

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: P546263

Luminaire Tested: **FMR-12-4-LD4-2LO-50-UNV-80-84-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: P546263
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-LD4-2LO-50-UNV-80-84-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

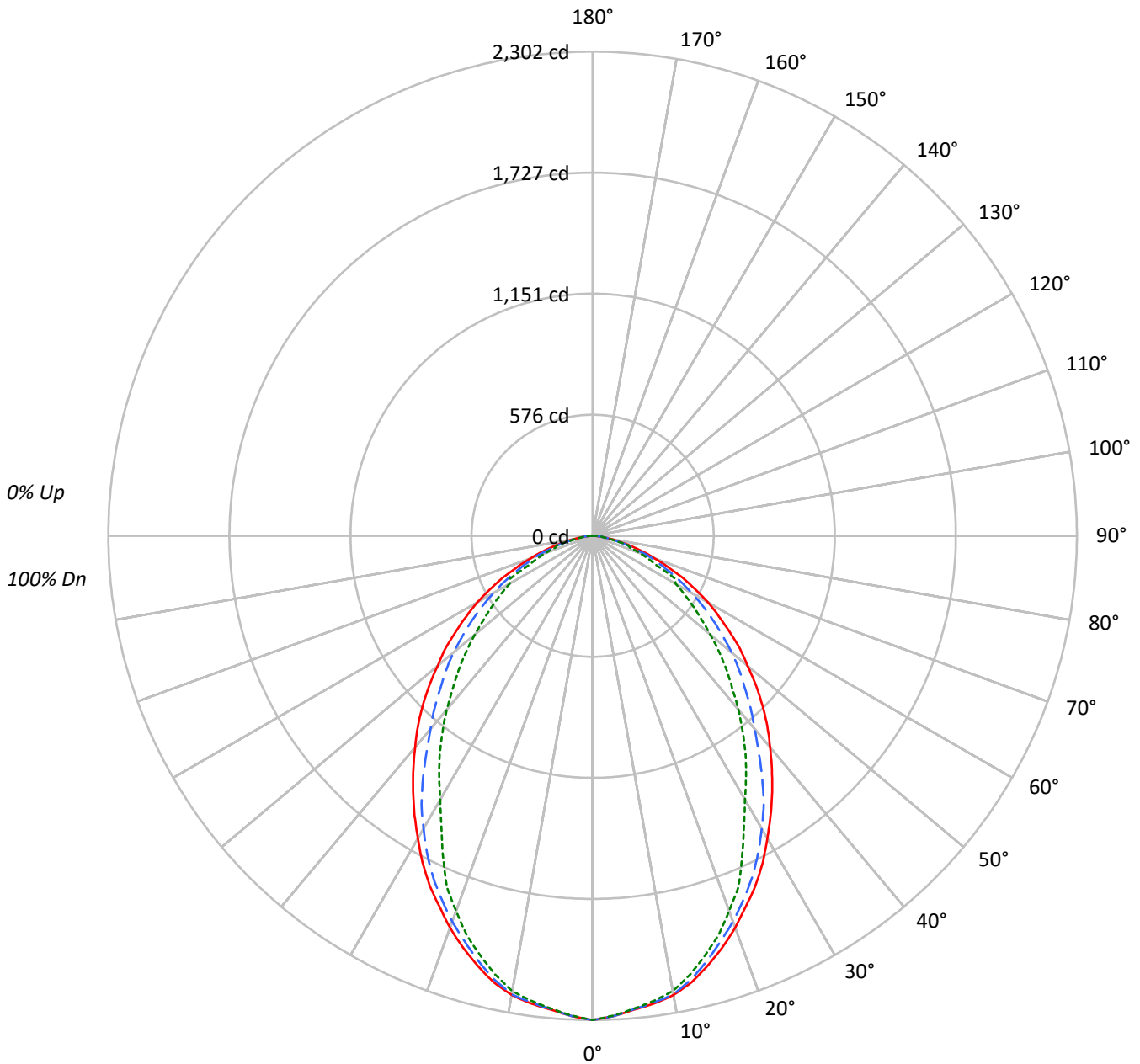
Lumens per Lamp: N/A
Luminaire Lumens: 4519.0 lumens
Efficiency: N/A
Efficacy: 96.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	6194	6194	6194
5°	6110	6103	6096
10°	6057	6050	6006
15°	5894	5835	5753
20°	5678	5586	5434
25°	5444	5325	4994
30°	5160	4995	4498
35°	4887	4616	4161
40°	4609	4207	3786
45°	4344	3889	3423
50°	4022	3610	3053
55°	3720	3271	2734
60°	3409	2922	2449
65°	2999	2558	2169
70°	2471	2240	1843
75°	1964	1716	1799
80°	1320	1237	1155
85°	821	985	1152



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.3	4.7
10°-20°	588.1	13.0
20°-30°	814.1	18.0
30°-40°	868.1	19.2
40°-50°	792.0	17.5
50°-60°	620.4	13.7
60°-70°	404.4	8.9
70°-80°	179.2	4.0
80°-90°	38.5	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°	1616.5	35.8
0°-40°	2484.6	55.0
0°-60°	3897.0	86.2
0°-90°	4519.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4519.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2302	2302	2302	2302	2302	
5°	2262	2259	2259	2257	2257	215
15°	2116	2116	2094	2073	2065	595
25°	1834	1823	1794	1730	1682	842
35°	1488	1477	1405	1299	1267	930
45°	1142	1118	1022	937	900	879
55°	793	769	697	615	583	711
65°	471	444	402	410	341	464
75°	189	176	165	157	173	203
85°	27	29	32	35	37	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2301.9	2301.9	2301.9	2301.9	2301.9
2.5°	2286.0	2286.0	2286.0	2283.3	2283.3
5°	2262.0	2259.3	2259.3	2256.7	2256.7
7.5°	2243.4	2240.7	2238.0	2235.4	2230.1
10°	2216.8	2216.8	2214.1	2200.8	2198.1
12.5°	2174.2	2171.5	2160.9	2142.2	2136.9
15°	2115.6	2115.6	2094.3	2073.1	2065.1
17.5°	2051.8	2049.1	2022.5	2001.2	1990.6
20°	1982.6	1977.3	1950.6	1916.0	1897.4
22.5°	1905.4	1905.4	1873.5	1828.2	1809.6
25°	1833.6	1822.9	1793.6	1729.8	1681.9
27.5°	1751.1	1735.1	1703.2	1612.7	1556.8
30°	1660.6	1652.6	1607.4	1490.3	1447.7
32.5°	1575.4	1562.1	1514.2	1391.8	1357.2
35°	1487.6	1477.0	1405.1	1298.7	1266.7
37.5°	1399.8	1386.5	1296.0	1210.8	1170.9
40°	1312.0	1296.0	1197.5	1120.4	1077.8
42.5°	1229.5	1208.2	1112.4	1029.9	982.0
45°	1141.6	1117.7	1021.9	936.7	899.5
47.5°	1053.8	1032.5	944.7	856.9	814.3
50°	960.7	942.1	862.2	774.4	729.2
52.5°	883.5	854.2	777.1	689.2	652.0
55°	793.0	769.1	697.2	614.7	582.8
57.5°	710.5	686.6	620.1	542.9	516.3
60°	633.4	598.8	542.9	476.4	455.1
62.5°	548.2	521.6	473.7	417.8	444.4
65°	471.0	444.4	401.8	409.8	340.6
67.5°	385.9	372.6	335.3	298.1	287.4
70°	314.0	298.1	284.7	244.8	234.2
72.5°	250.2	234.2	215.6	194.3	186.3
75°	188.9	175.6	165.0	157.0	173.0
77.5°	130.4	125.1	117.1	109.1	106.4
80°	85.2	82.5	79.8	77.2	74.5
82.5°	50.6	50.6	50.6	50.6	50.6
85°	26.6	29.3	31.9	34.6	37.3
87.5°	16.0	16.0	18.6	21.3	24.0
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)