

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: P545088

Luminaire Tested: **FMR-12-1-LD4-2LO-40-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: P545088
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

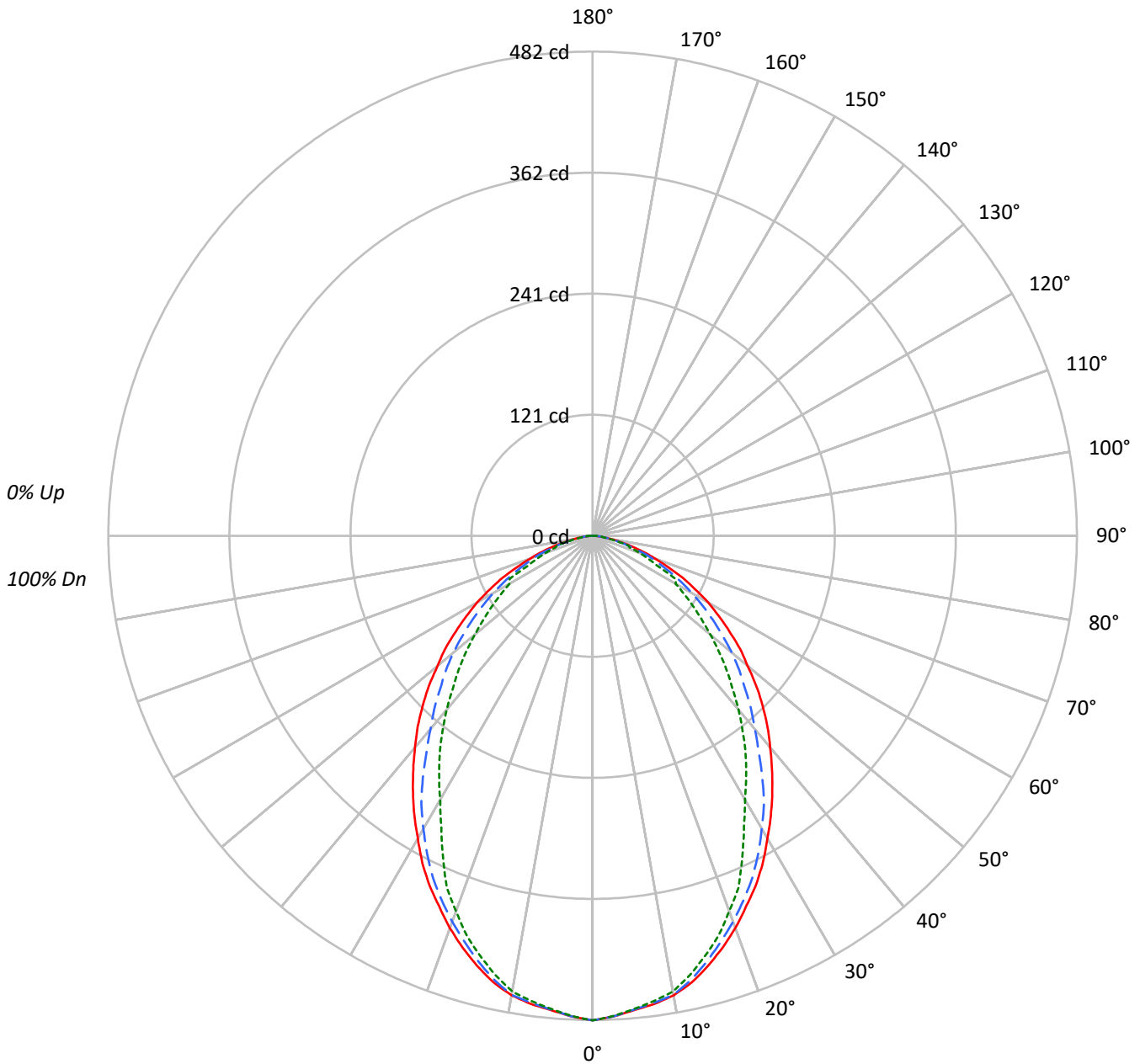
Lumens per Lamp: N/A
Luminaire Lumens: 947.0 lumens
Efficiency: N/A
Efficacy: 80.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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				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°	5193	5193	5193
5°	5122	5116	5110
10°	5077	5072	5034
15°	4941	4891	4823
20°	4759	4683	4554
25°	4563	4464	4187
30°	4325	4186	3771
35°	4096	3870	3489
40°	3863	3527	3174
45°	3641	3259	2869
50°	3371	3026	2559
55°	3119	2742	2291
60°	2857	2450	2054
65°	2514	2145	1819
70°	2071	1879	1545
75°	1647	1439	1506
80°	1103	1035	967
85°	692	827	963



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.9	4.7
10°-20°	123.2	13.0
20°-30°	170.6	18.0
30°-40°	181.9	19.2
40°-50°	166.0	17.5
50°-60°	130.0	13.7
60°-70°	84.8	8.9
70°-80°	37.5	4.0
80°-90°	8.1	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°	338.8	35.8
0°-40°	520.7	55.0
0°-60°	816.6	86.2
0°-90°	947.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	947.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	482	482	482	482	482	
5°	474	474	474	473	473	45
15°	443	443	439	434	433	125
25°	384	382	376	362	352	176
35°	312	310	294	272	266	195
45°	239	234	214	196	188	184
55°	166	161	146	129	122	149
65°	99	93	84	86	71	97
75°	40	37	35	33	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°	482.4	482.4	482.4	482.4	482.4
2.5°	479.0	479.0	479.0	478.5	478.5
5°	474.0	473.5	473.5	472.9	472.9
7.5°	470.1	469.6	469.0	468.4	467.3
10°	464.5	464.5	464.0	461.2	460.6
12.5°	455.6	455.1	452.8	448.9	447.8
15°	443.4	443.4	438.9	434.4	432.8
17.5°	430.0	429.4	423.8	419.4	417.1
20°	415.5	414.4	408.8	401.5	397.6
22.5°	399.3	399.3	392.6	383.1	379.2
25°	384.2	382.0	375.9	362.5	352.5
27.5°	367.0	363.6	356.9	338.0	326.2
30°	348.0	346.3	336.8	312.3	303.4
32.5°	330.1	327.4	317.3	291.7	284.4
35°	311.7	309.5	294.5	272.1	265.5
37.5°	293.3	290.5	271.6	253.7	245.4
40°	274.9	271.6	251.0	234.8	225.9
42.5°	257.6	253.2	233.1	215.8	205.8
45°	239.2	234.2	214.1	196.3	188.5
47.5°	220.8	216.4	198.0	179.6	170.6
50°	201.3	197.4	180.7	162.3	152.8
52.5°	185.1	179.0	162.8	144.4	136.6
55°	166.2	161.2	146.1	128.8	122.1
57.5°	148.9	143.9	129.9	113.8	108.2
60°	132.7	125.5	113.8	99.8	95.4
62.5°	114.9	109.3	99.3	87.6	93.1
65°	98.7	93.1	84.2	85.9	71.4
67.5°	80.9	78.1	70.3	62.5	60.2
70°	65.8	62.5	59.7	51.3	49.1
72.5°	52.4	49.1	45.2	40.7	39.0
75°	39.6	36.8	34.6	32.9	36.2
77.5°	27.3	26.2	24.5	22.9	22.3
80°	17.8	17.3	16.7	16.2	15.6
82.5°	10.6	10.6	10.6	10.6	10.6
85°	5.6	6.1	6.7	7.2	7.8
87.5°	3.3	3.3	3.9	4.5	5.0
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)