

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: P544814

Luminaire Tested: **FMR-12-1-LD4-1LO-40-UNV-82-97-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: P544814
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-82-97-EDD
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

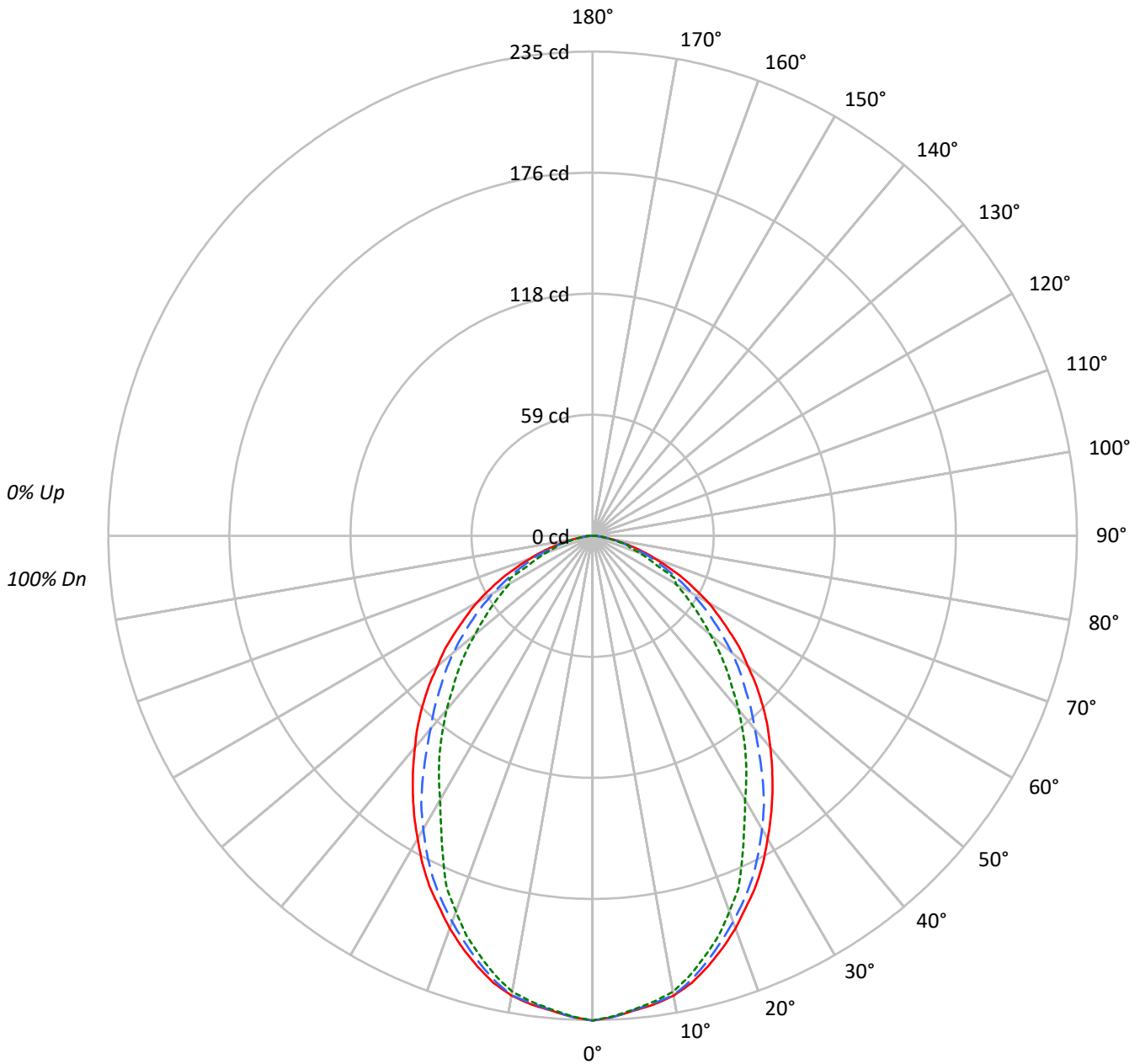
Lumens per Lamp: N/A
Luminaire Lumens: 462.0 lumens
Efficiency: N/A
Efficacy: 79.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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°	2533	2533	2533
5°	2499	2496	2493
10°	2477	2475	2456
15°	2410	2386	2352
20°	2322	2284	2222
25°	2227	2178	2042
30°	2110	2042	1840
35°	1999	1888	1702
40°	1884	1720	1548
45°	1776	1591	1400
50°	1644	1475	1248
55°	1522	1338	1118
60°	1395	1195	1001
65°	1228	1047	886
70°	1010	916	752
75°	803	703	736
80°	539	508	471
85°	333	408	469



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	21.9	4.7
10°-20°	60.1	13.0
20°-30°	83.2	18.0
30°-40°	88.8	19.2
40°-50°	81.0	17.5
50°-60°	63.4	13.7
60°-70°	41.3	8.9
70°-80°	18.3	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°	165.3	35.8
0°-40°	254.0	55.0
0°-60°	398.4	86.2
0°-90°	462.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	462.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	235	235	235	235	235	
5°	231	231	231	231	231	22
15°	216	216	214	212	211	61
25°	188	186	183	177	172	86
35°	152	151	144	133	130	95
45°	117	114	104	96	92	90
55°	81	79	71	63	60	73
65°	48	45	41	42	35	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°	235.3	235.3	235.3	235.3	235.3
2.5°	233.7	233.7	233.7	233.4	233.4
5°	231.3	231.0	231.0	230.7	230.7
7.5°	229.4	229.1	228.8	228.5	228.0
10°	226.6	226.6	226.4	225.0	224.7
12.5°	222.3	222.0	220.9	219.0	218.5
15°	216.3	216.3	214.1	211.9	211.1
17.5°	209.8	209.5	206.8	204.6	203.5
20°	202.7	202.1	199.4	195.9	194.0
22.5°	194.8	194.8	191.5	186.9	185.0
25°	187.5	186.4	183.4	176.8	171.9
27.5°	179.0	177.4	174.1	164.9	159.2
30°	169.8	169.0	164.3	152.4	148.0
32.5°	161.1	159.7	154.8	142.3	138.8
35°	152.1	151.0	143.7	132.8	129.5
37.5°	143.1	141.7	132.5	123.8	119.7
40°	134.1	132.5	122.4	114.5	110.2
42.5°	125.7	123.5	113.7	105.3	100.4
45°	116.7	114.3	104.5	95.8	92.0
47.5°	107.7	105.6	96.6	87.6	83.3
50°	98.2	96.3	88.1	79.2	74.5
52.5°	90.3	87.3	79.4	70.5	66.7
55°	81.1	78.6	71.3	62.8	59.6
57.5°	72.6	70.2	63.4	55.5	52.8
60°	64.8	61.2	55.5	48.7	46.5
62.5°	56.0	53.3	48.4	42.7	45.4
65°	48.2	45.4	41.1	41.9	34.8
67.5°	39.4	38.1	34.3	30.5	29.4
70°	32.1	30.5	29.1	25.0	23.9
72.5°	25.6	23.9	22.0	19.9	19.0
75°	19.3	18.0	16.9	16.1	17.7
77.5°	13.3	12.8	12.0	11.2	10.9
80°	8.7	8.4	8.2	7.9	7.6
82.5°	5.2	5.2	5.2	5.2	5.2
85°	2.7	3.0	3.3	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)