

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: P545074

Luminaire Tested: **FMR-12-1-LD4-2LO-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: P545074
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-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

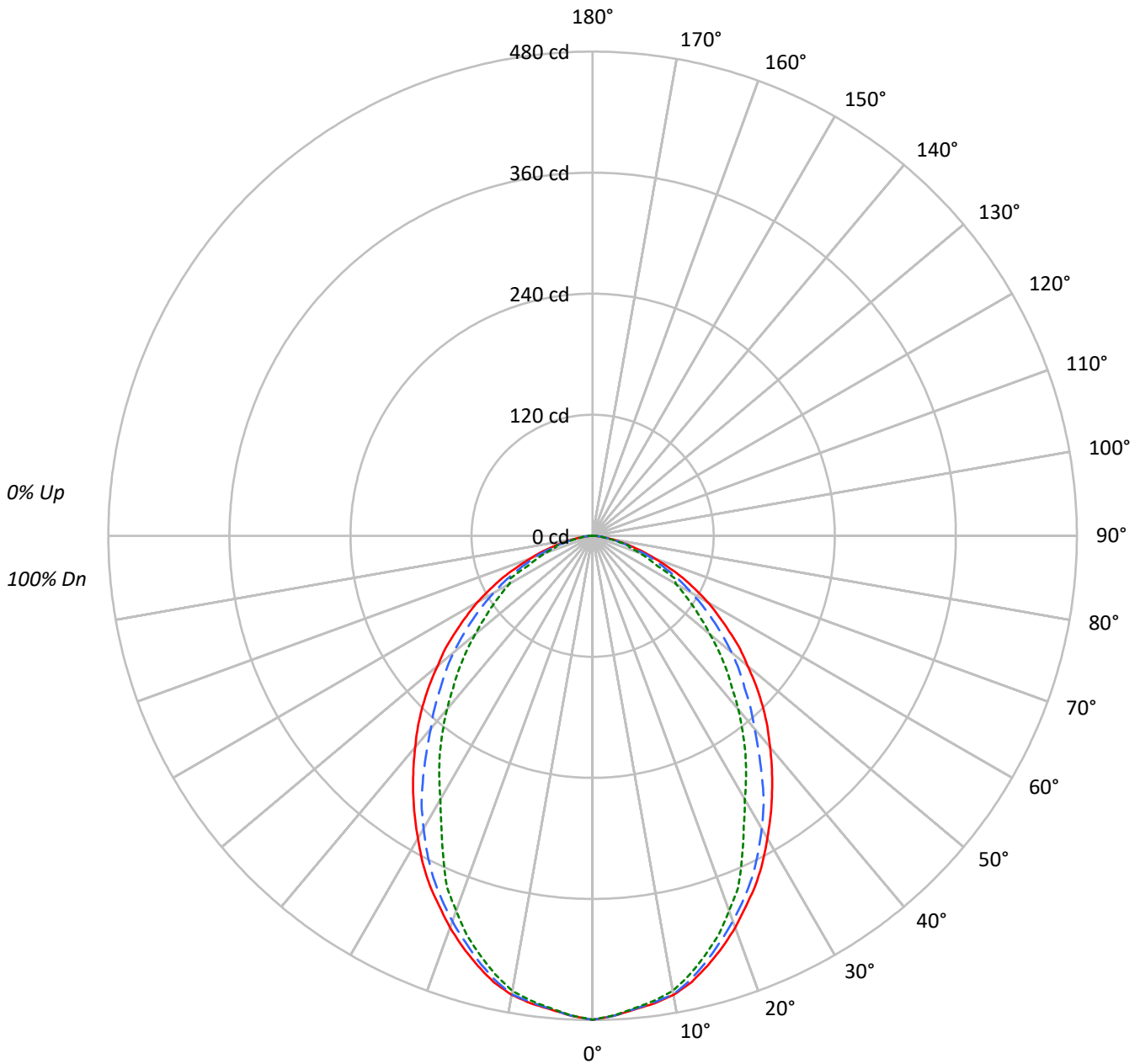
Lumens per Lamp: N/A
Luminaire Lumens: 942.0 lumens
Efficiency: N/A
Efficacy: 80.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	5165	5165	5165
5°	5095	5089	5083
10°	5051	5044	5008
15°	4914	4865	4797
20°	4734	4657	4530
25°	4539	4441	4164
30°	4303	4165	3751
35°	4075	3849	3470
40°	3843	3507	3157
45°	3623	3242	2854
50°	3354	3009	2545
55°	3102	2727	2280
60°	2842	2437	2043
65°	2501	2134	1808
70°	2061	1869	1536
75°	1639	1431	1501
80°	1103	1029	961
85°	679	827	963



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.7	4.7
10°-20°	122.6	13.0
20°-30°	169.7	18.0
30°-40°	181.0	19.2
40°-50°	165.1	17.5
50°-60°	129.3	13.7
60°-70°	84.3	8.9
70°-80°	37.3	4.0
80°-90°	8.0	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°	337.0	35.8
0°-40°	517.9	55.0
0°-60°	812.3	86.2
0°-90°	942.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	942.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	480	480	480	480	480	
5°	472	471	471	470	470	45
15°	441	441	437	432	430	124
25°	382	380	374	361	351	175
35°	310	308	293	271	264	194
45°	238	233	213	195	188	183
55°	165	160	145	128	122	148
65°	98	93	84	85	71	97
75°	39	37	34	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°	479.8	479.8	479.8	479.8	479.8
2.5°	476.5	476.5	476.5	476.0	476.0
5°	471.5	471.0	471.0	470.4	470.4
7.5°	467.6	467.1	466.5	466.0	464.9
10°	462.1	462.1	461.5	458.8	458.2
12.5°	453.2	452.7	450.4	446.6	445.4
15°	441.0	441.0	436.6	432.1	430.5
17.5°	427.7	427.1	421.6	417.2	414.9
20°	413.3	412.2	406.6	399.4	395.5
22.5°	397.2	397.2	390.5	381.1	377.2
25°	382.2	380.0	373.9	360.6	350.6
27.5°	365.0	361.7	355.0	336.2	324.5
30°	346.2	344.5	335.1	310.6	301.8
32.5°	328.4	325.6	315.6	290.1	282.9
35°	310.1	307.9	292.9	270.7	264.1
37.5°	291.8	289.0	270.2	252.4	244.1
40°	273.5	270.2	249.6	233.5	224.7
42.5°	256.3	251.8	231.9	214.7	204.7
45°	238.0	233.0	213.0	195.3	187.5
47.5°	219.7	215.2	196.9	178.6	169.7
50°	200.3	196.4	179.7	161.4	152.0
52.5°	184.2	178.1	162.0	143.7	135.9
55°	165.3	160.3	145.3	128.1	121.5
57.5°	148.1	143.1	129.3	113.2	107.6
60°	132.0	124.8	113.2	99.3	94.9
62.5°	114.3	108.7	98.7	87.1	92.6
65°	98.2	92.6	83.8	85.4	71.0
67.5°	80.4	77.7	69.9	62.1	59.9
70°	65.5	62.1	59.4	51.0	48.8
72.5°	52.1	48.8	44.9	40.5	38.8
75°	39.4	36.6	34.4	32.7	36.1
77.5°	27.2	26.1	24.4	22.7	22.2
80°	17.8	17.2	16.6	16.1	15.5
82.5°	10.5	10.5	10.5	10.5	10.5
85°	5.5	6.1	6.7	7.2	7.8
87.5°	3.3	3.3	3.9	4.4	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)