

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: P545917

Luminaire Tested: **FMR-12-4-LD4-1LO-35-UNV-80-96-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: P545917
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-35-UNV-80-96-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

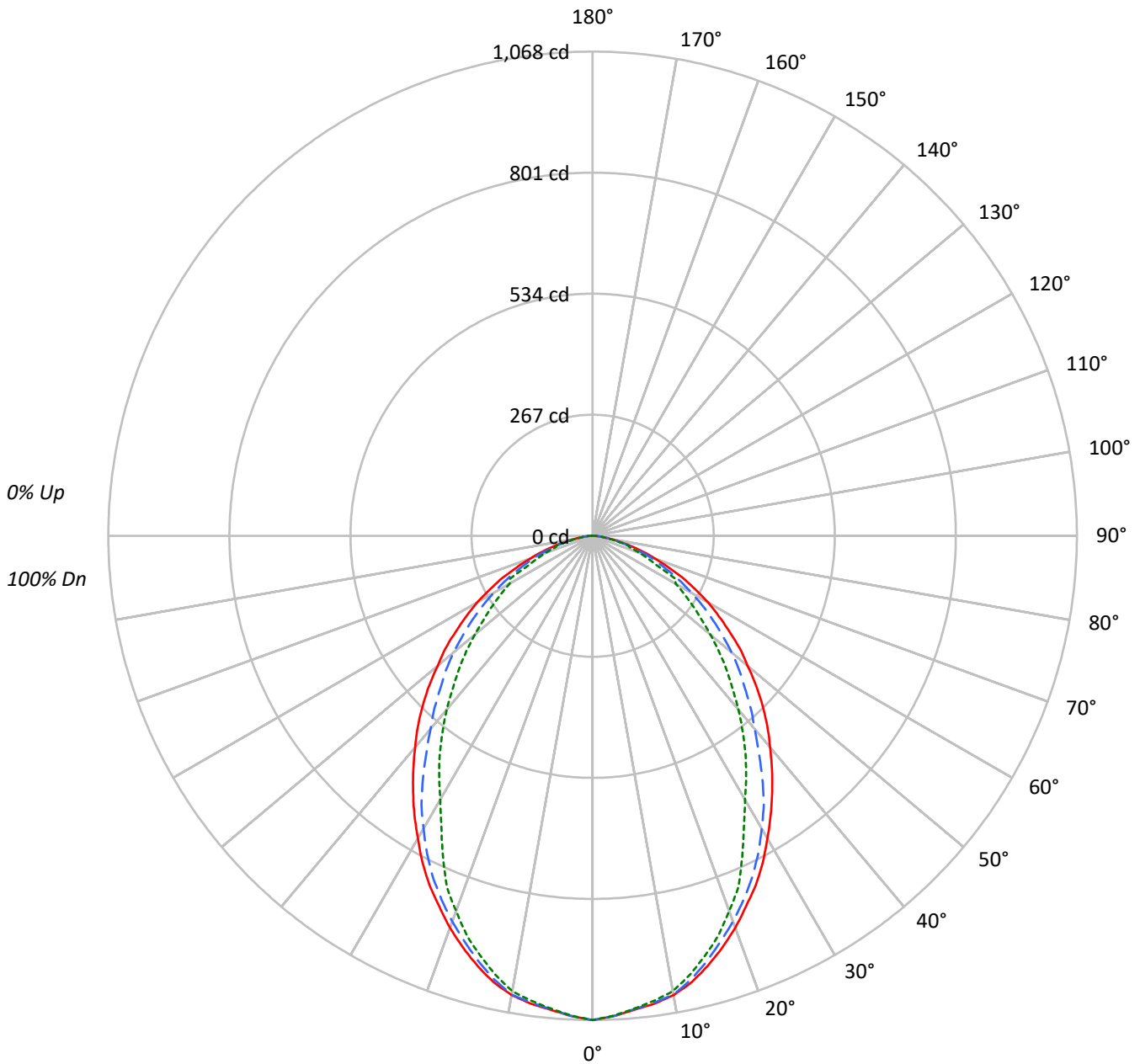
Lumens per Lamp: N/A
Luminaire Lumens: 2097.0 lumens
Efficiency: N/A
Efficacy: 89.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): 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

TEST NUMBER: P545917

CATALOG NUMBER: FMR-12-4-LD4-1LO-35-UNV-80-96-EDD

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°	2875	2875	2875
5°	2836	2832	2829
10°	2811	2807	2787
15°	2735	2708	2670
20°	2635	2592	2521
25°	2526	2471	2317
30°	2394	2318	2087
35°	2268	2142	1931
40°	2139	1952	1757
45°	2016	1805	1588
50°	1866	1675	1417
55°	1727	1518	1269
60°	1582	1356	1137
65°	1392	1188	1007
70°	1146	1039	855
75°	912	796	835
80°	612	573	536
85°	380	457	534



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.4	4.7
10°-20°	272.9	13.0
20°-30°	377.8	18.0
30°-40°	402.8	19.2
40°-50°	367.5	17.5
50°-60°	287.9	13.7
60°-70°	187.6	8.9
70°-80°	83.1	4.0
80°-90°	17.9	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°	750.1	35.8
0°-40°	1153.0	55.0
0°-60°	1808.4	86.2
0°-90°	2097.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2097.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1068	1068	1068	1068	1068	
5°	1050	1048	1048	1047	1047	100
15°	982	982	972	962	958	276
25°	851	846	832	803	780	391
35°	690	685	652	603	588	432
45°	530	519	474	435	417	408
55°	368	357	324	285	270	330
65°	219	206	186	190	158	215
75°	88	82	77	73	80	94
85°	12	14	15	16	17	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1068.2	1068.2	1068.2	1068.2	1068.2
2.5°	1060.8	1060.8	1060.8	1059.5	1059.5
5°	1049.7	1048.4	1048.4	1047.2	1047.2
7.5°	1041.0	1039.8	1038.5	1037.3	1034.8
10°	1028.7	1028.7	1027.4	1021.3	1020.0
12.5°	1008.9	1007.7	1002.7	994.1	991.6
15°	981.7	981.7	971.9	962.0	958.3
17.5°	952.1	950.9	938.5	928.6	923.7
20°	920.0	917.5	905.2	889.1	880.5
22.5°	884.2	884.2	869.4	848.4	839.7
25°	850.8	845.9	832.3	802.7	780.5
27.5°	812.6	805.2	790.3	748.3	722.4
30°	770.6	766.9	745.9	691.5	671.8
32.5°	731.1	724.9	702.7	645.8	629.8
35°	690.3	685.4	652.0	602.6	587.8
37.5°	649.6	643.4	601.4	561.9	543.4
40°	608.8	601.4	555.7	519.9	500.1
42.5°	570.5	560.6	516.2	477.9	455.7
45°	529.8	518.7	474.2	434.7	417.4
47.5°	489.0	479.1	438.4	397.6	377.9
50°	445.8	437.2	400.1	359.4	338.4
52.5°	410.0	396.4	360.6	319.8	302.5
55°	368.0	356.9	323.5	285.3	270.4
57.5°	329.7	318.6	287.7	251.9	239.6
60°	293.9	277.9	251.9	221.0	211.2
62.5°	254.4	242.0	219.8	193.9	206.2
65°	218.6	206.2	186.5	190.2	158.1
67.5°	179.1	172.9	155.6	138.3	133.4
70°	145.7	138.3	132.1	113.6	108.7
72.5°	116.1	108.7	100.0	90.1	86.4
75°	87.7	81.5	76.6	72.9	80.3
77.5°	60.5	58.0	54.3	50.6	49.4
80°	39.5	38.3	37.0	35.8	34.6
82.5°	23.5	23.5	23.5	23.5	23.5
85°	12.3	13.6	14.8	16.1	17.3
87.5°	7.4	7.4	8.6	9.9	11.1
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)