

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: P545383

Luminaire Tested: **FMR-12-2-LD4-1LO-40-UNV-82-84-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: P545383
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-LD4-1LO-40-UNV-82-84-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

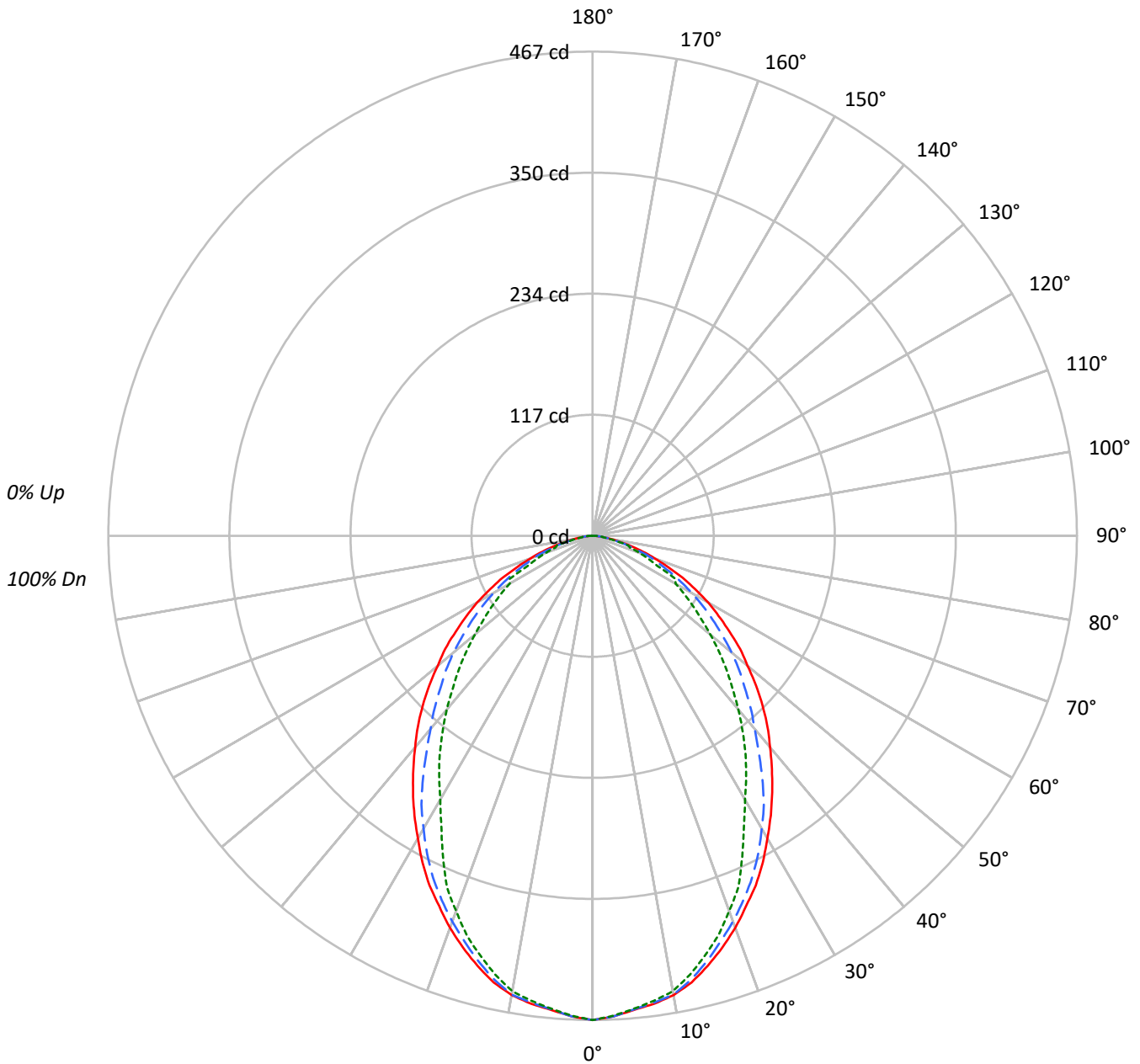
Lumens per Lamp: N/A
Luminaire Lumens: 917.0 lumens
Efficiency: N/A
Efficacy: 78.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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: P545383

CATALOG NUMBER: FMR-12-2-LD4-1LO-40-UNV-82-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545383

CATALOG NUMBER: FMR-12-2-LD4-1LO-40-UNV-82-84-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°	2514	2514	2514
5°	2480	2477	2474
10°	2458	2455	2437
15°	2392	2368	2335
20°	2304	2267	2205
25°	2210	2162	2027
30°	2094	2027	1826
35°	1984	1873	1689
40°	1870	1707	1537
45°	1764	1579	1389
50°	1632	1465	1239
55°	1510	1328	1110
60°	1383	1186	994
65°	1217	1038	880
70°	1002	910	747
75°	796	697	730
80°	536	502	468
85°	333	401	469



TEST NUMBER: P545383

CATALOG NUMBER: FMR-12-2-LD4-1LO-40-UNV-82-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.5	4.7
10°-20°	119.3	13.0
20°-30°	165.2	18.0
30°-40°	176.2	19.2
40°-50°	160.7	17.5
50°-60°	125.9	13.7
60°-70°	82.1	8.9
70°-80°	36.4	4.0
80°-90°	7.8	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°	328.0	35.8
0°-40°	504.2	55.0
0°-60°	790.8	86.2
0°-90°	917.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	917.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	467	467	467	467	467	
5°	459	458	458	458	458	44
15°	429	429	425	421	419	121
25°	372	370	364	351	341	171
35°	302	300	285	264	257	189
45°	232	227	207	190	182	178
55°	161	156	142	125	118	144
65°	96	90	82	83	69	94
75°	38	36	34	32	35	41
85°	5	6	6	7	8	7
90°	0	0	0	0	0	



TEST NUMBER: P545383

CATALOG NUMBER: FMR-12-2-LD4-1LO-40-UNV-82-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	467.1	467.1	467.1	467.1	467.1
2.5°	463.9	463.9	463.9	463.3	463.3
5°	459.0	458.5	458.5	457.9	457.9
7.5°	455.2	454.7	454.1	453.6	452.5
10°	449.8	449.8	449.3	446.6	446.0
12.5°	441.2	440.6	438.5	434.7	433.6
15°	429.3	429.3	425.0	420.7	419.0
17.5°	416.3	415.8	410.4	406.1	403.9
20°	402.3	401.2	395.8	388.8	385.0
22.5°	386.6	386.6	380.2	371.0	367.2
25°	372.1	369.9	364.0	351.0	341.3
27.5°	355.3	352.1	345.6	327.2	315.9
30°	337.0	335.3	326.2	302.4	293.8
32.5°	319.7	317.0	307.3	282.4	275.4
35°	301.9	299.7	285.1	263.5	257.0
37.5°	284.0	281.3	263.0	245.7	237.6
40°	266.2	263.0	243.0	227.3	218.7
42.5°	249.5	245.2	225.7	209.0	199.3
45°	231.7	226.8	207.4	190.1	182.5
47.5°	213.8	209.5	191.7	173.9	165.2
50°	194.9	191.2	175.0	157.1	148.0
52.5°	179.3	173.3	157.7	139.9	132.3
55°	160.9	156.1	141.5	124.7	118.3
57.5°	144.2	139.3	125.8	110.2	104.8
60°	128.5	121.5	110.2	96.7	92.3
62.5°	111.2	105.8	96.1	84.8	90.2
65°	95.6	90.2	81.5	83.2	69.1
67.5°	78.3	75.6	68.0	60.5	58.3
70°	63.7	60.5	57.8	49.7	47.5
72.5°	50.8	47.5	43.7	39.4	37.8
75°	38.3	35.6	33.5	31.9	35.1
77.5°	26.5	25.4	23.8	22.1	21.6
80°	17.3	16.7	16.2	15.7	15.1
82.5°	10.3	10.3	10.3	10.3	10.3
85°	5.4	5.9	6.5	7.0	7.6
87.5°	3.2	3.2	3.8	4.3	4.9
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)