

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: P544721

Luminaire Tested: **FMR-12-1-LD4-1HI-40-UNV-93-86-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: P544721
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-LD4-1HI-40-UNV-93-86-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

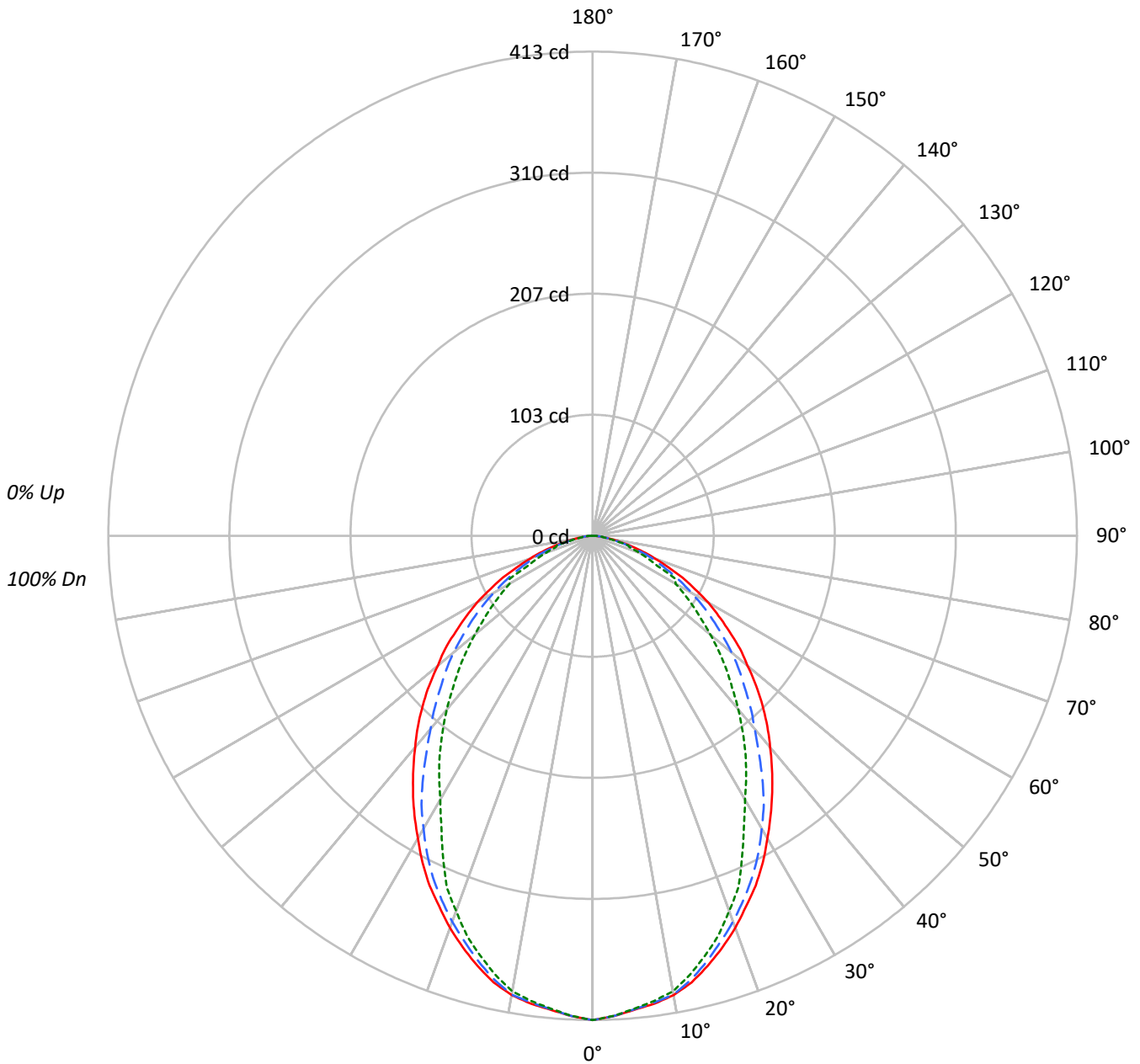
Lumens per Lamp: N/A
Luminaire Lumens: 811.0 lumens
Efficiency: N/A
Efficacy: 75.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 10.8
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°	4447	4447	4447
5°	4386	4381	4376
10°	4348	4344	4312
15°	4231	4189	4130
20°	4076	4010	3900
25°	3909	3823	3584
30°	3704	3586	3229
35°	3508	3314	2987
40°	3309	3020	2718
45°	3119	2792	2457
50°	2887	2591	2192
55°	2670	2348	1963
60°	2448	2097	1759
65°	2152	1836	1556
70°	1775	1608	1322
75°	1410	1231	1289
80°	948	886	831
85°	593	704	827



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.5	4.7
10°-20°	105.5	13.0
20°-30°	146.1	18.0
30°-40°	155.8	19.2
40°-50°	142.1	17.5
50°-60°	111.3	13.7
60°-70°	72.6	8.9
70°-80°	32.1	4.0
80°-90°	6.9	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°	290.1	35.8
0°-40°	445.9	55.0
0°-60°	699.4	86.2
0°-90°	811.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	811.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	413	413	413	413	413	
5°	406	406	406	405	405	39
15°	380	380	376	372	371	107
25°	329	327	322	310	302	151
35°	267	265	252	233	227	167
45°	205	201	183	168	161	158
55°	142	138	125	110	105	128
65°	84	80	72	74	61	83
75°	34	32	30	28	31	36
85°	5	5	6	6	7	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	413.1	413.1	413.1	413.1	413.1
2.5°	410.2	410.2	410.2	409.8	409.8
5°	405.9	405.5	405.5	405.0	405.0
7.5°	402.6	402.1	401.7	401.2	400.2
10°	397.8	397.8	397.4	395.0	394.5
12.5°	390.2	389.7	387.8	384.5	383.5
15°	379.7	379.7	375.9	372.0	370.6
17.5°	368.2	367.7	363.0	359.1	357.2
20°	355.8	354.8	350.1	343.9	340.5
22.5°	342.0	342.0	336.2	328.1	324.8
25°	329.1	327.1	321.9	310.4	301.8
27.5°	314.3	311.4	305.7	289.4	279.4
30°	298.0	296.6	288.5	267.4	259.8
32.5°	282.7	280.3	271.7	249.8	243.6
35°	267.0	265.1	252.2	233.1	227.3
37.5°	251.2	248.8	232.6	217.3	210.1
40°	235.5	232.6	214.9	201.1	193.4
42.5°	220.6	216.8	199.6	184.8	176.2
45°	204.9	200.6	183.4	168.1	161.4
47.5°	189.1	185.3	169.5	153.8	146.1
50°	172.4	169.1	154.7	139.0	130.9
52.5°	158.6	153.3	139.5	123.7	117.0
55°	142.3	138.0	125.1	110.3	104.6
57.5°	127.5	123.2	111.3	97.4	92.7
60°	113.7	107.5	97.4	85.5	81.7
62.5°	98.4	93.6	85.0	75.0	79.8
65°	84.5	79.8	72.1	73.5	61.1
67.5°	69.3	66.9	60.2	53.5	51.6
70°	56.4	53.5	51.1	43.9	42.0
72.5°	44.9	42.0	38.7	34.9	33.4
75°	33.9	31.5	29.6	28.2	31.0
77.5°	23.4	22.4	21.0	19.6	19.1
80°	15.3	14.8	14.3	13.9	13.4
82.5°	9.1	9.1	9.1	9.1	9.1
85°	4.8	5.3	5.7	6.2	6.7
87.5°	2.9	2.9	3.3	3.8	4.3
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)