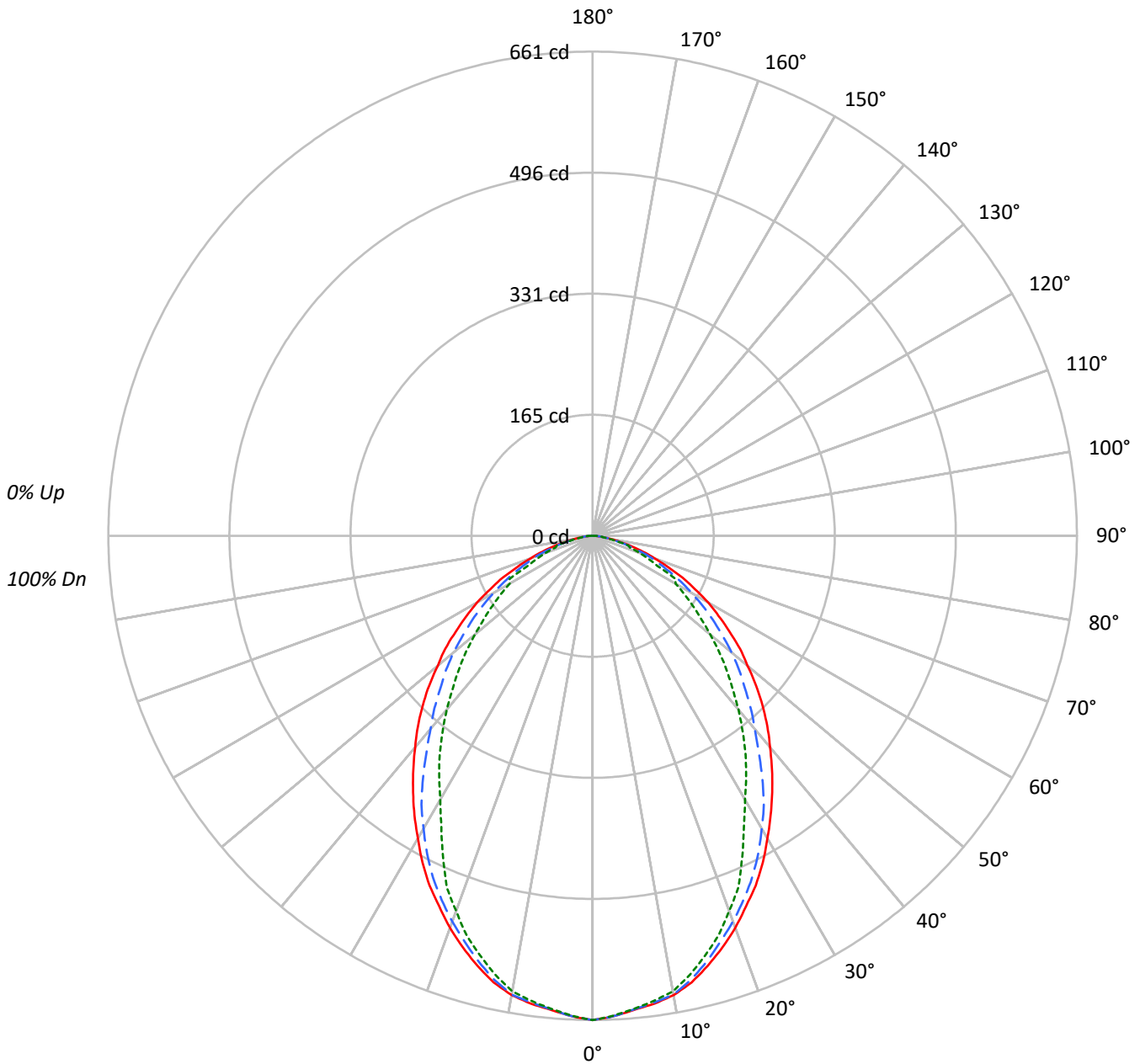
Lumens per Lamp: N/A
Luminaire Lumens: 1298.0 lumens
Efficiency: N/A
Efficacy: 60.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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: P545283

CATALOG NUMBER: FMR-12-2-LD4-1HI-40-UNV-81-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545283

CATALOG NUMBER: FMR-12-2-LD4-1HI-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°	3559	3559	3559
5°	3510	3506	3502
10°	3480	3476	3451
15°	3386	3352	3305
20°	3262	3209	3121
25°	3128	3059	2869
30°	2964	2869	2584
35°	2807	2652	2390
40°	2647	2417	2175
45°	2496	2234	1967
50°	2310	2074	1753
55°	2137	1879	1571
60°	1958	1678	1407
65°	1723	1470	1245
70°	1419	1287	1059
75°	1129	986	1033
80°	759	710	663
85°	469	568	661



TEST NUMBER: P545283

CATALOG NUMBER: FMR-12-2-LD4-1HI-40-UNV-81-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.5	4.7
10°-20°	168.9	13.0
20°-30°	233.8	18.0
30°-40°	249.3	19.2
40°-50°	227.5	17.5
50°-60°	178.2	13.7
60°-70°	116.1	8.9
70°-80°	51.5	4.0
80°-90°	11.0	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°	464.3	35.8
0°-40°	713.7	55.0
0°-60°	1119.4	86.2
0°-90°	1298.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1298.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	661	661	661	661	661	
5°	650	649	649	648	648	62
15°	608	608	602	595	593	171
25°	527	524	515	497	483	242
35°	427	424	404	373	364	267
45°	328	321	294	269	258	253
55°	228	221	200	177	167	204
65°	135	128	115	118	98	133
75°	54	50	47	45	50	58
85°	8	8	9	10	11	11
90°	0	0	0	0	0	



TEST NUMBER: P545283

CATALOG NUMBER: FMR-12-2-LD4-1HI-40-UNV-81-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	661.2	661.2	661.2	661.2	661.2
2.5°	656.6	656.6	656.6	655.8	655.8
5°	649.7	649.0	649.0	648.2	648.2
7.5°	644.4	643.6	642.8	642.1	640.5
10°	636.7	636.7	636.0	632.1	631.4
12.5°	624.5	623.7	620.7	615.3	613.8
15°	607.7	607.7	601.6	595.4	593.2
17.5°	589.3	588.6	580.9	574.8	571.8
20°	569.5	567.9	560.3	550.3	545.0
22.5°	547.3	547.3	538.1	525.1	519.8
25°	526.7	523.6	515.2	496.8	483.1
27.5°	503.0	498.4	489.2	463.2	447.2
30°	477.0	474.7	461.7	428.0	415.8
32.5°	452.5	448.7	434.9	399.8	389.8
35°	427.3	424.2	403.6	373.0	363.8
37.5°	402.1	398.2	372.3	347.8	336.3
40°	376.8	372.3	344.0	321.8	309.6
42.5°	353.1	347.0	319.5	295.8	282.1
45°	327.9	321.0	293.5	269.1	258.4
47.5°	302.7	296.6	271.4	246.1	233.9
50°	275.9	270.6	247.7	222.4	209.4
52.5°	253.8	245.4	223.2	198.0	187.3
55°	227.8	220.9	200.3	176.6	167.4
57.5°	204.1	197.2	178.1	155.9	148.3
60°	181.9	172.0	155.9	136.8	130.7
62.5°	157.5	149.8	136.1	120.0	127.7
65°	135.3	127.7	115.4	117.7	97.8
67.5°	110.8	107.0	96.3	85.6	82.6
70°	90.2	85.6	81.8	70.3	67.3
72.5°	71.9	67.3	61.9	55.8	53.5
75°	54.3	50.4	47.4	45.1	49.7
77.5°	37.5	35.9	33.6	31.3	30.6
80°	24.5	23.7	22.9	22.2	21.4
82.5°	14.5	14.5	14.5	14.5	14.5
85°	7.6	8.4	9.2	9.9	10.7
87.5°	4.6	4.6	5.4	6.1	6.9
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)