

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: P546568

Luminaire Tested: **FMR-24-4-LD4-1LO-50-UNV-82-85-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: P546568
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-24-4-LD4-1LO-50-UNV-82-85-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

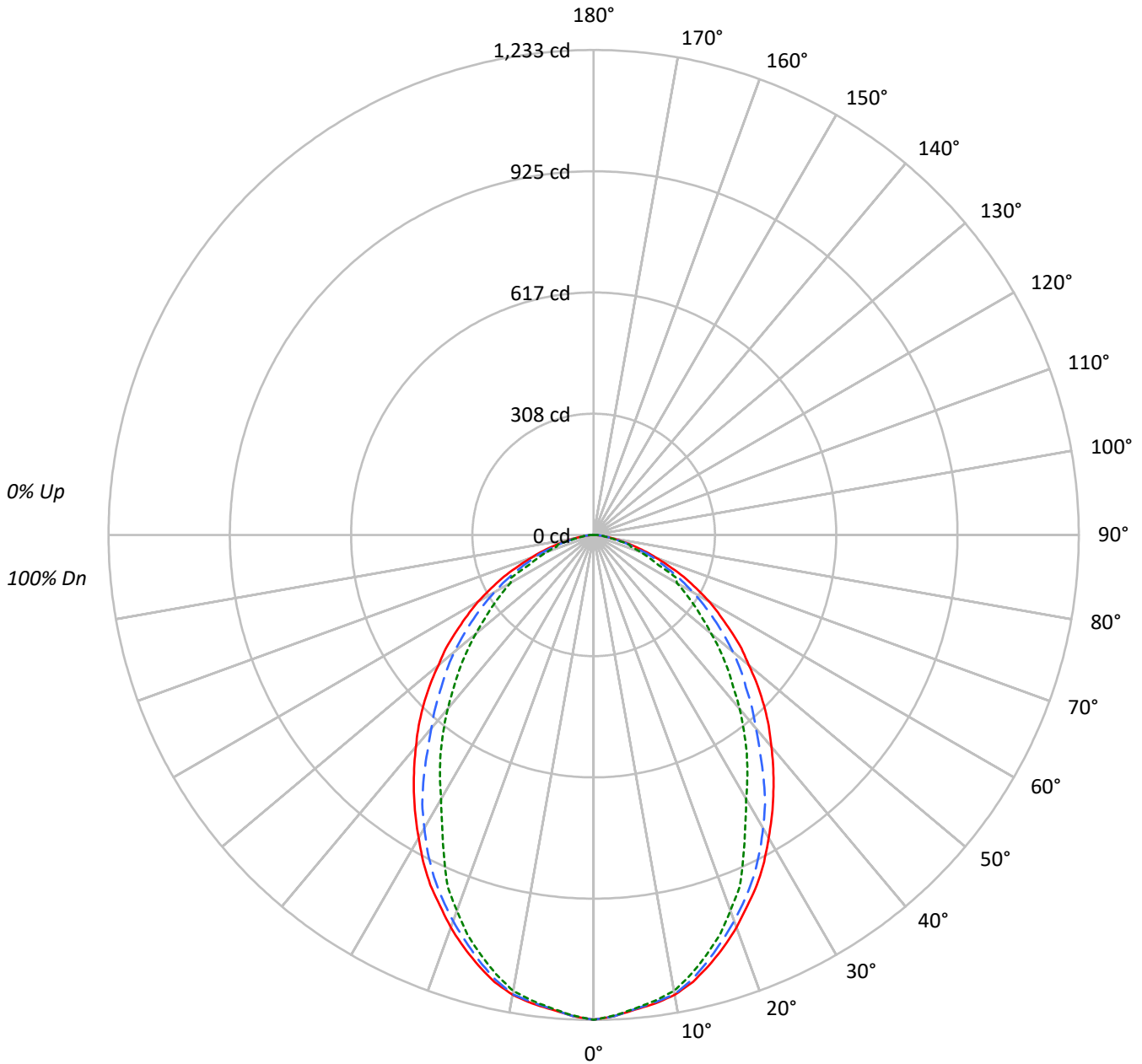
Lumens per Lamp: N/A
Luminaire Lumens: 2420.0 lumens
Efficiency: N/A
Efficacy: 103.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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				20				20	
RC	80				70				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°	1659	1659	1659
5°	1636	1634	1632
10°	1622	1620	1608
15°	1578	1562	1540
20°	1520	1496	1455
25°	1458	1426	1337
30°	1382	1337	1205
35°	1308	1236	1114
40°	1234	1126	1014
45°	1163	1041	917
50°	1077	966	817
55°	996	876	732
60°	913	782	656
65°	803	685	581
70°	662	600	493
75°	526	460	481
80°	353	332	309
85°	221	264	309



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.7	4.7
10°-20°	314.9	13.0
20°-30°	436.0	18.0
30°-40°	464.9	19.2
40°-50°	424.1	17.5
50°-60°	332.3	13.7
60°-70°	216.5	8.9
70°-80°	95.9	4.0
80°-90°	20.6	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°	865.7	35.8
0°-40°	1330.6	55.0
0°-60°	2086.9	86.2
0°-90°	2420.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2420.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1233	1233	1233	1233	1233	
5°	1211	1210	1210	1208	1208	115
15°	1133	1133	1122	1110	1106	319
25°	982	976	960	926	901	451
35°	797	791	752	696	678	498
45°	611	598	547	502	482	471
55°	425	412	373	329	312	381
65°	252	238	215	220	182	249
75°	101	94	88	84	93	108
85°	14	16	17	18	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1232.7	1232.7	1232.7	1232.7	1232.7
2.5°	1224.2	1224.2	1224.2	1222.7	1222.7
5°	1211.3	1209.9	1209.9	1208.5	1208.5
7.5°	1201.4	1199.9	1198.5	1197.1	1194.2
10°	1187.1	1187.1	1185.7	1178.6	1177.1
12.5°	1164.3	1162.9	1157.2	1147.2	1144.4
15°	1133.0	1133.0	1121.6	1110.2	1105.9
17.5°	1098.8	1097.3	1083.1	1071.7	1066.0
20°	1061.7	1058.9	1044.6	1026.1	1016.1
22.5°	1020.4	1020.4	1003.3	979.0	969.1
25°	981.9	976.2	960.5	926.3	900.7
27.5°	937.7	929.2	912.1	863.6	833.7
30°	889.3	885.0	860.8	798.1	775.3
32.5°	843.7	836.5	810.9	745.3	726.8
35°	796.6	790.9	752.5	695.5	678.3
37.5°	749.6	742.5	694.0	648.4	627.0
40°	702.6	694.0	641.3	600.0	577.2
42.5°	658.4	647.0	595.7	551.5	525.9
45°	611.4	598.5	547.2	501.6	481.7
47.5°	564.3	552.9	505.9	458.9	436.1
50°	514.5	504.5	461.7	414.7	390.5
52.5°	473.1	457.5	416.1	369.1	349.2
55°	424.7	411.9	373.4	329.2	312.1
57.5°	380.5	367.7	332.0	290.7	276.5
60°	339.2	320.6	290.7	255.1	243.7
62.5°	293.6	279.3	253.7	223.7	238.0
65°	252.2	238.0	215.2	219.5	182.4
67.5°	206.6	199.5	179.6	159.6	153.9
70°	168.2	159.6	152.5	131.1	125.4
72.5°	134.0	125.4	115.4	104.0	99.8
75°	101.2	94.1	88.4	84.1	92.6
77.5°	69.8	67.0	62.7	58.4	57.0
80°	45.6	44.2	42.8	41.3	39.9
82.5°	27.1	27.1	27.1	27.1	27.1
85°	14.3	15.7	17.1	18.5	20.0
87.5°	8.6	8.6	10.0	11.4	12.8
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)