

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: P545014

Luminaire Tested: **FMR-12-1-LD4-2HI-40-UNV-93-97-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: P545014
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-LD4-2HI-40-UNV-93-97-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

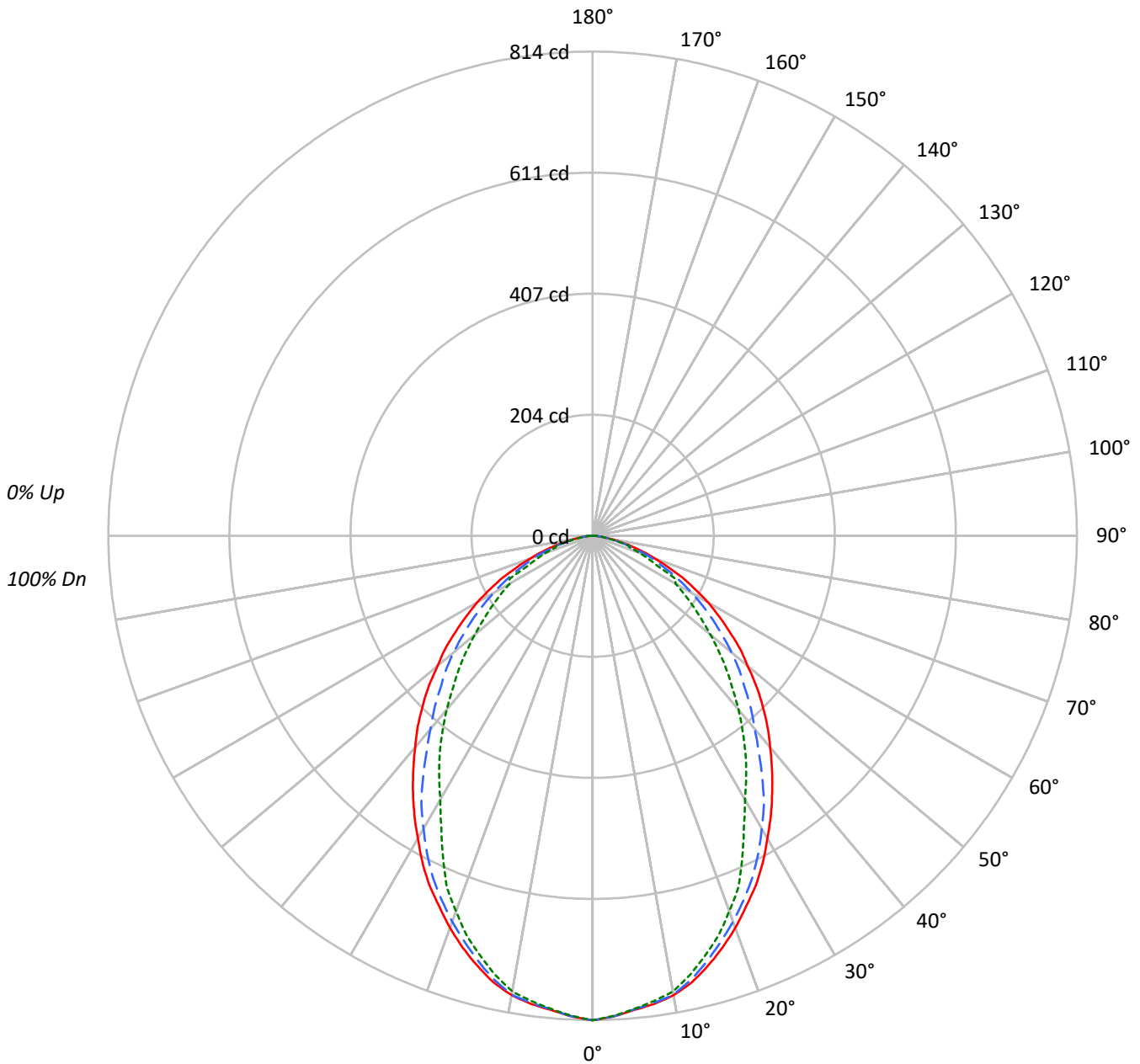
Lumens per Lamp: N/A
Luminaire Lumens: 1599.0 lumens
Efficiency: N/A
Efficacy: 74.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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°	8767	8767	8767
5°	8648	8638	8628
10°	8573	8563	8501
15°	8342	8259	8143
20°	8035	7906	7691
25°	7706	7538	7068
30°	7303	7068	6366
35°	6917	6533	5889
40°	6523	5954	5359
45°	6150	5504	4845
50°	5692	5109	4320
55°	5266	4630	3870
60°	4824	4135	3466
65°	4246	3622	3069
70°	3496	3172	2609
75°	2782	2429	2545
80°	1866	1748	1636
85°	1161	1396	1630



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.8	4.7
10°-20°	208.1	13.0
20°-30°	288.1	18.0
30°-40°	307.2	19.2
40°-50°	280.2	17.5
50°-60°	219.5	13.7
60°-70°	143.1	8.9
70°-80°	63.4	4.0
80°-90°	13.6	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°	572.0	35.8
0°-40°	879.1	55.0
0°-60°	1378.9	86.2
0°-90°	1599.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1599.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	814	814	814	814	814	
5°	800	799	799	798	798	76
15°	749	749	741	734	731	210
25°	649	645	635	612	595	298
35°	526	523	497	460	448	329
45°	404	396	362	332	318	311
55°	281	272	247	218	206	252
65°	167	157	142	145	120	164
75°	67	62	58	56	61	72
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	814.5	814.5	814.5	814.5	814.5
2.5°	808.9	808.9	808.9	807.9	807.9
5°	800.4	799.4	799.4	798.5	798.5
7.5°	793.8	792.9	791.9	791.0	789.1
10°	784.4	784.4	783.4	778.7	777.8
12.5°	769.3	768.4	764.6	758.0	756.1
15°	748.6	748.6	741.1	733.5	730.7
17.5°	726.0	725.1	715.6	708.1	704.3
20°	701.5	699.6	690.2	678.0	671.4
22.5°	674.2	674.2	662.9	646.9	640.3
25°	648.8	645.0	634.7	612.1	595.1
27.5°	619.6	613.9	602.6	570.6	550.9
30°	587.6	584.8	568.7	527.3	512.2
32.5°	557.4	552.7	535.8	492.5	480.2
35°	526.4	522.6	497.2	459.5	448.2
37.5°	495.3	490.6	458.6	428.4	414.3
40°	464.2	458.6	423.7	396.4	381.4
42.5°	435.0	427.5	393.6	364.4	347.5
45°	404.0	395.5	361.6	331.5	318.3
47.5°	372.9	365.4	334.3	303.2	288.1
50°	339.9	333.3	305.1	274.0	258.0
52.5°	312.6	302.3	275.0	243.9	230.7
55°	280.6	272.1	246.7	217.5	206.2
57.5°	251.4	242.9	219.4	192.1	182.7
60°	224.1	211.9	192.1	168.6	161.0
62.5°	194.0	184.6	167.6	147.8	157.3
65°	166.7	157.3	142.2	145.0	120.5
67.5°	136.5	131.8	118.6	105.5	101.7
70°	111.1	105.5	100.8	86.6	82.9
72.5°	88.5	82.9	76.3	68.7	65.9
75°	66.9	62.1	58.4	55.6	61.2
77.5°	46.1	44.3	41.4	38.6	37.7
80°	30.1	29.2	28.2	27.3	26.4
82.5°	17.9	17.9	17.9	17.9	17.9
85°	9.4	10.4	11.3	12.2	13.2
87.5°	5.6	5.6	6.6	7.5	8.5
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)