

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: P545046

Luminaire Tested: **FMR-12-1-LD4-2HI-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: P545046
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-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

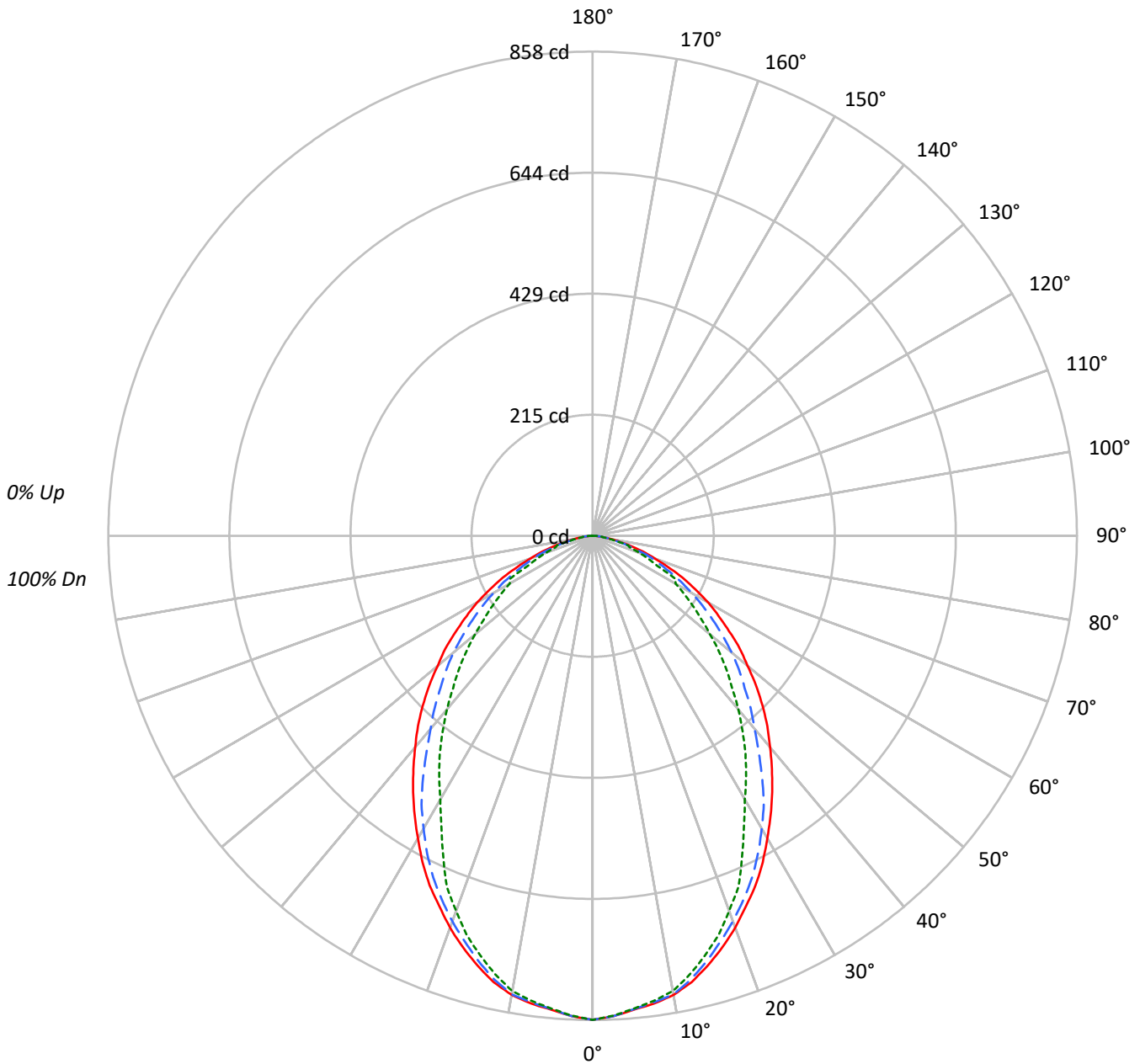
Lumens per Lamp: N/A
Luminaire Lumens: 1684.0 lumens
Efficiency: N/A
Efficacy: 78.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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°	9233	9233	9233
5°	9108	9097	9086
10°	9029	9018	8953
15°	8786	8698	8575
20°	8463	8326	8100
25°	8115	7938	7443
30°	7691	7445	6705
35°	7285	6880	6202
40°	6870	6271	5643
45°	6476	5797	5103
50°	5995	5380	4550
55°	5545	4875	4076
60°	5081	4355	3651
65°	4470	3813	3232
70°	3682	3339	2747
75°	2928	2558	2682
80°	1965	1847	1723
85°	1223	1470	1717



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.8	4.7
10°-20°	219.1	13.0
20°-30°	303.4	18.0
30°-40°	323.5	19.2
40°-50°	295.1	17.5
50°-60°	231.2	13.7
60°-70°	150.7	8.9
70°-80°	66.8	4.0
80°-90°	14.3	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°	602.4	35.8
0°-40°	925.9	55.0
0°-60°	1452.2	86.2
0°-90°	1684.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1684.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	858	858	858	858	858	
5°	843	842	842	841	841	80
15°	788	788	780	772	770	222
25°	683	679	668	645	627	314
35°	554	550	524	484	472	347
45°	425	416	381	349	335	328
55°	296	287	260	229	217	265
65°	176	166	150	153	127	173
75°	70	66	62	58	64	75
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	857.8	857.8	857.8	857.8	857.8
2.5°	851.9	851.9	851.9	850.9	850.9
5°	842.9	841.9	841.9	840.9	840.9
7.5°	836.0	835.0	834.0	833.0	831.0
10°	826.1	826.1	825.1	820.1	819.1
12.5°	810.2	809.2	805.2	798.3	796.3
15°	788.4	788.4	780.5	772.5	769.5
17.5°	764.6	763.6	753.7	745.7	741.8
20°	738.8	736.8	726.9	714.0	707.1
22.5°	710.0	710.0	698.1	681.3	674.3
25°	683.3	679.3	668.4	644.6	626.7
27.5°	652.5	646.6	634.7	601.0	580.1
30°	618.8	615.8	599.0	555.3	539.5
32.5°	587.1	582.1	564.3	518.7	505.8
35°	554.4	550.4	523.6	483.9	472.0
37.5°	521.6	516.7	483.0	451.2	436.3
40°	488.9	483.0	446.3	417.5	401.6
42.5°	458.2	450.2	414.5	383.8	365.9
45°	425.4	416.5	380.8	349.1	335.2
47.5°	392.7	384.8	352.0	319.3	303.5
50°	358.0	351.1	321.3	288.6	271.7
52.5°	329.2	318.3	289.6	256.8	243.0
55°	295.5	286.6	259.8	229.1	217.2
57.5°	264.8	255.9	231.1	202.3	192.4
60°	236.0	223.1	202.3	177.5	169.6
62.5°	204.3	194.4	176.5	155.7	165.6
65°	175.5	165.6	149.7	152.7	126.9
67.5°	143.8	138.8	125.0	111.1	107.1
70°	117.0	111.1	106.1	91.2	87.3
72.5°	93.2	87.3	80.3	72.4	69.4
75°	70.4	65.5	61.5	58.5	64.5
77.5°	48.6	46.6	43.6	40.7	39.7
80°	31.7	30.7	29.8	28.8	27.8
82.5°	18.8	18.8	18.8	18.8	18.8
85°	9.9	10.9	11.9	12.9	13.9
87.5°	6.0	6.0	6.9	7.9	8.9
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)