

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: P544810

Luminaire Tested: **FMR-12-1-LD4-1LO-40-UNV-82-87-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: P544810
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-82-87-EDD
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

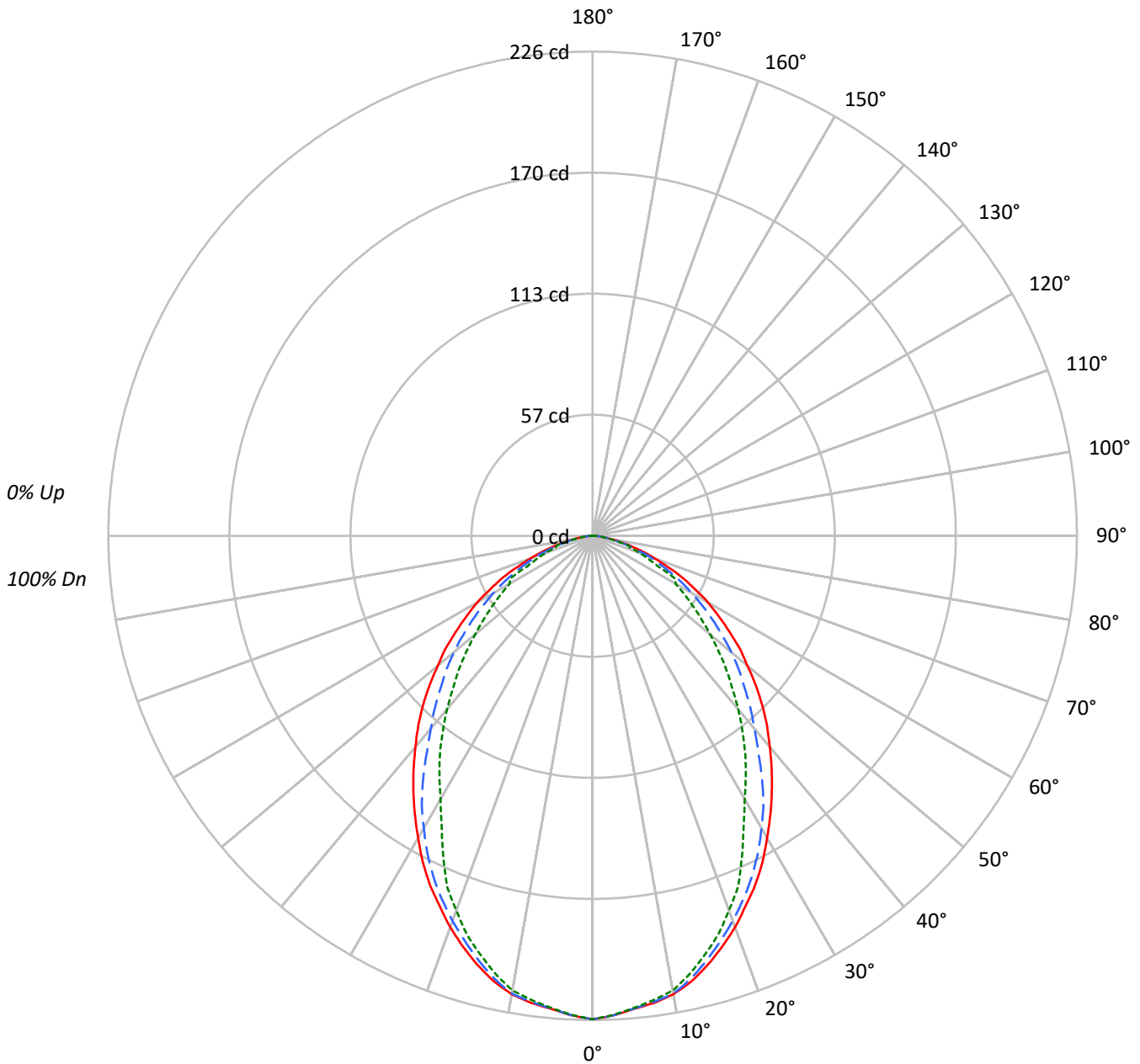
Lumens per Lamp: N/A
Luminaire Lumens: 443.0 lumens
Efficiency: N/A
Efficacy: 76.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 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	47	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°	2429	2429	2429
5°	2395	2393	2390
10°	2375	2372	2355
15°	2311	2288	2255
20°	2227	2190	2131
25°	2134	2088	1958
30°	2023	1959	1764
35°	1916	1809	1632
40°	1807	1650	1485
45°	1703	1525	1343
50°	1577	1415	1197
55°	1458	1282	1072
60°	1337	1145	960
65°	1177	1004	851
70°	969	878	724
75°	769	674	707
80°	514	483	453
85°	321	383	457



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	21.0	4.7
10°-20°	57.6	13.0
20°-30°	79.8	18.0
30°-40°	85.1	19.2
40°-50°	77.6	17.5
50°-60°	60.8	13.7
60°-70°	39.6	8.9
70°-80°	17.6	4.0
80°-90°	3.8	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°	158.5	35.8
0°-40°	243.6	55.0
0°-60°	382.0	86.2
0°-90°	443.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	443.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	226	226	226	226	226	
5°	222	222	222	221	221	21
15°	207	207	205	203	202	58
25°	180	179	176	170	165	83
35°	146	145	138	127	124	91
45°	112	110	100	92	88	86
55°	78	75	68	60	57	70
65°	46	44	39	40	33	45
75°	18	17	16	15	17	20
85°	3	3	3	3	4	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	225.7	225.7	225.7	225.7	225.7
2.5°	224.1	224.1	224.1	223.8	223.8
5°	221.7	221.5	221.5	221.2	221.2
7.5°	219.9	219.7	219.4	219.1	218.6
10°	217.3	217.3	217.0	215.7	215.5
12.5°	213.1	212.9	211.8	210.0	209.5
15°	207.4	207.4	205.3	203.2	202.4
17.5°	201.1	200.9	198.3	196.2	195.1
20°	194.4	193.8	191.2	187.8	186.0
22.5°	186.8	186.8	183.7	179.2	177.4
25°	179.7	178.7	175.8	169.6	164.9
27.5°	171.7	170.1	167.0	158.1	152.6
30°	162.8	162.0	157.6	146.1	141.9
32.5°	154.4	153.1	148.4	136.4	133.0
35°	145.8	144.8	137.7	127.3	124.2
37.5°	137.2	135.9	127.0	118.7	114.8
40°	128.6	127.0	117.4	109.8	105.7
42.5°	120.5	118.4	109.0	101.0	96.3
45°	111.9	109.6	100.2	91.8	88.2
47.5°	103.3	101.2	92.6	84.0	79.8
50°	94.2	92.4	84.5	75.9	71.5
52.5°	86.6	83.7	76.2	67.6	63.9
55°	77.7	75.4	68.3	60.3	57.1
57.5°	69.7	67.3	60.8	53.2	50.6
60°	62.1	58.7	53.2	46.7	44.6
62.5°	53.7	51.1	46.4	41.0	43.6
65°	46.2	43.6	39.4	40.2	33.4
67.5°	37.8	36.5	32.9	29.2	28.2
70°	30.8	29.2	27.9	24.0	23.0
72.5°	24.5	23.0	21.1	19.0	18.3
75°	18.5	17.2	16.2	15.4	17.0
77.5°	12.8	12.3	11.5	10.7	10.4
80°	8.3	8.1	7.8	7.6	7.3
82.5°	5.0	5.0	5.0	5.0	5.0
85°	2.6	2.9	3.1	3.4	3.7
87.5°	1.6	1.6	1.8	2.1	2.3
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)