

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: P544769

Luminaire Tested: **FMR-12-1-LD4-1LO-35-UNV-81-86-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: P544769
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-35-UNV-81-86-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

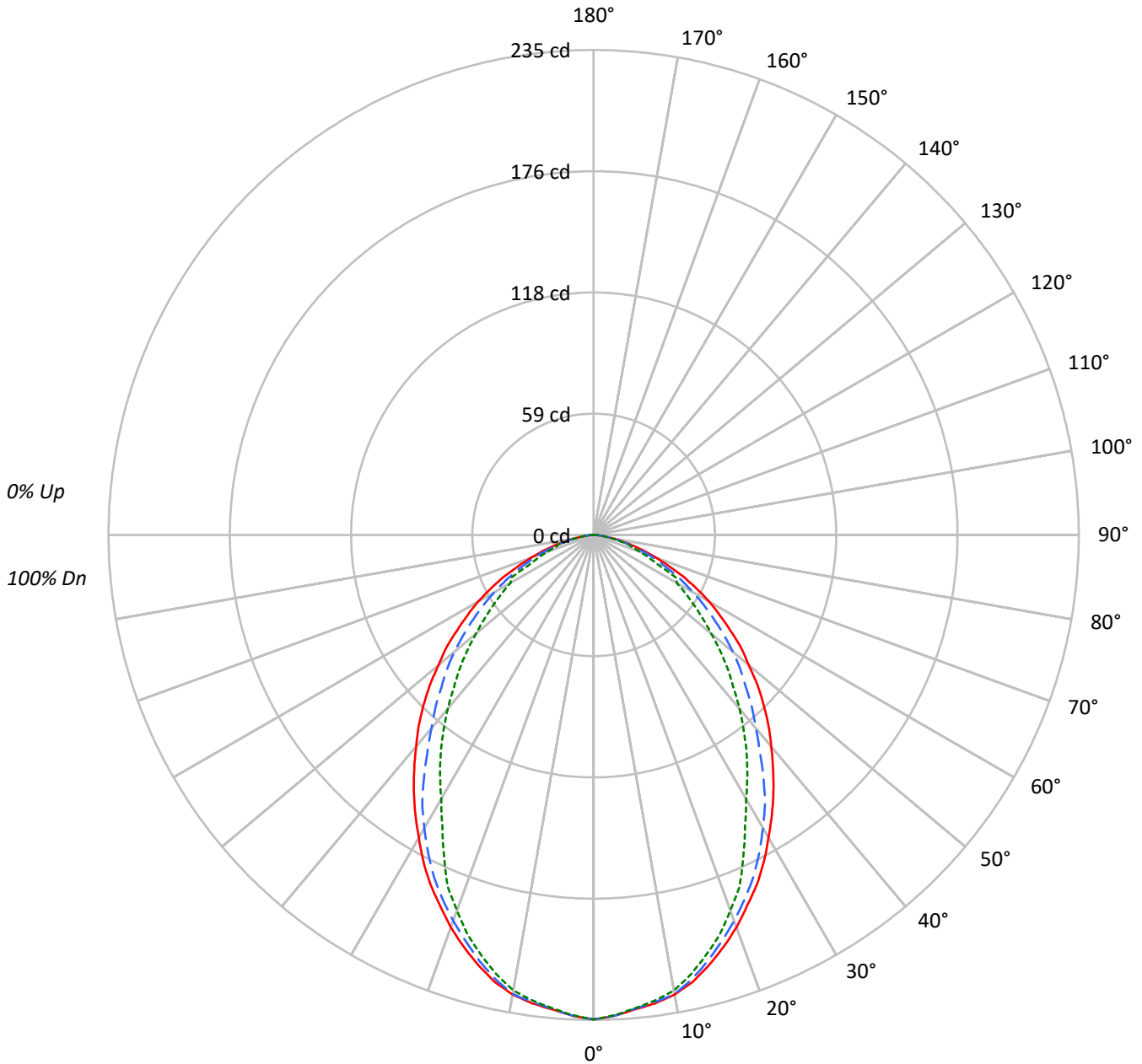
Lumens per Lamp: N/A
Luminaire Lumens: 461.0 lumens
Efficiency: N/A
Efficacy: 79.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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°	2527	2527	2527
5°	2494	2491	2487
10°	2471	2469	2450
15°	2405	2381	2348
20°	2317	2279	2218
25°	2221	2173	2038
30°	2105	2038	1836
35°	1995	1883	1698
40°	1880	1717	1544
45°	1773	1586	1397
50°	1641	1474	1246
55°	1518	1334	1117
60°	1391	1193	999
65°	1225	1044	884
70°	1007	913	752
75°	803	699	732
80°	539	502	471
85°	333	408	469



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	21.9	4.7
10°-20°	60.0	13.0
20°-30°	83.1	18.0
30°-40°	88.6	19.2
40°-50°	80.8	17.5
50°-60°	63.3	13.7
60°-70°	41.2	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°	164.9	35.8
0°-40°	253.5	55.0
0°-60°	397.6	86.2
0°-90°	461.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	461.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	235	235	235	235	235	
5°	231	230	230	230	230	22
15°	216	216	214	212	211	61
25°	187	186	183	176	172	86
35°	152	151	143	132	129	95
45°	116	114	104	96	92	90
55°	81	78	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°	234.8	234.8	234.8	234.8	234.8
2.5°	233.2	233.2	233.2	232.9	232.9
5°	230.8	230.5	230.5	230.2	230.2
7.5°	228.9	228.6	228.3	228.0	227.5
10°	226.1	226.1	225.9	224.5	224.2
12.5°	221.8	221.5	220.4	218.5	218.0
15°	215.8	215.8	213.7	211.5	210.7
17.5°	209.3	209.0	206.3	204.2	203.1
20°	202.3	201.7	199.0	195.5	193.6
22.5°	194.4	194.4	191.1	186.5	184.6
25°	187.0	186.0	183.0	176.5	171.6
27.5°	178.6	177.0	173.7	164.5	158.8
30°	169.4	168.6	164.0	152.0	147.7
32.5°	160.7	159.4	154.5	142.0	138.5
35°	151.8	150.7	143.3	132.5	129.2
37.5°	142.8	141.4	132.2	123.5	119.4
40°	133.8	132.2	122.2	114.3	109.9
42.5°	125.4	123.3	113.5	105.1	100.2
45°	116.5	114.0	104.2	95.6	91.8
47.5°	107.5	105.3	96.4	87.4	83.1
50°	98.0	96.1	88.0	79.0	74.4
52.5°	90.1	87.1	79.3	70.3	66.5
55°	80.9	78.5	71.1	62.7	59.5
57.5°	72.5	70.0	63.3	55.4	52.7
60°	64.6	61.1	55.4	48.6	46.4
62.5°	55.9	53.2	48.3	42.6	45.3
65°	48.1	45.3	41.0	41.8	34.7
67.5°	39.4	38.0	34.2	30.4	29.3
70°	32.0	30.4	29.0	25.0	23.9
72.5°	25.5	23.9	22.0	19.8	19.0
75°	19.3	17.9	16.8	16.0	17.6
77.5°	13.3	12.8	11.9	11.1	10.9
80°	8.7	8.4	8.1	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)