

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: P544809

Luminaire Tested: **FMR-12-1-LD4-1LO-40-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: P544809
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-LD4-1LO-40-UNV-82-86-EDD
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

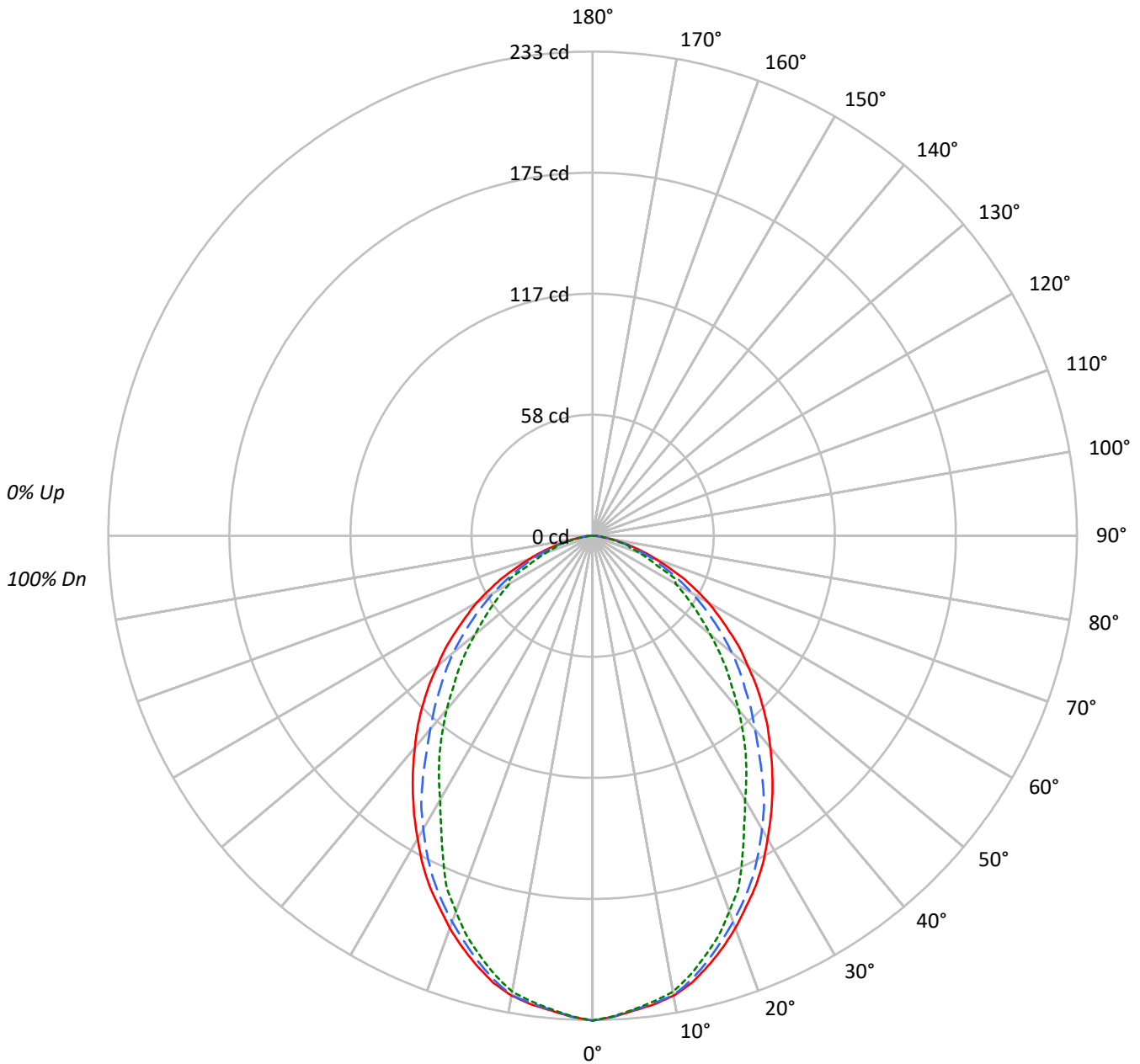
Lumens per Lamp: N/A
Luminaire Lumens: 458.0 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 5.8
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

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Luminous Intensity Polar Plot





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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°	2511	2511	2511
5°	2478	2474	2471
10°	2456	2453	2435
15°	2389	2366	2332
20°	2301	2265	2203
25°	2207	2159	2025
30°	2092	2025	1823
35°	1982	1871	1687
40°	1869	1706	1534
45°	1761	1577	1388
50°	1631	1464	1238
55°	1509	1327	1109
60°	1382	1184	992
65°	1215	1037	879
70°	1001	910	746
75°	794	695	728
80°	533	502	471
85°	333	395	469



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	21.7	4.7
10°-20°	59.6	13.0
20°-30°	82.5	18.0
30°-40°	88.0	19.2
40°-50°	80.3	17.5
50°-60°	62.9	13.7
60°-70°	41.0	8.9
70°-80°	18.2	4.0
80°-90°	3.9	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°	163.8	35.8
0°-40°	251.8	55.0
0°-60°	395.0	86.2
0°-90°	458.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	458.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	233	233	233	233	233	
5°	229	229	229	229	229	22
15°	214	214	212	210	209	60
25°	186	185	182	175	170	85
35°	151	150	142	132	128	94
45°	116	113	104	95	91	89
55°	80	78	71	62	59	72
65°	48	45	41	42	34	47
75°	19	18	17	16	18	21
85°	3	3	3	4	4	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	233.3	233.3	233.3	233.3	233.3
2.5°	231.7	231.7	231.7	231.4	231.4
5°	229.3	229.0	229.0	228.7	228.7
7.5°	227.4	227.1	226.8	226.6	226.0
10°	224.7	224.7	224.4	223.1	222.8
12.5°	220.4	220.1	219.0	217.1	216.6
15°	214.4	214.4	212.3	210.1	209.3
17.5°	207.9	207.7	205.0	202.8	201.7
20°	200.9	200.4	197.7	194.2	192.3
22.5°	193.1	193.1	189.9	185.3	183.4
25°	185.8	184.8	181.8	175.3	170.5
27.5°	177.5	175.9	172.6	163.4	157.8
30°	168.3	167.5	162.9	151.0	146.7
32.5°	159.7	158.3	153.5	141.1	137.6
35°	150.8	149.7	142.4	131.6	128.4
37.5°	141.9	140.5	131.3	122.7	118.7
40°	133.0	131.3	121.4	113.5	109.2
42.5°	124.6	122.4	112.7	104.4	99.5
45°	115.7	113.3	103.6	94.9	91.2
47.5°	106.8	104.6	95.7	86.8	82.5
50°	97.4	95.5	87.4	78.5	73.9
52.5°	89.5	86.6	78.8	69.9	66.1
55°	80.4	77.9	70.7	62.3	59.1
57.5°	72.0	69.6	62.8	55.0	52.3
60°	64.2	60.7	55.0	48.3	46.1
62.5°	55.6	52.9	48.0	42.3	45.0
65°	47.7	45.0	40.7	41.5	34.5
67.5°	39.1	37.8	34.0	30.2	29.1
70°	31.8	30.2	28.9	24.8	23.7
72.5°	25.4	23.7	21.8	19.7	18.9
75°	19.1	17.8	16.7	15.9	17.5
77.5°	13.2	12.7	11.9	11.1	10.8
80°	8.6	8.4	8.1	7.8	7.6
82.5°	5.1	5.1	5.1	5.1	5.1
85°	2.7	3.0	3.2	3.5	3.8
87.5°	1.6	1.6	1.9	2.2	2.4
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)