

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: P545056

Luminaire Tested: **FMR-12-1-LD4-2LO-35-UNV-81-85-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: P545056
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-LD4-2LO-35-UNV-81-85-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

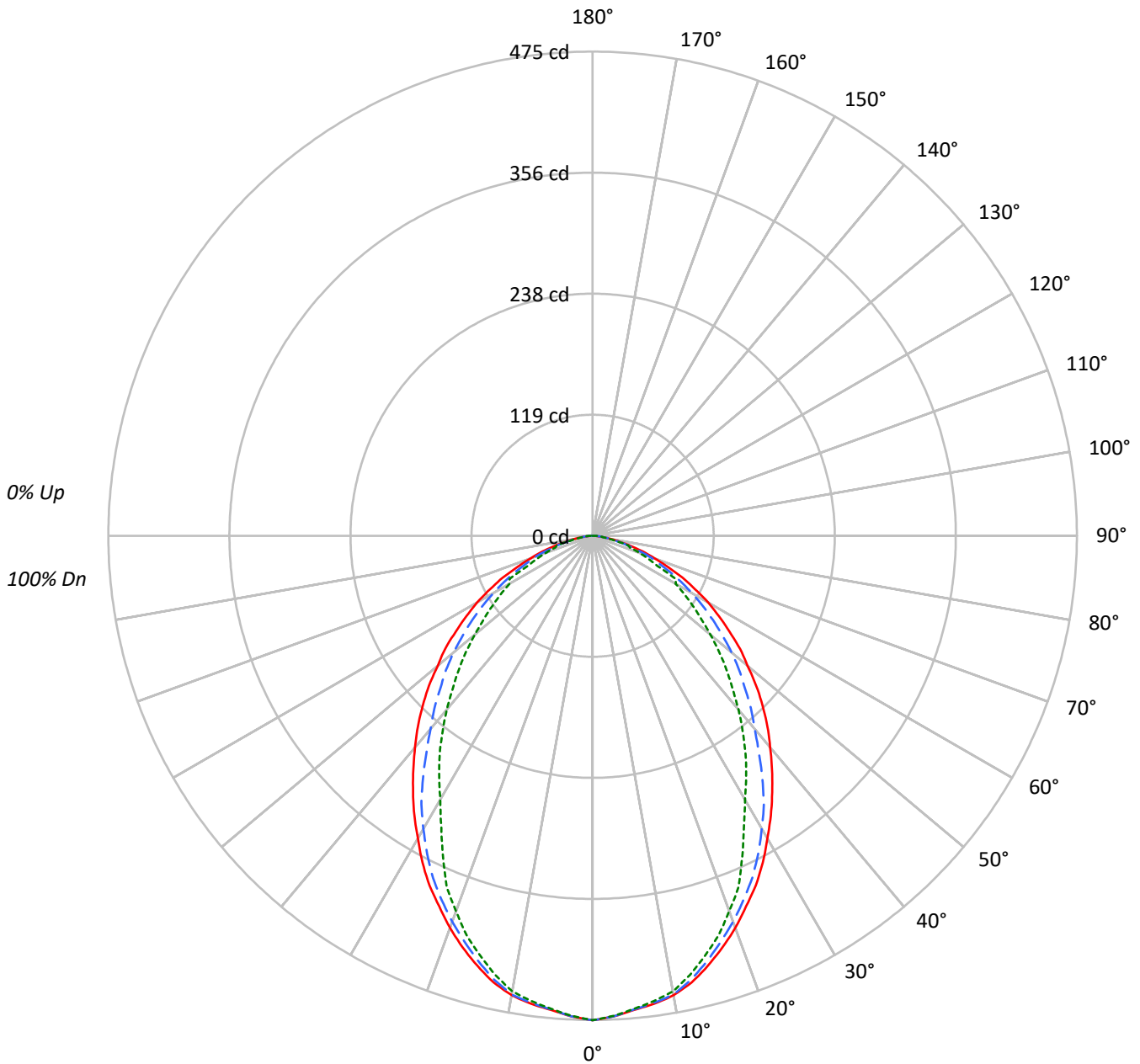
Lumens per Lamp: N/A
Luminaire Lumens: 933.0 lumens
Efficiency: N/A
Efficacy: 79.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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°	5116	5116	5116
5°	5046	5041	5034
10°	5003	4996	4960
15°	4868	4819	4752
20°	4688	4613	4487
25°	4497	4398	4124
30°	4261	4125	3715
35°	4035	3812	3436
40°	3806	3473	3126
45°	3588	3212	2827
50°	3321	2981	2520
55°	3072	2702	2258
60°	2816	2413	2024
65°	2476	2114	1791
70°	2039	1851	1520
75°	1622	1418	1485
80°	1091	1023	955
85°	679	815	951



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.2	4.7
10°-20°	121.4	13.0
20°-30°	168.1	18.0
30°-40°	179.2	19.2
40°-50°	163.5	17.5
50°-60°	128.1	13.7
60°-70°	83.5	8.9
70°-80°	37.0	4.0
80°-90°	7.9	0.8
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°	333.7	35.8
0°-40°	513.0	55.0
0°-60°	804.6	86.2
0°-90°	933.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	933.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	475	475	475	475	475	
5°	467	466	466	466	466	44
15°	437	437	432	428	426	123
25°	379	376	370	357	347	174
35°	307	305	290	268	262	192
45°	236	231	211	193	186	182
55°	164	159	144	127	120	147
65°	97	92	83	85	70	96
75°	39	36	34	32	36	42
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	475.3	475.3	475.3	475.3	475.3
2.5°	472.0	472.0	472.0	471.4	471.4
5°	467.0	466.5	466.5	465.9	465.9
7.5°	463.2	462.6	462.1	461.5	460.4
10°	457.7	457.7	457.1	454.4	453.8
12.5°	448.9	448.3	446.1	442.3	441.2
15°	436.8	436.8	432.4	428.0	426.4
17.5°	423.6	423.1	417.6	413.2	411.0
20°	409.3	408.2	402.7	395.6	391.7
22.5°	393.4	393.4	386.8	377.5	373.6
25°	378.6	376.4	370.3	357.1	347.2
27.5°	361.5	358.2	351.6	333.0	321.4
30°	342.8	341.2	331.9	307.7	298.9
32.5°	325.3	322.5	312.6	287.4	280.2
35°	307.1	304.9	290.1	268.1	261.5
37.5°	289.0	286.3	267.6	250.0	241.7
40°	270.9	267.6	247.2	231.3	222.5
42.5°	253.8	249.4	229.7	212.6	202.7
45°	235.7	230.8	211.0	193.4	185.7
47.5°	217.6	213.2	195.0	176.9	168.1
50°	198.3	194.5	178.0	159.9	150.5
52.5°	182.4	176.4	160.4	142.3	134.6
55°	163.7	158.8	144.0	126.9	120.3
57.5°	146.7	141.8	128.0	112.1	106.6
60°	130.8	123.6	112.1	98.3	94.0
62.5°	113.2	107.7	97.8	86.3	91.8
65°	97.2	91.8	83.0	84.6	70.3
67.5°	79.7	76.9	69.2	61.5	59.3
70°	64.8	61.5	58.8	50.5	48.3
72.5°	51.6	48.3	44.5	40.1	38.5
75°	39.0	36.3	34.1	32.4	35.7
77.5°	26.9	25.8	24.2	22.5	22.0
80°	17.6	17.0	16.5	15.9	15.4
82.5°	10.4	10.4	10.4	10.4	10.4
85°	5.5	6.0	6.6	7.1	7.7
87.5°	3.3	3.3	3.8	4.4	4.9
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)