

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: P544917

Luminaire Tested: **FMR-12-1-LD4-1STD-40-UNV-93-96-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: P544917
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-12-1-LD4-1STD-40-UNV-93-96-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

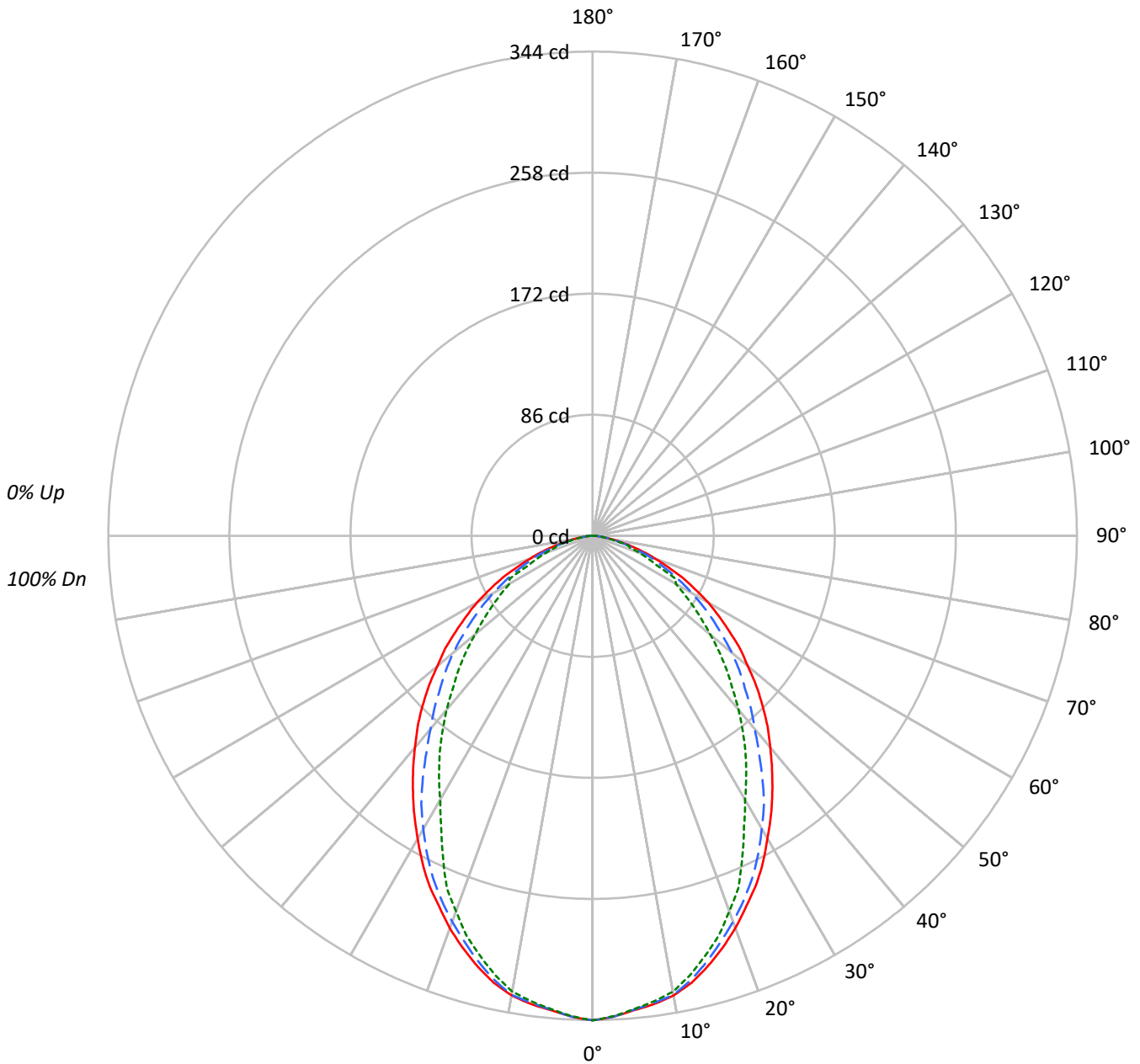
Lumens per Lamp: N/A
Luminaire Lumens: 676.0 lumens
Efficiency: N/A
Efficacy: 81.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 8.3
Input Voltage (V): NR
Input Current (A_{in}): 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: P544917

CATALOG NUMBER: FMR-12-1-LD4-1STD-40-UNV-93-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P544917

CATALOG NUMBER: FMR-12-1-LD4-1STD-40-UNV-93-96-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°	3706	3706	3706
5°	3656	3652	3648
10°	3624	3620	3594
15°	3527	3491	3442
20°	3397	3342	3251
25°	3258	3187	2988
30°	3087	2988	2692
35°	2924	2762	2490
40°	2758	2517	2265
45°	2600	2328	2049
50°	2406	2160	1827
55°	2226	1957	1636
60°	2039	1748	1466
65°	1796	1531	1299
70°	1479	1341	1102
75°	1177	1027	1077
80°	787	738	688
85°	494	593	692



TEST NUMBER: P544917

CATALOG NUMBER: FMR-12-1-LD4-1STD-40-UNV-93-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.1	4.7
10°-20°	88.0	13.0
20°-30°	121.8	18.0
30°-40°	129.9	19.2
40°-50°	118.5	17.5
50°-60°	92.8	13.7
60°-70°	60.5	8.9
70°-80°	26.8	4.0
80°-90°	5.8	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°	241.8	35.8
0°-40°	371.7	55.0
0°-60°	583.0	86.2
0°-90°	676.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	676.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	344	344	344	344	344	
5°	338	338	338	338	338	32
15°	316	316	313	310	309	89
25°	274	273	268	259	252	126
35°	222	221	210	194	190	139
45°	171	167	153	140	135	132
55°	119	115	104	92	87	106
65°	70	66	60	61	51	69
75°	28	26	25	24	26	30
85°	4	4	5	5	6	6
90°	0	0	0	0	0	



TEST NUMBER: P544917

CATALOG NUMBER: FMR-12-1-LD4-1STD-40-UNV-93-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	344.3	344.3	344.3	344.3	344.3
2.5°	342.0	342.0	342.0	341.6	341.6
5°	338.4	338.0	338.0	337.6	337.6
7.5°	335.6	335.2	334.8	334.4	333.6
10°	331.6	331.6	331.2	329.2	328.8
12.5°	325.2	324.8	323.2	320.5	319.7
15°	316.5	316.5	313.3	310.1	308.9
17.5°	306.9	306.5	302.5	299.4	297.8
20°	296.6	295.8	291.8	286.6	283.8
22.5°	285.0	285.0	280.3	273.5	270.7
25°	274.3	272.7	268.3	258.8	251.6
27.5°	261.9	259.6	254.8	241.2	232.9
30°	248.4	247.2	240.4	222.9	216.6
32.5°	235.7	233.7	226.5	208.2	203.0
35°	222.5	220.9	210.2	194.3	189.5
37.5°	209.4	207.4	193.9	181.1	175.2
40°	196.3	193.9	179.1	167.6	161.2
42.5°	183.9	180.7	166.4	154.1	146.9
45°	170.8	167.2	152.9	140.1	134.6
47.5°	157.6	154.5	141.3	128.2	121.8
50°	143.7	140.9	129.0	115.8	109.1
52.5°	132.2	127.8	116.2	103.1	97.5
55°	118.6	115.0	104.3	92.0	87.2
57.5°	106.3	102.7	92.8	81.2	77.2
60°	94.7	89.6	81.2	71.3	68.1
62.5°	82.0	78.0	70.9	62.5	66.5
65°	70.5	66.5	60.1	61.3	51.0
67.5°	57.7	55.7	50.2	44.6	43.0
70°	47.0	44.6	42.6	36.6	35.0
72.5°	37.4	35.0	32.2	29.1	27.9
75°	28.3	26.3	24.7	23.5	25.9
77.5°	19.5	18.7	17.5	16.3	15.9
80°	12.7	12.3	11.9	11.5	11.1
82.5°	7.6	7.6	7.6	7.6	7.6
85°	4.0	4.4	4.8	5.2	5.6
87.5°	2.4	2.4	2.8	3.2	3.6
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)