

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: P545097

Luminaire Tested: **FMR-12-1-LD4-2LO-40-UNV-82-86-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: P545097
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-82-86-EDD
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

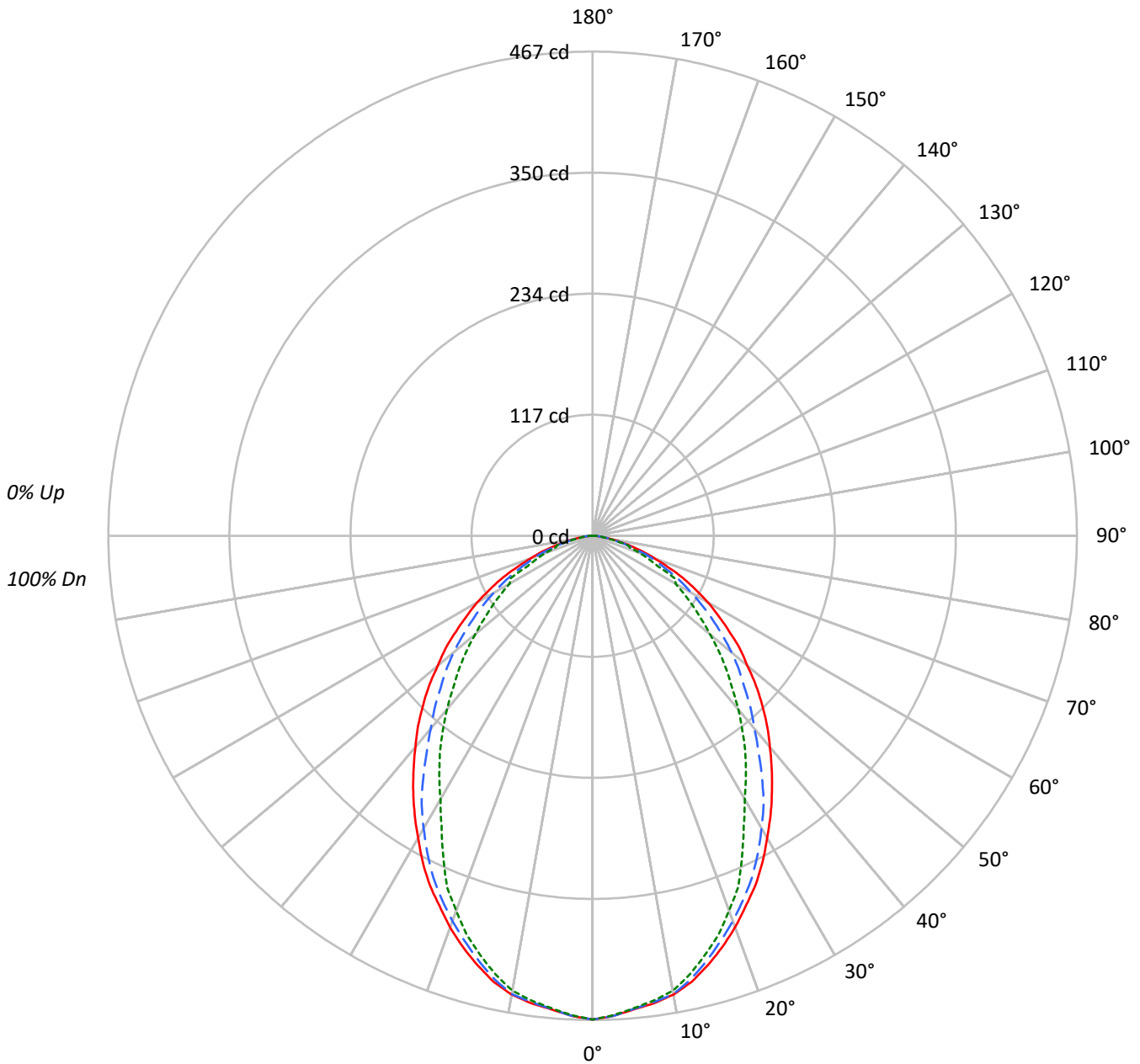
Lumens per Lamp: N/A
Luminaire Lumens: 916.0 lumens
Efficiency: N/A
Efficacy: 78.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
Input Voltage (V): NR
Input Current (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									
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°	5022	5022	5022
5°	4954	4949	4942
10°	4911	4905	4870
15°	4778	4730	4665
20°	4604	4529	4405
25°	4415	4318	4049
30°	4184	4049	3647
35°	3962	3742	3374
40°	3736	3410	3070
45°	3522	3153	2775
50°	3260	2927	2475
55°	3016	2652	2216
60°	2764	2368	1985
65°	2432	2076	1757
70°	2005	1816	1495
75°	1593	1389	1460
80°	1072	1004	936
85°	667	803	939



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.4	4.7
10°-20°	119.2	13.0
20°-30°	165.0	18.0
30°-40°	176.0	19.2
40°-50°	160.5	17.5
50°-60°	125.8	13.7
60°-70°	82.0	8.9
70°-80°	36.3	4.0
80°-90°	7.8	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°	327.7	35.8
0°-40°	503.6	55.0
0°-60°	789.9	86.2
0°-90°	916.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	916.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	467	467	467	467	467	
5°	458	458	458	457	457	44
15°	429	429	424	420	419	121
25°	372	370	364	351	341	171
35°	302	299	285	263	257	188
45°	231	227	207	190	182	178
55°	161	156	141	125	118	144
65°	96	90	82	83	69	94
75°	38	36	33	32	35	41
85°	5	6	6	7	8	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	466.6	466.6	466.6	466.6	466.6
2.5°	463.4	463.4	463.4	462.8	462.8
5°	458.5	458.0	458.0	457.4	457.4
7.5°	454.7	454.2	453.7	453.1	452.0
10°	449.3	449.3	448.8	446.1	445.6
12.5°	440.7	440.2	438.0	434.2	433.2
15°	428.8	428.8	424.5	420.2	418.6
17.5°	415.9	415.4	410.0	405.6	403.5
20°	401.9	400.8	395.4	388.4	384.6
22.5°	386.2	386.2	379.8	370.6	366.8
25°	371.7	369.5	363.6	350.6	340.9
27.5°	354.9	351.7	345.2	326.9	315.6
30°	336.6	335.0	325.8	302.1	293.4
32.5°	319.3	316.6	306.9	282.1	275.1
35°	301.5	299.4	284.8	263.2	256.8
37.5°	283.7	281.0	262.7	245.4	237.3
40°	265.9	262.7	242.7	227.1	218.5
42.5°	249.2	244.9	225.5	208.8	199.0
45°	231.4	226.6	207.1	189.9	182.3
47.5°	213.6	209.3	191.5	173.7	165.1
50°	194.7	191.0	174.8	157.0	147.8
52.5°	179.1	173.2	157.5	139.7	132.2
55°	160.7	155.9	141.3	124.6	118.1
57.5°	144.0	139.2	125.7	110.0	104.6
60°	128.4	121.4	110.0	96.6	92.2
62.5°	111.1	105.7	96.0	84.7	90.1
65°	95.5	90.1	81.5	83.1	69.0
67.5°	78.2	75.5	68.0	60.4	58.3
70°	63.7	60.4	57.7	49.6	47.5
72.5°	50.7	47.5	43.7	39.4	37.8
75°	38.3	35.6	33.4	31.8	35.1
77.5°	26.4	25.4	23.7	22.1	21.6
80°	17.3	16.7	16.2	15.6	15.1
82.5°	10.2	10.2	10.2	10.2	10.2
85°	5.4	5.9	6.5	7.0	7.6
87.5°	3.2	3.2	3.8	4.3	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)