

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: P545334

Luminaire Tested: **FMR-12-2-LD4-1HI-50-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: P545334
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-12-2-LD4-1HI-50-UNV-93-97-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

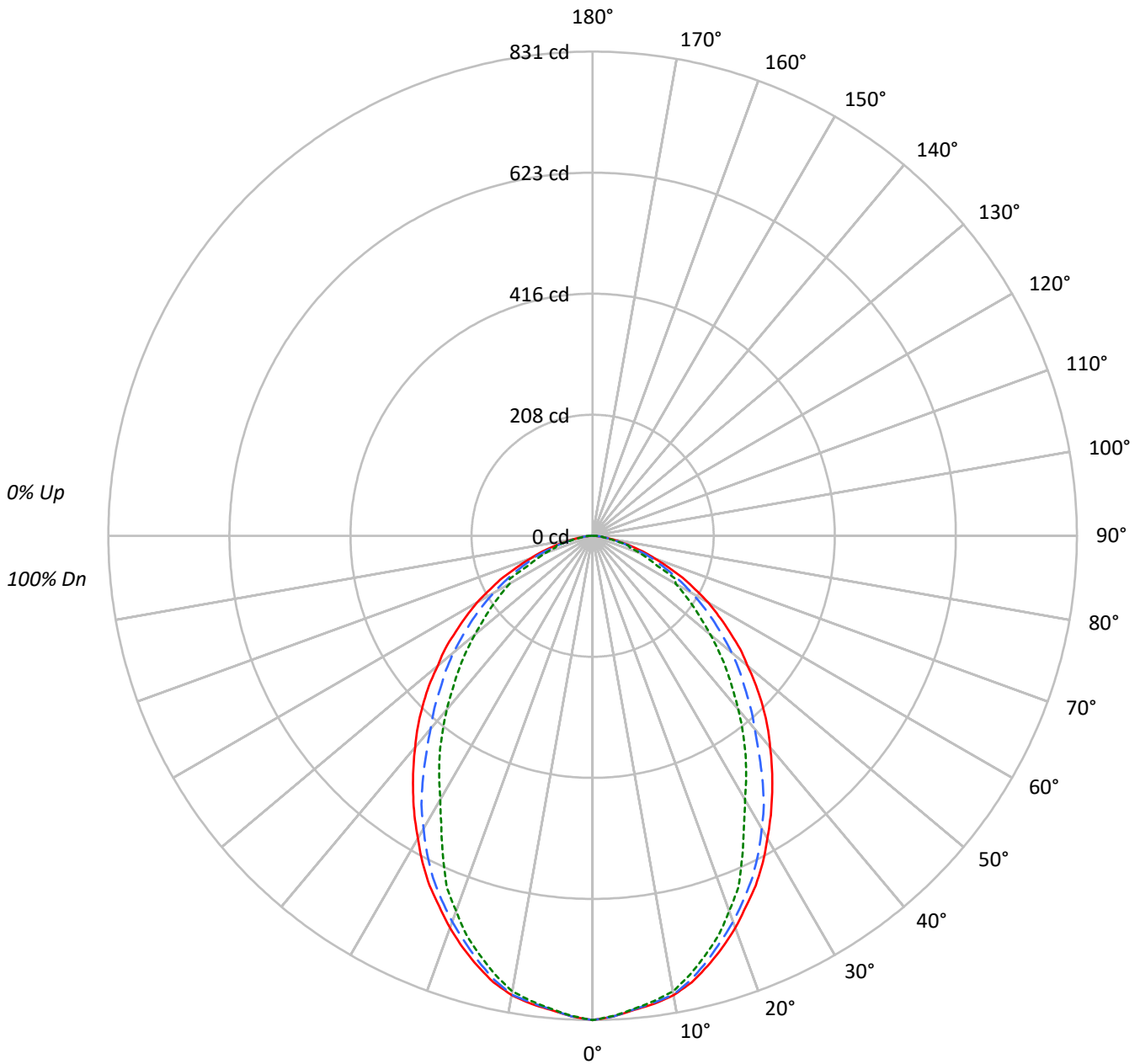
Lumens per Lamp: N/A
Luminaire Lumens: 1632.0 lumens
Efficiency: N/A
Efficacy: 75.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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				20				20	
RC	80				70				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				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4474	4474	4474
5°	4413	4408	4403
10°	4375	4370	4338
15°	4257	4215	4155
20°	4101	4035	3924
25°	3932	3847	3607
30°	3727	3608	3249
35°	3529	3334	3006
40°	3329	3039	2734
45°	3138	2809	2472
50°	2905	2607	2205
55°	2687	2363	1975
60°	2462	2111	1769
65°	2166	1848	1566
70°	1784	1618	1331
75°	1418	1239	1300
80°	955	893	834
85°	593	710	834



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.4	4.7
10°-20°	212.4	13.0
20°-30°	294.0	18.0
30°-40°	313.5	19.2
40°-50°	286.0	17.5
50°-60°	224.1	13.7
60°-70°	146.0	8.9
70°-80°	64.7	4.0
80°-90°	13.9	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°	583.8	35.8
0°-40°	897.3	55.0
0°-60°	1407.4	86.2
0°-90°	1632.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1632.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	831	831	831	831	831	
5°	817	816	816	815	815	78
15°	764	764	756	749	746	215
25°	662	658	648	625	607	304
35°	537	533	507	469	458	336
45°	412	404	369	338	325	318
55°	286	278	252	222	210	257
65°	170	160	145	148	123	168
75°	68	63	60	57	62	73
85°	10	11	12	12	14	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	831.3	831.3	831.3	831.3	831.3
2.5°	825.6	825.6	825.6	824.6	824.6
5°	816.9	815.9	815.9	815.0	815.0
7.5°	810.2	809.2	808.3	807.3	805.4
10°	800.6	800.6	799.6	794.8	793.8
12.5°	785.2	784.2	780.4	773.7	771.7
15°	764.0	764.0	756.4	748.7	745.8
17.5°	741.0	740.0	730.4	722.7	718.9
20°	716.0	714.1	704.5	692.0	685.2
22.5°	688.1	688.1	676.6	660.2	653.5
25°	662.2	658.3	647.8	624.7	607.4
27.5°	632.4	626.6	615.1	582.4	562.2
30°	599.7	596.8	580.5	538.2	522.8
32.5°	568.9	564.1	546.8	502.6	490.1
35°	537.2	533.4	507.4	469.0	457.5
37.5°	505.5	500.7	468.0	437.3	422.9
40°	473.8	468.0	432.5	404.6	389.2
42.5°	444.0	436.3	401.7	371.9	354.6
45°	412.3	403.6	369.0	338.3	324.8
47.5°	380.6	372.9	341.2	309.5	294.1
50°	346.9	340.2	311.4	279.7	263.3
52.5°	319.1	308.5	280.6	248.9	235.5
55°	286.4	277.7	251.8	222.0	210.5
57.5°	256.6	248.0	223.9	196.1	186.4
60°	228.7	216.2	196.1	172.0	164.3
62.5°	198.0	188.4	171.1	150.9	160.5
65°	170.1	160.5	145.1	148.0	123.0
67.5°	139.4	134.5	121.1	107.6	103.8
70°	113.4	107.6	102.8	88.4	84.6
72.5°	90.3	84.6	77.8	70.2	67.3
75°	68.2	63.4	59.6	56.7	62.5
77.5°	47.1	45.2	42.3	39.4	38.4
80°	30.8	29.8	28.8	27.9	26.9
82.5°	18.3	18.3	18.3	18.3	18.3
85°	9.6	10.6	11.5	12.5	13.5
87.5°	5.8	5.8	6.7	7.7	8.6
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)