

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: P544786

Luminaire Tested: **FMR-12-1-LD4-1LO-35-UNV-93-87-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: P544786
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-93-87-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

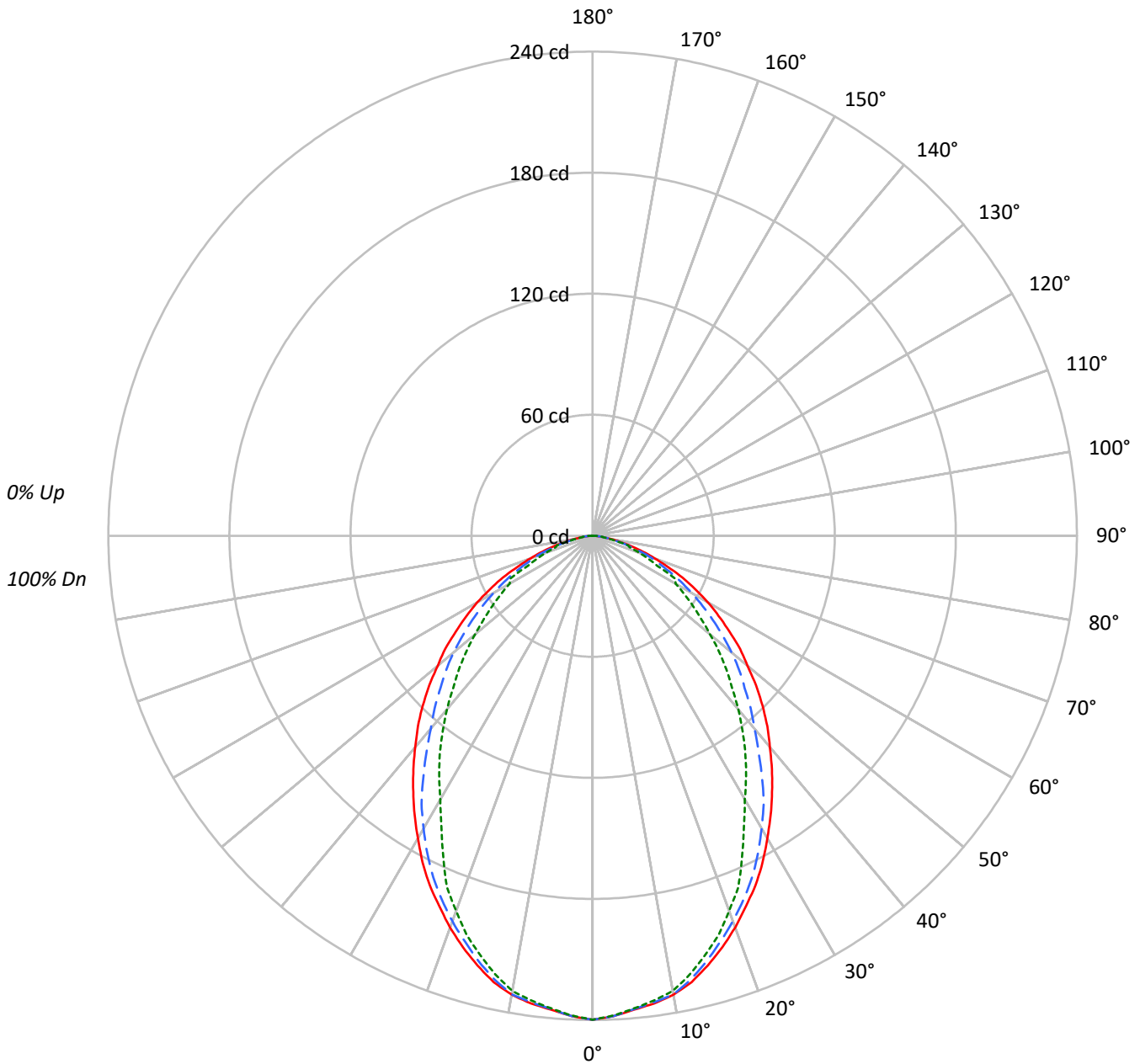
Lumens per Lamp: N/A
Luminaire Lumens: 471.0 lumens
Efficiency: N/A
Efficacy: 81.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 5.8
Input Voltage (V): NR
Input Current (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

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				20	
RC	80				70				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				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2582	2582	2582
5°	2548	2545	2541
10°	2525	2523	2504
15°	2457	2433	2398
20°	2367	2329	2266
25°	2270	2220	2082
30°	2151	2082	1876
35°	2037	1924	1735
40°	1921	1754	1578
45°	1811	1621	1426
50°	1676	1505	1273
55°	1552	1364	1139
60°	1421	1218	1020
65°	1251	1067	904
70°	1029	935	768
75°	819	715	749
80°	552	514	483
85°	346	408	482



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	22.3	4.7
10°-20°	61.3	13.0
20°-30°	84.9	18.0
30°-40°	90.5	19.2
40°-50°	82.5	17.5
50°-60°	64.7	13.7
60°-70°	42.1	8.9
70°-80°	18.7	4.0
80°-90°	4.0	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°	168.5	35.8
0°-40°	259.0	55.0
0°-60°	406.2	86.2
0°-90°	471.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	471.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	240	240	240	240	240	
5°	236	236	236	235	235	22
15°	220	220	218	216	215	62
25°	191	190	187	180	175	88
35°	155	154	146	135	132	97
45°	119	116	106	98	94	92
55°	83	80	73	64	61	74
65°	49	46	42	43	36	48
75°	20	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°	239.9	239.9	239.9	239.9	239.9
2.5°	238.3	238.3	238.3	238.0	238.0
5°	235.8	235.5	235.5	235.2	235.2
7.5°	233.8	233.5	233.3	233.0	232.4
10°	231.0	231.0	230.8	229.4	229.1
12.5°	226.6	226.3	225.2	223.3	222.7
15°	220.5	220.5	218.3	216.1	215.2
17.5°	213.8	213.6	210.8	208.6	207.5
20°	206.6	206.1	203.3	199.7	197.8
22.5°	198.6	198.6	195.3	190.6	188.6
25°	191.1	190.0	186.9	180.3	175.3
27.5°	182.5	180.8	177.5	168.1	162.3
30°	173.1	172.2	167.5	155.3	150.9
32.5°	164.2	162.8	157.8	145.1	141.5
35°	155.0	153.9	146.4	135.4	132.0
37.5°	145.9	144.5	135.1	126.2	122.0
40°	136.7	135.1	124.8	116.8	112.3
42.5°	128.1	125.9	115.9	107.3	102.3
45°	119.0	116.5	106.5	97.6	93.7
47.5°	109.8	107.6	98.5	89.3	84.9
50°	100.1	98.2	89.9	80.7	76.0
52.5°	92.1	89.0	81.0	71.8	68.0
55°	82.7	80.2	72.7	64.1	60.7
57.5°	74.1	71.6	64.6	56.6	53.8
60°	66.0	62.4	56.6	49.6	47.4
62.5°	57.1	54.4	49.4	43.5	46.3
65°	49.1	46.3	41.9	42.7	35.5
67.5°	40.2	38.8	34.9	31.1	30.0
70°	32.7	31.1	29.7	25.5	24.4
72.5°	26.1	24.4	22.5	20.2	19.4
75°	19.7	18.3	17.2	16.4	18.0
77.5°	13.6	13.0	12.2	11.4	11.1
80°	8.9	8.6	8.3	8.0	7.8
82.5°	5.3	5.3	5.3	5.3	5.3
85°	2.8	3.1	3.3	3.6	3.9
87.5°	1.7	1.7	1.9	2.2	2.5
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)