

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: P545982

Luminaire Tested: **FMR-12-4-LD4-1LO-50-UNV-80-97-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: P545982
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-12-4-LD4-1LO-50-UNV-80-97-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

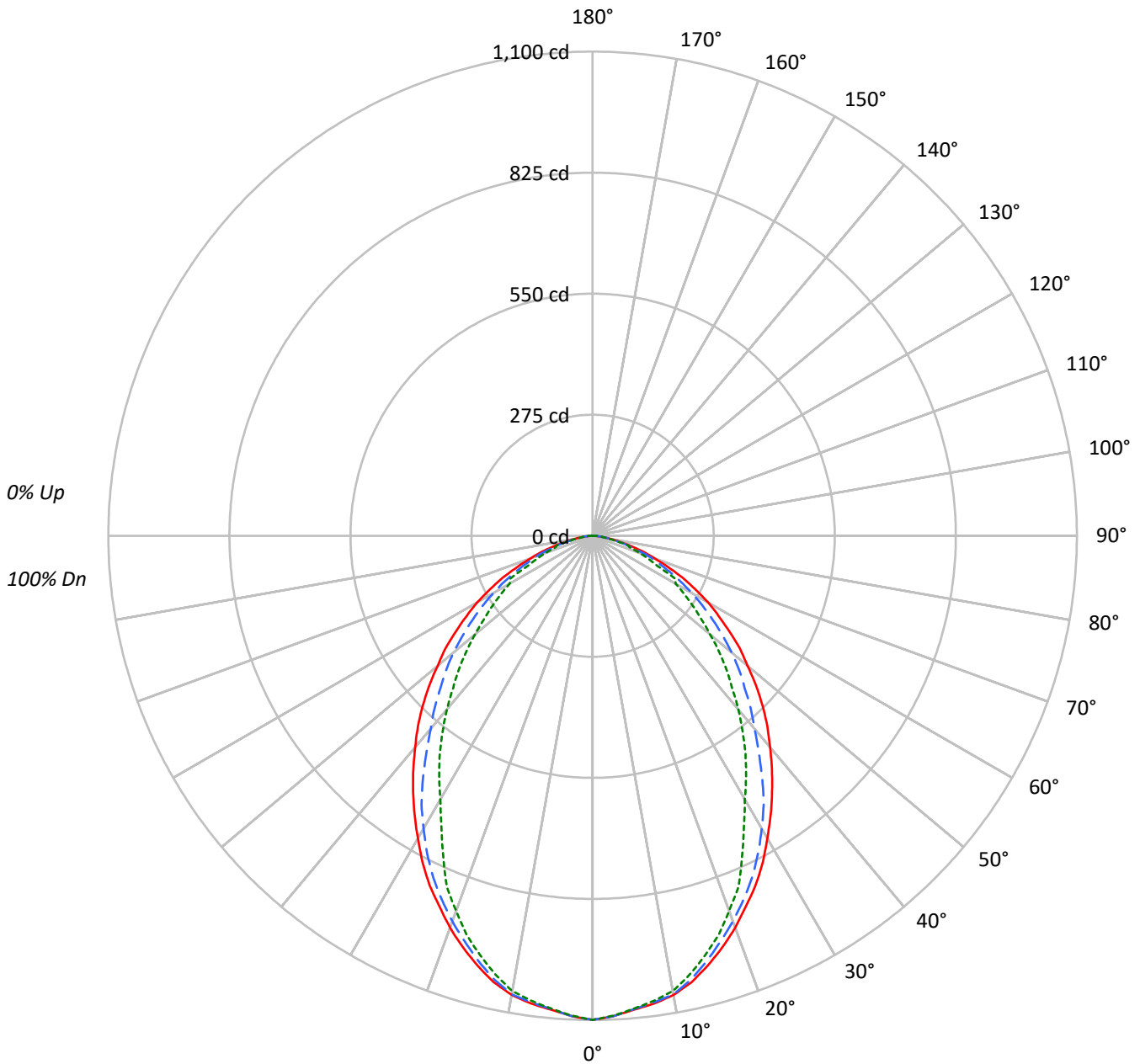
Lumens per Lamp: N/A
Luminaire Lumens: 2159.0 lumens
Efficiency: N/A
Efficacy: 92.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	2960	2960	2960
5°	2919	2916	2912
10°	2894	2890	2870
15°	2816	2788	2749
20°	2712	2669	2596
25°	2601	2544	2386
30°	2465	2386	2149
35°	2335	2205	1988
40°	2202	2010	1809
45°	2076	1858	1635
50°	1922	1724	1459
55°	1778	1563	1306
60°	1629	1396	1170
65°	1433	1223	1036
70°	1180	1070	880
75°	939	819	859
80°	631	590	552
85°	392	472	550



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.4	4.7
10°-20°	281.0	13.0
20°-30°	389.0	18.0
30°-40°	414.7	19.2
40°-50°	378.4	17.5
50°-60°	296.4	13.7
60°-70°	193.2	8.9
70°-80°	85.6	4.0
80°-90°	18.4	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°	772.3	35.8
0°-40°	1187.0	55.0
0°-60°	1861.8	86.2
0°-90°	2159.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2159.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1100	1100	1100	1100	1100	
5°	1081	1079	1079	1078	1078	103
15°	1011	1011	1001	990	987	284
25°	876	871	857	826	804	402
35°	711	706	671	620	605	444
45°	545	534	488	448	430	420
55°	379	367	333	294	278	340
65°	225	212	192	196	163	222
75°	90	84	79	75	83	97
85°	13	14	15	16	18	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1099.8	1099.8	1099.8	1099.8	1099.8
2.5°	1092.1	1092.1	1092.1	1090.9	1090.9
5°	1080.7	1079.4	1079.4	1078.2	1078.2
7.5°	1071.8	1070.5	1069.3	1068.0	1065.4
10°	1059.1	1059.1	1057.8	1051.5	1050.2
12.5°	1038.7	1037.5	1032.4	1023.5	1020.9
15°	1010.8	1010.8	1000.6	990.4	986.6
17.5°	980.3	979.0	966.3	956.1	951.0
20°	947.2	944.7	931.9	915.4	906.5
22.5°	910.3	910.3	895.1	873.5	864.6
25°	876.0	870.9	856.9	826.4	803.5
27.5°	836.6	829.0	813.7	770.5	743.8
30°	793.4	789.5	767.9	712.0	691.6
32.5°	752.7	746.3	723.4	664.9	648.4
35°	710.7	705.6	671.3	620.4	605.2
37.5°	668.8	662.4	619.2	578.5	559.4
40°	626.8	619.2	572.1	535.3	514.9
42.5°	587.4	577.2	531.4	492.0	469.1
45°	545.4	534.0	488.2	447.5	429.7
47.5°	503.5	493.3	451.3	409.4	389.1
50°	459.0	450.1	411.9	370.0	348.4
52.5°	422.1	408.1	371.3	329.3	311.5
55°	378.9	367.4	333.1	293.7	278.4
57.5°	339.5	328.0	296.2	259.4	246.7
60°	302.6	286.1	259.4	227.6	217.4
62.5°	261.9	249.2	226.3	199.6	212.3
65°	225.0	212.3	192.0	195.8	162.7
67.5°	184.4	178.0	160.2	142.4	137.3
70°	150.0	142.4	136.0	117.0	111.9
72.5°	119.5	111.9	103.0	92.8	89.0
75°	90.3	83.9	78.8	75.0	82.6
77.5°	62.3	59.8	55.9	52.1	50.9
80°	40.7	39.4	38.1	36.9	35.6
82.5°	24.2	24.2	24.2	24.2	24.2
85°	12.7	14.0	15.3	16.5	17.8
87.5°	7.6	7.6	8.9	10.2	11.4
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)