

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: P545946

Luminaire Tested: **FMR-12-4-LD4-1LO-40-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: P545946
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

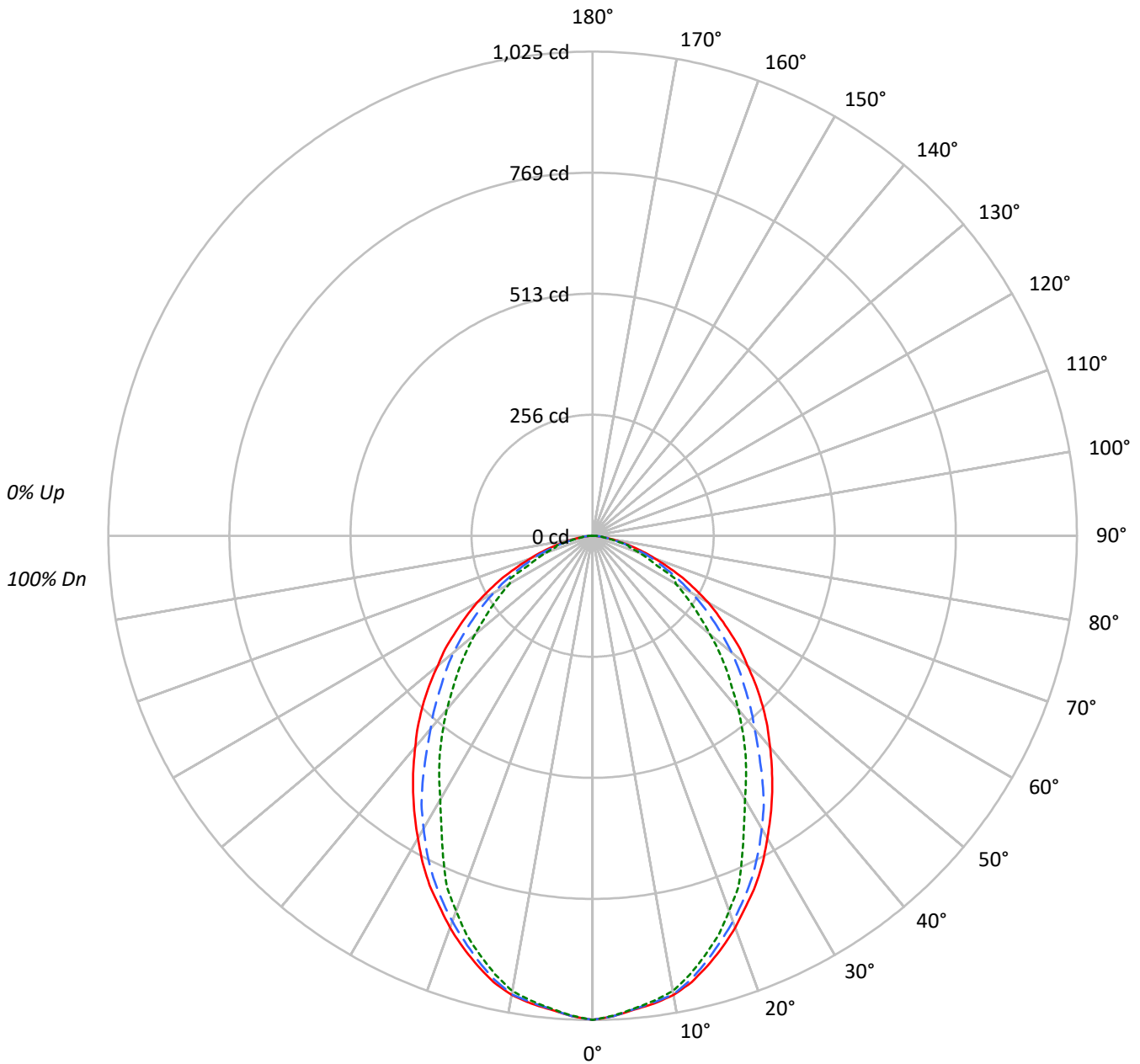
Lumens per Lamp: N/A
Luminaire Lumens: 2012.0 lumens
Efficiency: N/A
Efficacy: 86.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	2758	2758	2758
5°	2720	2717	2714
10°	2697	2694	2674
15°	2624	2598	2561
20°	2528	2487	2419
25°	2424	2371	2223
30°	2297	2224	2003
35°	2176	2055	1853
40°	2052	1873	1686
45°	1934	1732	1524
50°	1791	1607	1359
55°	1657	1456	1217
60°	1518	1301	1090
65°	1335	1139	966
70°	1100	998	821
75°	874	764	801
80°	587	550	514
85°	364	438	513



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.4	4.7
10°-20°	261.8	13.0
20°-30°	362.5	18.0
30°-40°	386.5	19.2
40°-50°	352.6	17.5
50°-60°	276.2	13.7
60°-70°	180.0	8.9
70°-80°	79.8	4.0
80°-90°	17.1	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°	719.7	35.8
0°-40°	1106.2	55.0
0°-60°	1735.1	86.2
0°-90°	2012.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2012.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1025	1025	1025	1025	1025	
5°	1007	1006	1006	1005	1005	96
15°	942	942	932	923	919	265
25°	816	812	799	770	749	375
35°	662	658	626	578	564	414
45°	508	498	455	417	400	392
55°	353	342	310	274	260	317
65°	210	198	179	182	152	207
75°	84	78	74	70	77	90
85°	12	13	14	15	17	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1024.9	1024.9	1024.9	1024.9	1024.9
2.5°	1017.8	1017.8	1017.8	1016.6	1016.6
5°	1007.1	1005.9	1005.9	1004.7	1004.7
7.5°	998.8	997.6	996.4	995.3	992.9
10°	987.0	987.0	985.8	979.9	978.7
12.5°	968.0	966.8	962.1	953.8	951.4
15°	941.9	941.9	932.5	923.0	919.4
17.5°	913.5	912.3	900.5	891.0	886.3
20°	882.7	880.3	868.5	853.1	844.8
22.5°	848.3	848.3	834.1	814.0	805.7
25°	816.4	811.6	798.6	770.1	748.8
27.5°	779.6	772.5	758.3	718.0	693.1
30°	739.3	735.8	715.6	663.5	644.6
32.5°	701.4	695.5	674.2	619.7	604.3
35°	662.3	657.6	625.6	578.2	564.0
37.5°	623.2	617.3	577.0	539.1	521.3
40°	584.1	577.0	533.2	498.8	479.9
42.5°	547.4	537.9	495.3	458.5	437.2
45°	508.3	497.6	455.0	417.1	400.5
47.5°	469.2	459.7	420.6	381.5	362.6
50°	427.7	419.4	383.9	344.8	324.6
52.5°	393.4	380.3	346.0	306.9	290.3
55°	353.1	342.4	310.4	273.7	259.5
57.5°	316.4	305.7	276.1	241.7	229.9
60°	282.0	266.6	241.7	212.1	202.6
62.5°	244.1	232.2	210.9	186.0	197.9
65°	209.7	197.9	178.9	182.5	151.7
67.5°	171.8	165.9	149.3	132.7	128.0
70°	139.8	132.7	126.8	109.0	104.3
72.5°	111.4	104.3	96.0	86.5	82.9
75°	84.1	78.2	73.5	69.9	77.0
77.5°	58.1	55.7	52.1	48.6	47.4
80°	37.9	36.7	35.5	34.4	33.2
82.5°	22.5	22.5	22.5	22.5	22.5
85°	11.8	13.0	14.2	15.4	16.6
87.5°	7.1	7.1	8.3	9.5	10.7
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)