

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: P545299

Luminaire Tested: **FMR-12-2-LD4-1HI-40-UNV-93-88-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: P545299
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-40-UNV-93-88-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

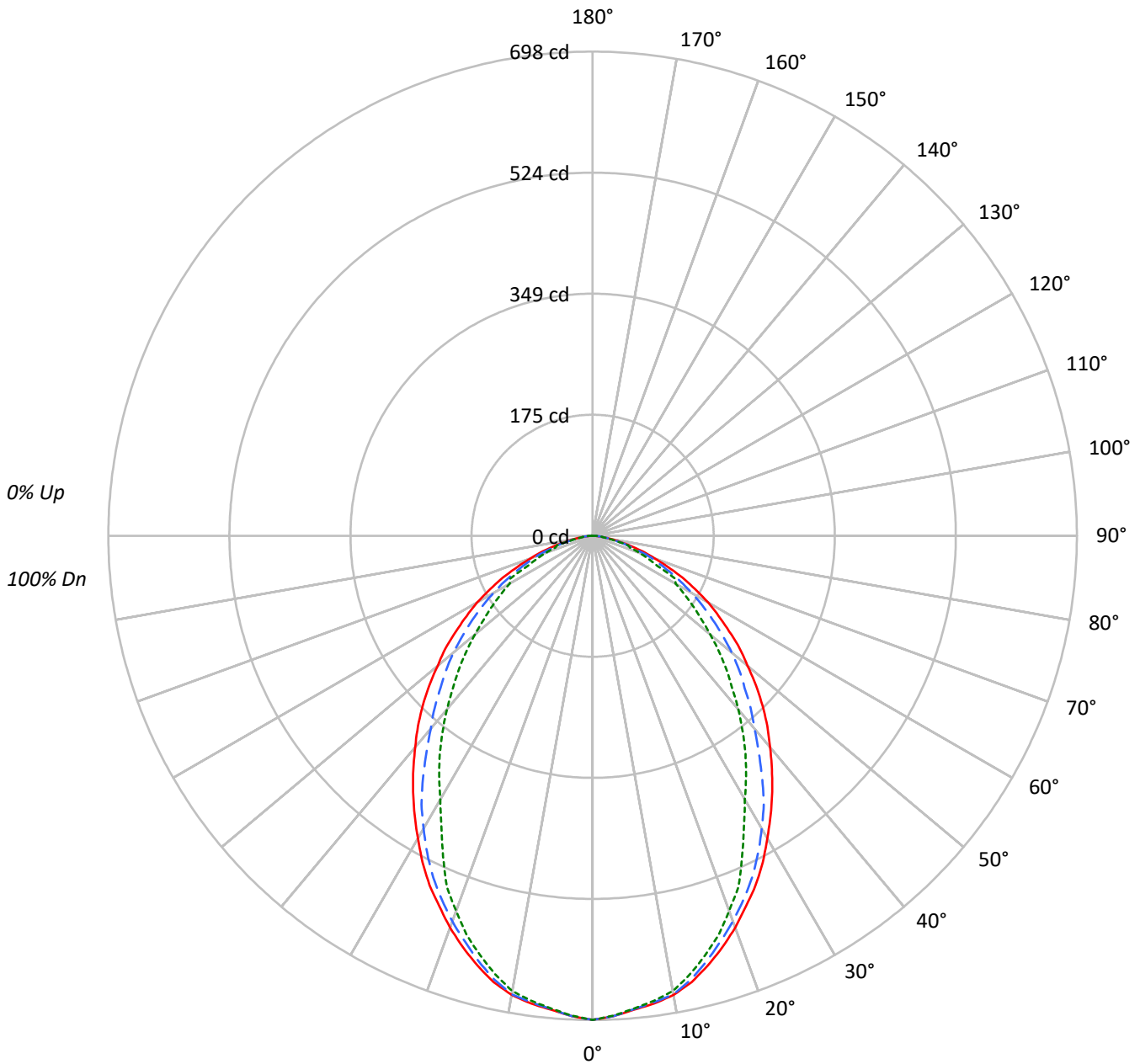
Lumens per Lamp: N/A
Luminaire Lumens: 1370.0 lumens
Efficiency: N/A
Efficacy: 63.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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									
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°	3756	3756	3756
5°	3705	3701	3696
10°	3672	3668	3642
15°	3574	3538	3489
20°	3442	3387	3294
25°	3301	3229	3028
30°	3128	3028	2728
35°	2963	2799	2523
40°	2794	2550	2295
45°	2634	2358	2076
50°	2438	2189	1851
55°	2256	1984	1658
60°	2067	1772	1485
65°	1819	1551	1316
70°	1498	1358	1117
75°	1192	1040	1090
80°	800	750	700
85°	500	599	698



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.0	4.7
10°-20°	178.3	13.0
20°-30°	246.8	18.0
30°-40°	263.2	19.2
40°-50°	240.1	17.5
50°-60°	188.1	13.7
60°-70°	122.6	8.9
70°-80°	54.3	4.0
80°-90°	11.7	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°	490.1	35.8
0°-40°	753.2	55.0
0°-60°	1181.4	86.2
0°-90°	1370.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1370.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	698	698	698	698	698	
5°	686	685	685	684	684	65
15°	641	641	635	628	626	180
25°	556	553	544	524	510	255
35°	451	448	426	394	384	282
45°	346	339	310	284	273	267
55°	240	233	211	186	177	216
65°	143	135	122	124	103	141
75°	57	53	50	48	52	61
85°	8	9	10	10	11	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	697.9	697.9	697.9	697.9	697.9
2.5°	693.0	693.0	693.0	692.2	692.2
5°	685.8	685.0	685.0	684.1	684.1
7.5°	680.1	679.3	678.5	677.7	676.1
10°	672.0	672.0	671.2	667.2	666.4
12.5°	659.1	658.3	655.1	649.5	647.8
15°	641.4	641.4	634.9	628.5	626.1
17.5°	622.0	621.2	613.1	606.7	603.5
20°	601.0	599.4	591.4	580.9	575.2
22.5°	577.7	577.7	568.0	554.3	548.6
25°	555.9	552.6	543.8	524.4	509.9
27.5°	530.9	526.0	516.3	488.9	472.0
30°	503.4	501.0	487.3	451.8	438.9
32.5°	477.6	473.6	459.1	421.9	411.5
35°	451.0	447.8	426.0	393.7	384.0
37.5°	424.4	420.3	392.9	367.1	355.0
40°	397.7	392.9	363.0	339.7	326.7
42.5°	372.7	366.3	337.2	312.2	297.7
45°	346.1	338.8	309.8	284.0	272.7
47.5°	319.5	313.0	286.4	259.8	246.9
50°	291.2	285.6	261.4	234.8	221.1
52.5°	267.8	259.0	235.6	209.0	197.7
55°	240.4	233.2	211.4	186.4	176.7
57.5°	215.4	208.1	188.0	164.6	156.5
60°	192.0	181.5	164.6	144.4	138.0
62.5°	166.2	158.1	143.6	126.7	134.7
65°	142.8	134.7	121.8	124.2	103.3
67.5°	117.0	112.9	101.7	90.4	87.1
70°	95.2	90.4	86.3	74.2	71.0
72.5°	75.8	71.0	65.3	58.9	56.5
75°	57.3	53.2	50.0	47.6	52.4
77.5°	39.5	37.9	35.5	33.1	32.3
80°	25.8	25.0	24.2	23.4	22.6
82.5°	15.3	15.3	15.3	15.3	15.3
85°	8.1	8.9	9.7	10.5	11.3
87.5°	4.8	4.8	5.6	6.5	7.3
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)