

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: P545976

Luminaire Tested: **FMR-12-4-LD4-1LO-50-UNV-80-85-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: P545976
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-80-85-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

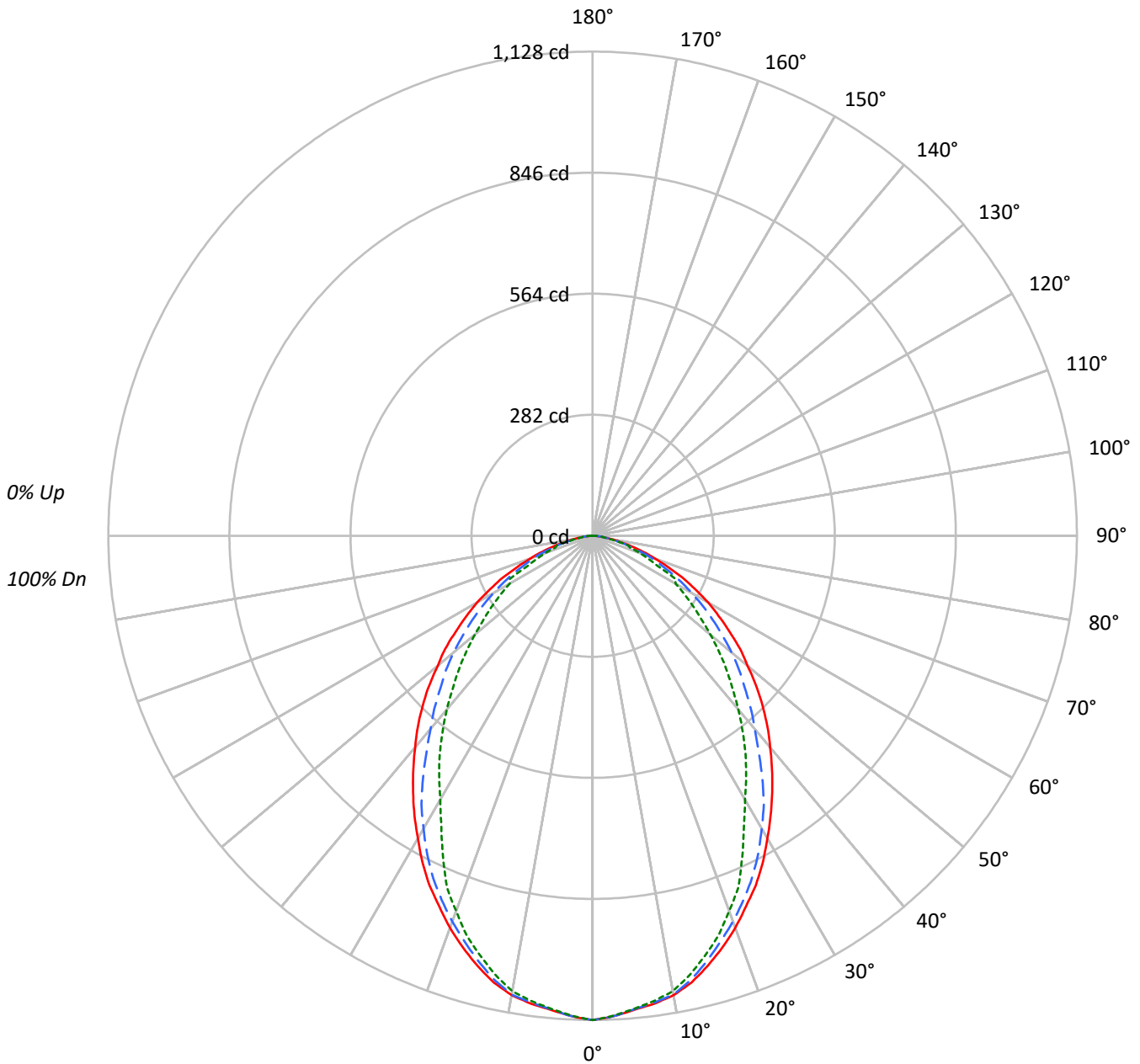
Lumens per Lamp: N/A
Luminaire Lumens: 2215.0 lumens
Efficiency: N/A
Efficacy: 94.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	3036	3036	3036
5°	2995	2991	2988
10°	2969	2965	2944
15°	2889	2860	2820
20°	2783	2738	2663
25°	2668	2610	2448
30°	2529	2448	2205
35°	2395	2262	2040
40°	2259	2062	1856
45°	2130	1906	1678
50°	1971	1769	1496
55°	1824	1603	1340
60°	1671	1432	1200
65°	1470	1254	1063
70°	1211	1098	903
75°	963	841	882
80°	646	606	566
85°	401	485	565



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.0	4.7
10°-20°	288.2	13.0
20°-30°	399.1	18.0
30°-40°	425.5	19.2
40°-50°	388.2	17.5
50°-60°	304.1	13.7
60°-70°	198.2	8.9
70°-80°	87.8	4.0
80°-90°	18.8	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°	792.3	35.8
0°-40°	1217.8	55.0
0°-60°	1910.1	86.2
0°-90°	2215.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2215.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1128	1128	1128	1128	1128	
5°	1109	1107	1107	1106	1106	105
15°	1037	1037	1026	1016	1012	292
25°	899	894	879	848	824	413
35°	729	724	689	636	621	456
45°	560	548	501	459	441	431
55°	389	377	342	301	286	349
65°	231	218	197	201	167	228
75°	93	86	81	77	85	99
85°	13	14	16	17	18	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1128.3	1128.3	1128.3	1128.3	1128.3
2.5°	1120.5	1120.5	1120.5	1119.2	1119.2
5°	1108.7	1107.4	1107.4	1106.1	1106.1
7.5°	1099.6	1098.3	1097.0	1095.7	1093.1
10°	1086.6	1086.6	1085.2	1078.7	1077.4
12.5°	1065.7	1064.4	1059.2	1050.0	1047.4
15°	1037.0	1037.0	1026.5	1016.1	1012.2
17.5°	1005.7	1004.4	991.3	980.9	975.7
20°	971.8	969.2	956.1	939.2	930.0
22.5°	933.9	933.9	918.3	896.1	887.0
25°	898.7	893.5	879.2	847.8	824.4
27.5°	858.3	850.5	834.8	790.5	763.1
30°	813.9	810.0	787.8	730.5	709.6
32.5°	772.2	765.7	742.2	682.2	665.2
35°	729.2	723.9	688.7	636.5	620.9
37.5°	686.1	679.6	635.2	593.5	573.9
40°	643.1	635.2	587.0	549.1	528.3
42.5°	602.6	592.2	545.2	504.8	481.3
45°	559.6	547.8	500.9	459.1	440.9
47.5°	516.5	506.1	463.1	420.0	399.1
50°	470.9	461.8	422.6	379.6	357.4
52.5°	433.1	418.7	380.9	337.8	319.6
55°	388.7	377.0	341.7	301.3	285.7
57.5°	348.3	336.5	303.9	266.1	253.1
60°	310.4	293.5	266.1	233.5	223.0
62.5°	268.7	255.7	232.2	204.8	217.8
65°	230.9	217.8	197.0	200.9	167.0
67.5°	189.1	182.6	164.4	146.1	140.9
70°	153.9	146.1	139.6	120.0	114.8
72.5°	122.6	114.8	105.7	95.2	91.3
75°	92.6	86.1	80.9	77.0	84.8
77.5°	63.9	61.3	57.4	53.5	52.2
80°	41.7	40.4	39.1	37.8	36.5
82.5°	24.8	24.8	24.8	24.8	24.8
85°	13.0	14.3	15.7	17.0	18.3
87.5°	7.8	7.8	9.1	10.4	11.7
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)