

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: P545977

Luminaire Tested: **FMR-12-4-LD4-1LO-50-UNV-80-86-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: P545977
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-80-86-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

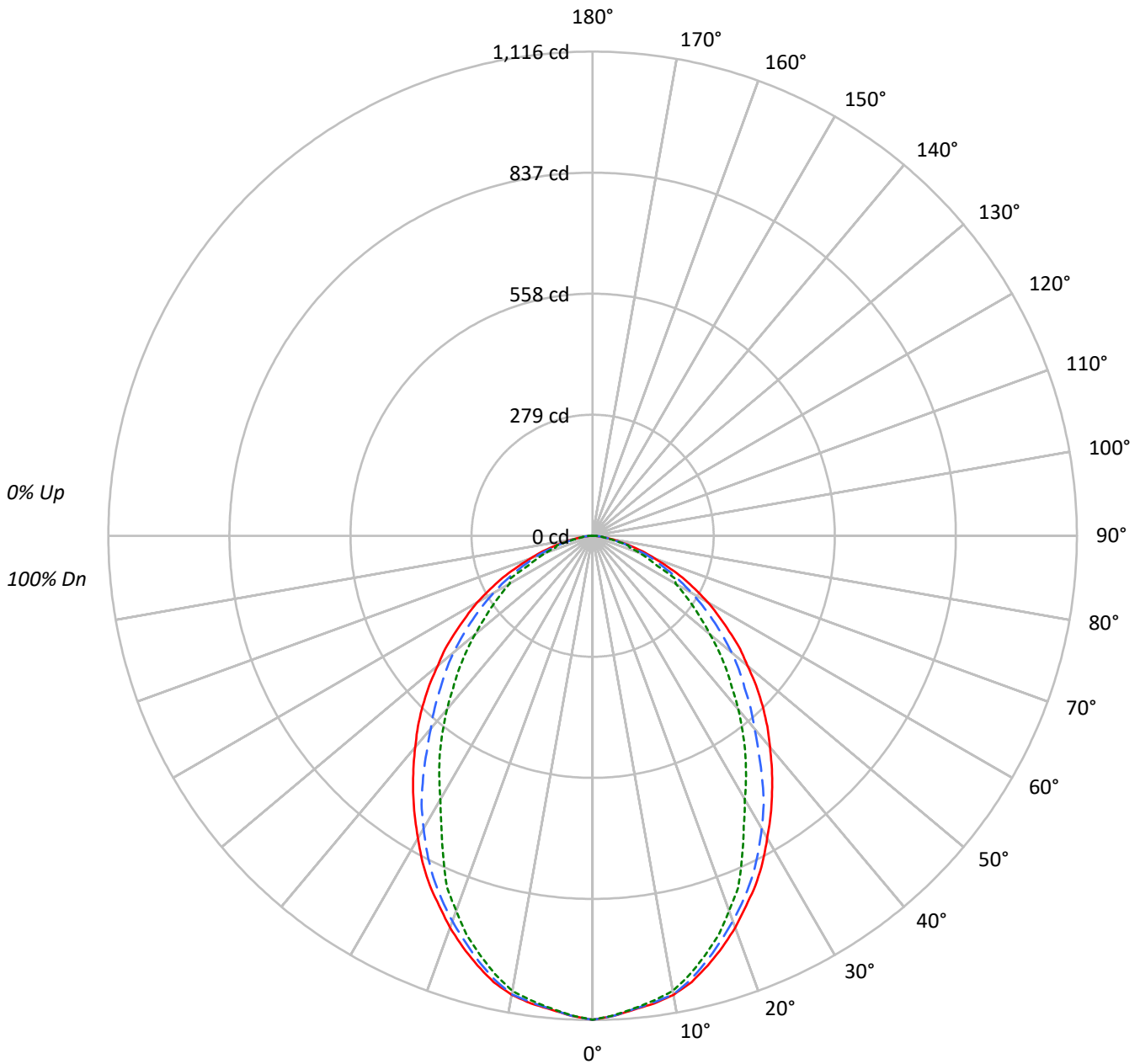
Lumens per Lamp: N/A
Luminaire Lumens: 2190.0 lumens
Efficiency: N/A
Efficacy: 93.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	3002	3002	3002
5°	2961	2958	2954
10°	2936	2932	2911
15°	2856	2828	2788
20°	2751	2707	2633
25°	2638	2581	2420
30°	2500	2421	2180
35°	2368	2237	2017
40°	2233	2038	1835
45°	2106	1885	1659
50°	1949	1750	1479
55°	1803	1585	1325
60°	1652	1416	1187
65°	1454	1240	1051
70°	1197	1086	893
75°	952	832	871
80°	640	600	559
85°	398	479	559



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.8	4.7
10°-20°	285.0	13.0
20°-30°	394.6	18.0
30°-40°	420.7	19.2
40°-50°	383.8	17.5
50°-60°	300.7	13.7
60°-70°	196.0	8.9
70°-80°	86.8	4.0
80°-90°	18.6	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°	783.4	35.8
0°-40°	1204.1	55.0
0°-60°	1888.6	86.2
0°-90°	2190.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2190.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1116	1116	1116	1116	1116	
5°	1096	1095	1095	1094	1094	104
15°	1025	1025	1015	1005	1001	288
25°	889	883	869	838	815	408
35°	721	716	681	629	614	451
45°	553	542	495	454	436	426
55°	384	373	338	298	282	345
65°	228	215	195	199	165	225
75°	92	85	80	76	84	98
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°	1115.6	1115.6	1115.6	1115.6	1115.6
2.5°	1107.8	1107.8	1107.8	1106.5	1106.5
5°	1096.2	1094.9	1094.9	1093.6	1093.6
7.5°	1087.2	1085.9	1084.6	1083.3	1080.7
10°	1074.3	1074.3	1073.0	1066.5	1065.3
12.5°	1053.7	1052.4	1047.2	1038.2	1035.6
15°	1025.3	1025.3	1015.0	1004.6	1000.8
17.5°	994.3	993.0	980.1	969.8	964.7
20°	960.8	958.2	945.3	928.6	919.5
22.5°	923.4	923.4	907.9	886.0	877.0
25°	888.6	883.4	869.2	838.3	815.1
27.5°	848.6	840.9	825.4	781.5	754.5
30°	804.7	800.9	779.0	722.2	701.6
32.5°	763.5	757.0	733.8	674.5	657.7
35°	720.9	715.8	680.9	629.4	613.9
37.5°	678.4	671.9	628.1	586.8	567.5
40°	635.8	628.1	580.3	542.9	522.3
42.5°	595.8	585.5	539.1	499.1	475.9
45°	553.3	541.7	495.2	454.0	435.9
47.5°	510.7	500.4	457.8	415.3	394.6
50°	465.6	456.5	417.9	375.3	353.4
52.5°	428.2	414.0	376.6	334.0	316.0
55°	384.3	372.7	337.9	297.9	282.4
57.5°	344.3	332.7	300.5	263.1	250.2
60°	306.9	290.2	263.1	230.8	220.5
62.5°	265.7	252.8	229.6	202.5	215.4
65°	228.3	215.4	194.7	198.6	165.1
67.5°	187.0	180.6	162.5	144.4	139.3
70°	152.2	144.4	138.0	118.6	113.5
72.5°	121.2	113.5	104.5	94.1	90.3
75°	91.6	85.1	80.0	76.1	83.8
77.5°	63.2	60.6	56.7	52.9	51.6
80°	41.3	40.0	38.7	37.4	36.1
82.5°	24.5	24.5	24.5	24.5	24.5
85°	12.9	14.2	15.5	16.8	18.1
87.5°	7.7	7.7	9.0	10.3	11.6
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)