

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: P545978

Luminaire Tested: **FMR-12-4-LD4-1LO-50-UNV-80-87-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: P545978
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-80-87-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

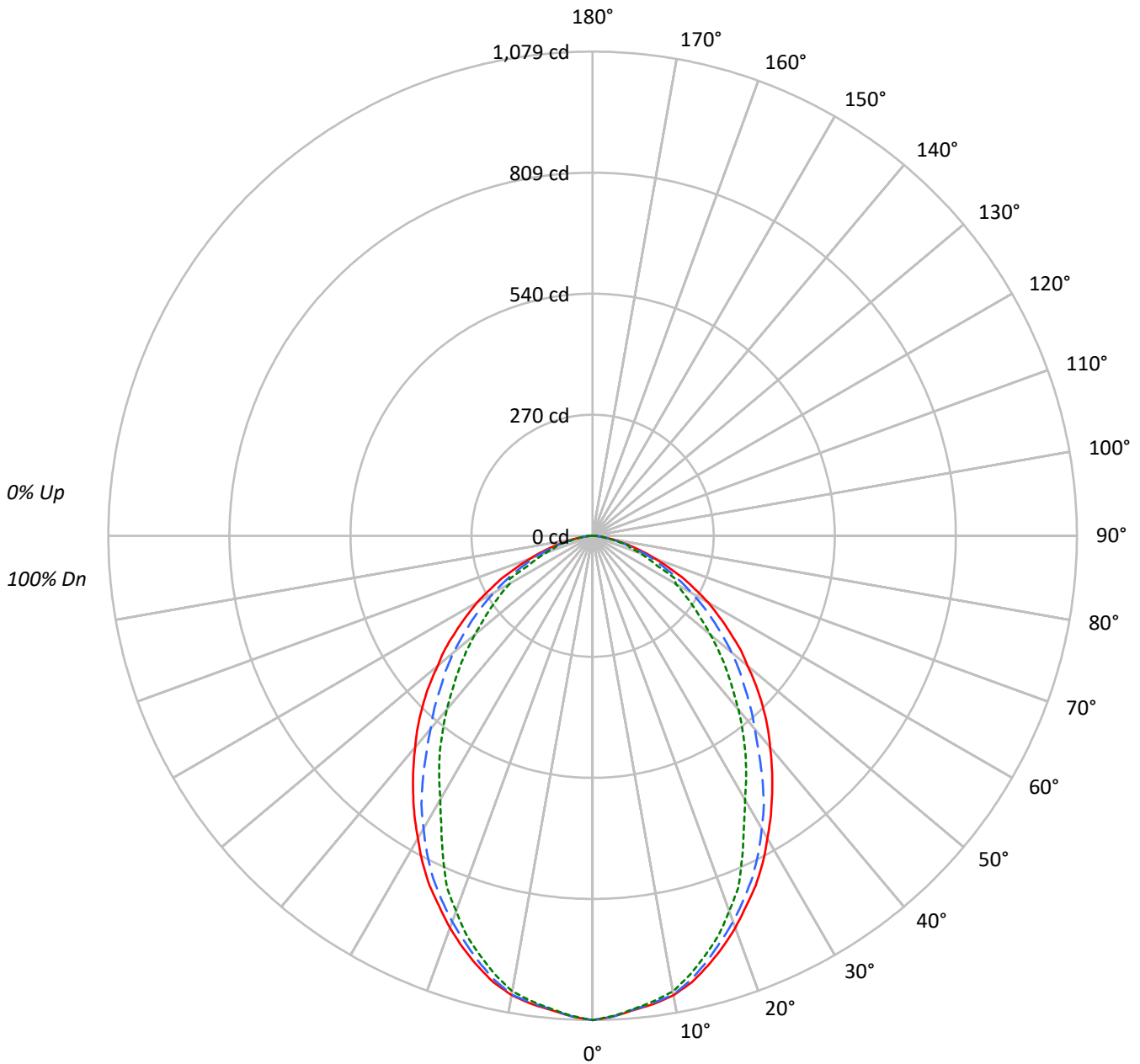
Lumens per Lamp: N/A
Luminaire Lumens: 2119.0 lumens
Efficiency: N/A
Efficacy: 90.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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				100															
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87															
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75															
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65															
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56															
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50															
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44															
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40															
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36															
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33															
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2905	2905	2905
5°	2865	2862	2858
10°	2840	2837	2816
15°	2764	2736	2698
20°	2662	2619	2548
25°	2553	2497	2341
30°	2420	2342	2109
35°	2291	2165	1951
40°	2161	1972	1775
45°	2037	1824	1605
50°	1886	1693	1431
55°	1745	1534	1282
60°	1598	1370	1149
65°	1407	1200	1017
70°	1158	1050	864
75°	921	805	843
80°	618	580	541
85°	386	463	540



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.5	4.7
10°-20°	275.8	13.0
20°-30°	381.8	18.0
30°-40°	407.1	19.2
40°-50°	371.4	17.5
50°-60°	290.9	13.7
60°-70°	189.6	8.9
70°-80°	84.0	4.0
80°-90°	18.0	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°	758.0	35.8
0°-40°	1165.1	55.0
0°-60°	1827.3	86.2
0°-90°	2119.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2119.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1079	1079	1079	1079	1079	
5°	1061	1059	1059	1058	1058	101
15°	992	992	982	972	968	279
25°	860	855	841	811	789	395
35°	698	693	659	609	594	436
45°	535	524	479	439	422	412
55°	372	361	327	288	273	334
65°	221	208	188	192	160	218
75°	89	82	77	74	81	95
85°	12	14	15	16	18	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1079.4	1079.4	1079.4	1079.4	1079.4
2.5°	1071.9	1071.9	1071.9	1070.7	1070.7
5°	1060.7	1059.4	1059.4	1058.2	1058.2
7.5°	1051.9	1050.7	1049.4	1048.2	1045.7
10°	1039.5	1039.5	1038.2	1032.0	1030.7
12.5°	1019.5	1018.2	1013.3	1004.5	1002.0
15°	992.0	992.0	982.1	972.1	968.3
17.5°	962.1	960.8	948.4	938.4	933.4
20°	929.6	927.2	914.7	898.5	889.7
22.5°	893.5	893.5	878.5	857.3	848.5
25°	859.8	854.8	841.1	811.1	788.6
27.5°	821.1	813.6	798.6	756.2	730.0
30°	778.7	774.9	753.7	698.8	678.8
32.5°	738.7	732.5	710.0	652.6	636.4
35°	697.5	692.6	658.9	609.0	594.0
37.5°	656.4	650.1	607.7	567.8	549.1
40°	615.2	607.7	561.5	525.3	505.4
42.5°	576.5	566.5	521.6	482.9	460.5
45°	535.3	524.1	479.2	439.2	421.8
47.5°	494.1	484.2	443.0	401.8	381.8
50°	450.5	441.7	404.3	363.1	341.9
52.5°	414.3	400.6	364.4	323.2	305.7
55°	371.9	360.6	326.9	288.3	273.3
57.5°	333.2	321.9	290.7	254.6	242.1
60°	297.0	280.8	254.6	223.4	213.4
62.5°	257.1	244.6	222.1	195.9	208.4
65°	220.9	208.4	188.4	192.2	159.7
67.5°	180.9	174.7	157.2	139.8	134.8
70°	147.2	139.8	133.5	114.8	109.8
72.5°	117.3	109.8	101.1	91.1	87.3
75°	88.6	82.4	77.4	73.6	81.1
77.5°	61.1	58.6	54.9	51.2	49.9
80°	39.9	38.7	37.4	36.2	34.9
82.5°	23.7	23.7	23.7	23.7	23.7
85°	12.5	13.7	15.0	16.2	17.5
87.5°	7.5	7.5	8.7	10.0	11.2
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)