

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: P545100

Luminaire Tested: **FMR-12-1-LD4-2LO-40-UNV-82-94-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: P545100
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-82-94-EDD
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

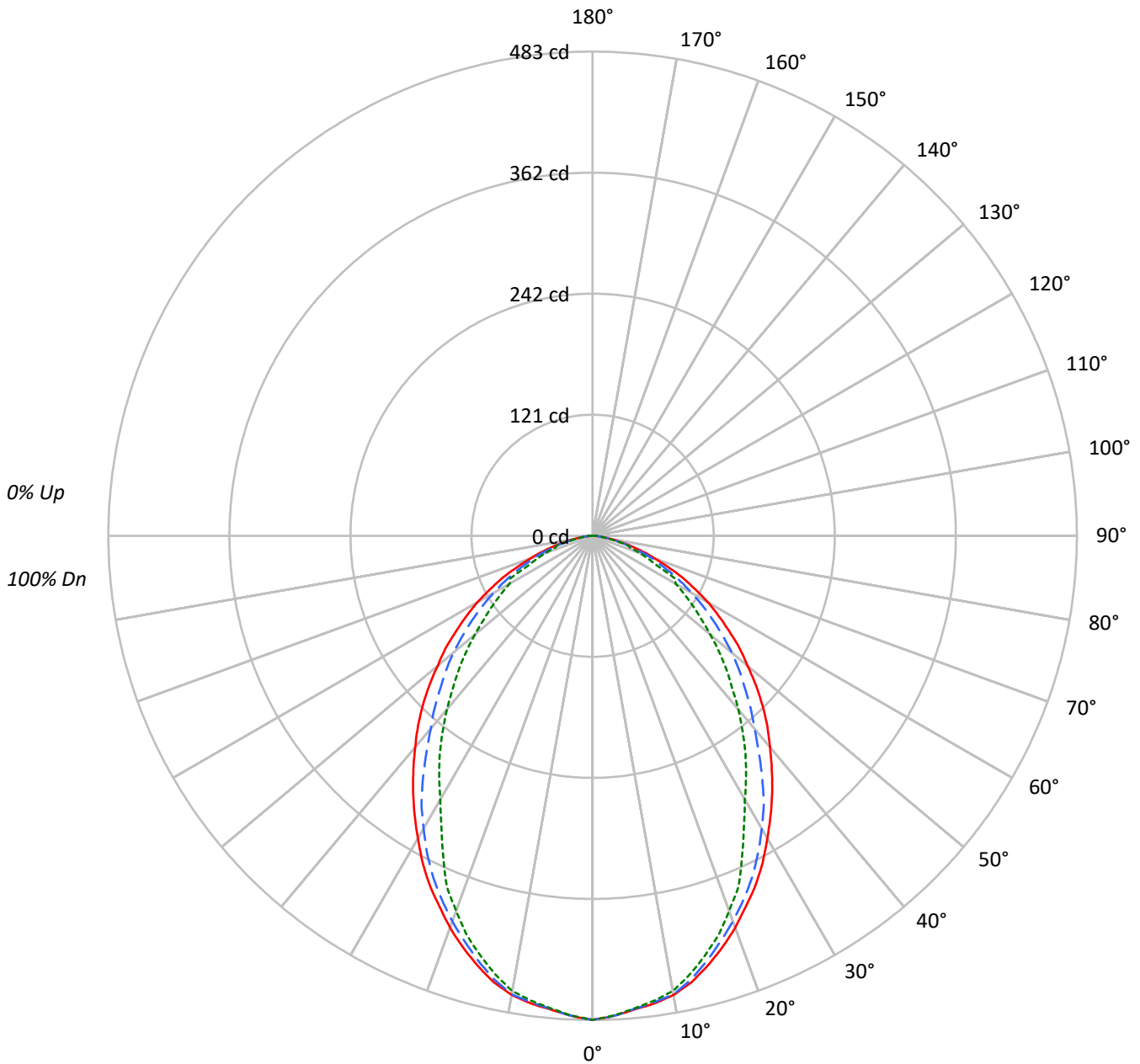
Lumens per Lamp: N/A
Luminaire Lumens: 948.0 lumens
Efficiency: N/A
Efficacy: 81.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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°	5198	5198	5198
5°	5127	5122	5115
10°	5082	5077	5040
15°	4946	4897	4827
20°	4764	4687	4559
25°	4568	4469	4190
30°	4330	4191	3775
35°	4101	3874	3491
40°	3867	3530	3177
45°	3646	3264	2872
50°	3374	3029	2562
55°	3123	2746	2295
60°	2861	2452	2056
65°	2516	2147	1821
70°	2074	1879	1545
75°	1647	1439	1510
80°	1110	1035	967
85°	692	827	963



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.0	4.7
10°-20°	123.4	13.0
20°-30°	170.8	18.0
30°-40°	182.1	19.2
40°-50°	166.1	17.5
50°-60°	130.2	13.7
60°-70°	84.8	8.9
70°-80°	37.6	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°	339.1	35.8
0°-40°	521.2	55.0
0°-60°	817.5	86.2
0°-90°	948.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	948.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	483	483	483	483	483	
5°	474	474	474	473	473	45
15°	444	444	439	435	433	125
25°	385	382	376	363	353	177
35°	312	310	295	272	266	195
45°	240	234	214	196	189	184
55°	166	161	146	129	122	149
65°	99	93	84	86	72	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°	482.9	482.9	482.9	482.9	482.9
2.5°	479.5	479.5	479.5	479.0	479.0
5°	474.5	474.0	474.0	473.4	473.4
7.5°	470.6	470.1	469.5	468.9	467.8
10°	465.0	465.0	464.5	461.7	461.1
12.5°	456.1	455.5	453.3	449.4	448.3
15°	443.8	443.8	439.4	434.9	433.2
17.5°	430.4	429.9	424.3	419.8	417.6
20°	415.9	414.8	409.2	402.0	398.0
22.5°	399.7	399.7	393.0	383.5	379.6
25°	384.6	382.4	376.3	362.9	352.8
27.5°	367.3	364.0	357.3	338.3	326.6
30°	348.4	346.7	337.2	312.6	303.7
32.5°	330.5	327.7	317.7	292.0	284.7
35°	312.1	309.8	294.8	272.4	265.7
37.5°	293.6	290.9	271.9	254.0	245.6
40°	275.2	271.9	251.2	235.0	226.1
42.5°	257.9	253.5	233.4	216.0	206.0
45°	239.5	234.5	214.4	196.5	188.7
47.5°	221.1	216.6	198.2	179.8	170.8
50°	201.5	197.6	180.9	162.5	153.0
52.5°	185.3	179.2	163.0	144.6	136.8
55°	166.4	161.3	146.3	129.0	122.3
57.5°	149.1	144.0	130.1	113.9	108.3
60°	132.9	125.6	113.9	99.9	95.5
62.5°	115.0	109.4	99.4	87.6	93.2
65°	98.8	93.2	84.3	86.0	71.5
67.5°	80.9	78.2	70.3	62.5	60.3
70°	65.9	62.5	59.7	51.4	49.1
72.5°	52.5	49.1	45.2	40.8	39.1
75°	39.6	36.8	34.6	32.9	36.3
77.5°	27.4	26.2	24.6	22.9	22.3
80°	17.9	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	7.3	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)