

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: P545979

Luminaire Tested: **FMR-12-4-LD4-1LO-50-UNV-80-88-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: P545979
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-80-88-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

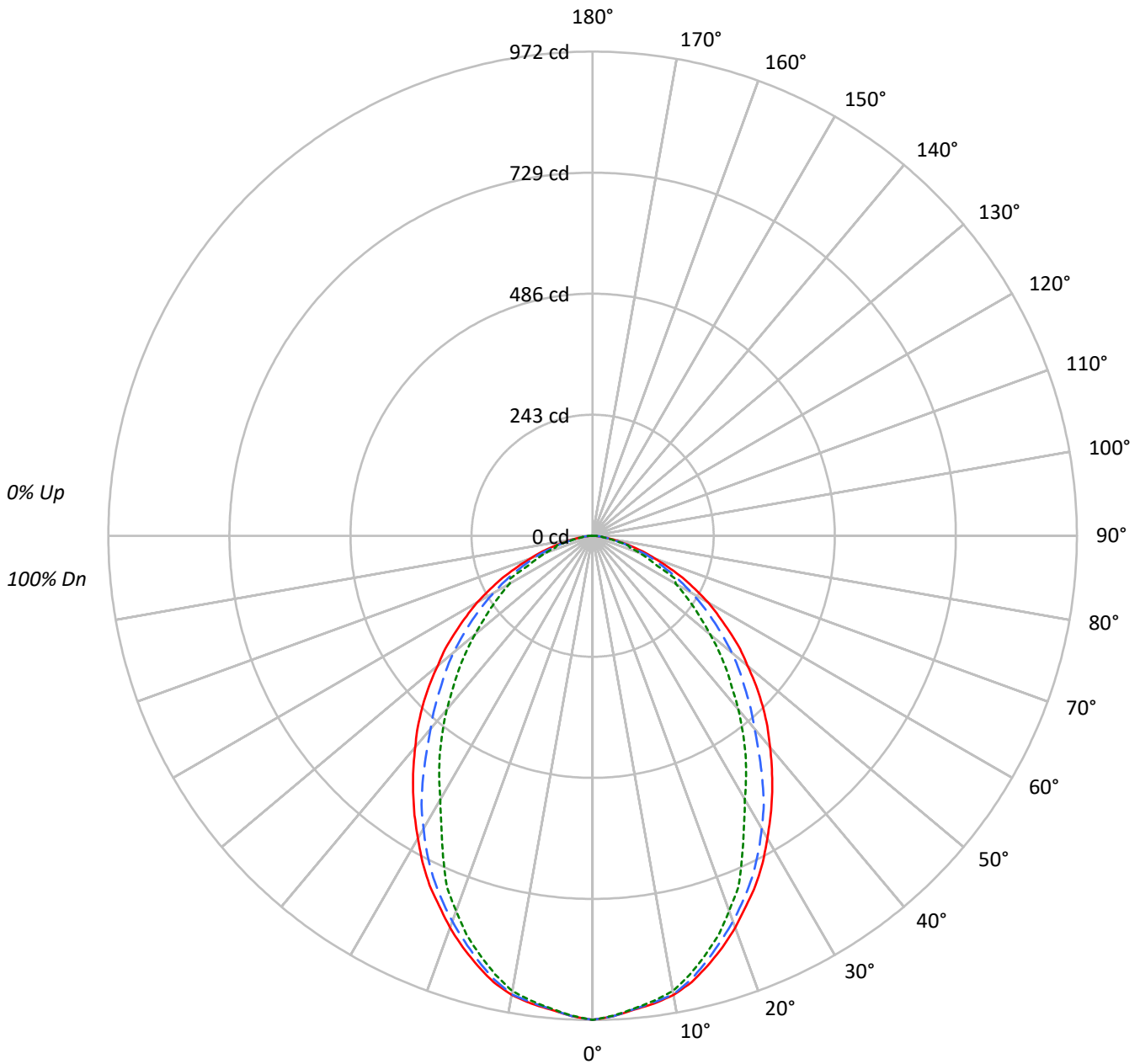
Lumens per Lamp: N/A
Luminaire Lumens: 1908.0 lumens
Efficiency: N/A
Efficacy: 81.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (Ain): 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°	2615	2615	2615
5°	2580	2577	2574
10°	2558	2554	2536
15°	2489	2464	2429
20°	2397	2359	2294
25°	2299	2249	2108
30°	2179	2109	1899
35°	2063	1949	1757
40°	1946	1776	1599
45°	1834	1642	1445
50°	1698	1524	1289
55°	1571	1381	1155
60°	1439	1234	1034
65°	1266	1081	916
70°	1043	946	778
75°	830	725	759
80°	558	522	488
85°	346	417	485



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.5	4.7
10°-20°	248.3	13.0
20°-30°	343.7	18.0
30°-40°	366.5	19.2
40°-50°	334.4	17.5
50°-60°	262.0	13.7
60°-70°	170.7	8.9
70°-80°	75.6	4.0
80°-90°	16.2	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°	682.5	35.8
0°-40°	1049.0	55.0
0°-60°	1645.4	86.2
0°-90°	1908.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1908.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	972	972	972	972	972	
5°	955	954	954	953	953	91
15°	893	893	884	875	872	251
25°	774	770	757	730	710	355
35°	628	624	593	548	535	393
45°	482	472	432	396	380	371
55°	335	325	294	260	246	300
65°	199	188	170	173	144	196
75°	80	74	70	66	73	86
85°	11	12	14	15	16	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	971.9	971.9	971.9	971.9	971.9
2.5°	965.2	965.2	965.2	964.0	964.0
5°	955.1	953.9	953.9	952.8	952.8
7.5°	947.2	946.1	944.9	943.8	941.6
10°	936.0	936.0	934.8	929.2	928.1
12.5°	918.0	916.9	912.4	904.5	902.2
15°	893.3	893.3	884.3	875.3	871.9
17.5°	866.3	865.2	853.9	844.9	840.4
20°	837.1	834.8	823.6	809.0	801.1
22.5°	804.5	804.5	791.0	771.9	764.0
25°	774.2	769.7	757.3	730.3	710.1
27.5°	739.3	732.6	719.1	680.9	657.3
30°	701.1	697.8	678.7	629.2	611.2
32.5°	665.2	659.6	639.3	587.6	573.0
35°	628.1	623.6	593.3	548.3	534.8
37.5°	591.0	585.4	547.2	511.2	494.4
40°	553.9	547.2	505.6	473.0	455.1
42.5°	519.1	510.1	469.7	434.8	414.6
45°	482.0	471.9	431.5	395.5	379.8
47.5°	444.9	436.0	398.9	361.8	343.8
50°	405.6	397.8	364.0	327.0	307.9
52.5°	373.0	360.7	328.1	291.0	275.3
55°	334.8	324.7	294.4	259.6	246.1
57.5°	300.0	289.9	261.8	229.2	218.0
60°	267.4	252.8	229.2	201.1	192.1
62.5°	231.5	220.2	200.0	176.4	187.6
65°	198.9	187.6	169.7	173.0	143.8
67.5°	162.9	157.3	141.6	125.8	121.3
70°	132.6	125.8	120.2	103.4	98.9
72.5°	105.6	98.9	91.0	82.0	78.7
75°	79.8	74.2	69.7	66.3	73.0
77.5°	55.1	52.8	49.4	46.1	44.9
80°	36.0	34.8	33.7	32.6	31.5
82.5°	21.3	21.3	21.3	21.3	21.3
85°	11.2	12.4	13.5	14.6	15.7
87.5°	6.7	6.7	7.9	9.0	10.1
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)