

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: P546567

Luminaire Tested: **FMR-24-4-LD4-1LO-50-UNV-82-84-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: P546567
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-82-84-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC 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

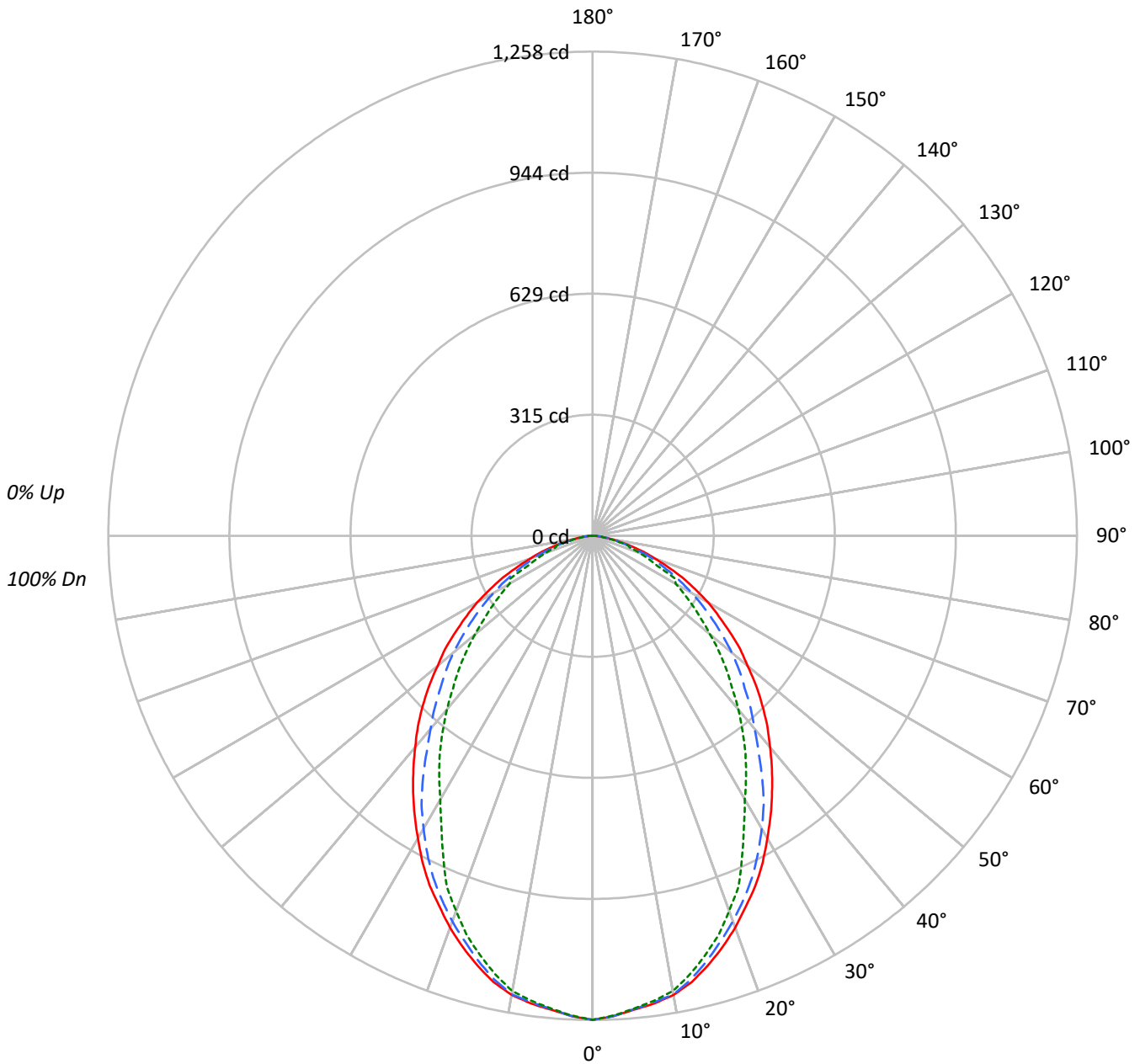
Lumens per Lamp: N/A
Luminaire Lumens: 2469.0 lumens
Efficiency: N/A
Efficacy: 105.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P546567

CATALOG NUMBER: FMR-24-4-LD4-1LO-50-UNV-82-84-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°	1692	1692	1692
5°	1669	1667	1665
10°	1655	1653	1641
15°	1610	1594	1572
20°	1551	1526	1484
25°	1487	1455	1364
30°	1410	1364	1229
35°	1335	1261	1137
40°	1259	1149	1034
45°	1187	1062	935
50°	1099	986	834
55°	1016	894	747
60°	931	798	669
65°	819	699	592
70°	675	612	503
75°	536	468	491
80°	360	338	315
85°	224	269	315



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.1	4.7
10°-20°	321.3	13.0
20°-30°	444.8	18.0
30°-40°	474.3	19.2
40°-50°	432.7	17.5
50°-60°	339.0	13.7
60°-70°	220.9	8.9
70°-80°	97.9	4.0
80°-90°	21.0	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°	883.2	35.8
0°-40°	1357.5	55.0
0°-60°	2129.2	86.2
0°-90°	2469.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2469.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1258	1258	1258	1258	1258	
5°	1236	1234	1234	1233	1233	117
15°	1156	1156	1144	1133	1128	325
25°	1002	996	980	945	919	460
35°	813	807	768	710	692	508
45°	624	611	558	512	491	480
55°	433	420	381	336	318	389
65°	257	243	220	224	186	254
75°	103	96	90	86	94	111
85°	14	16	17	19	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1257.7	1257.7	1257.7	1257.7	1257.7
2.5°	1249.0	1249.0	1249.0	1247.5	1247.5
5°	1235.9	1234.4	1234.4	1233.0	1233.0
7.5°	1225.7	1224.2	1222.8	1221.3	1218.4
10°	1211.1	1211.1	1209.7	1202.4	1201.0
12.5°	1187.9	1186.4	1180.6	1170.4	1167.5
15°	1155.9	1155.9	1144.3	1132.6	1128.3
17.5°	1121.0	1119.5	1105.0	1093.4	1087.6
20°	1083.2	1080.3	1065.8	1046.9	1036.7
22.5°	1041.0	1041.0	1023.6	998.9	988.7
25°	1001.8	996.0	980.0	945.1	918.9
27.5°	956.7	948.0	930.5	881.1	850.6
30°	907.3	902.9	878.2	814.2	791.0
32.5°	860.7	853.5	827.3	760.4	741.5
35°	812.8	806.9	767.7	709.5	692.1
37.5°	764.8	757.5	708.1	661.6	639.7
40°	716.8	708.1	654.3	612.1	588.9
42.5°	671.7	660.1	607.8	562.7	536.5
45°	623.7	610.7	558.3	511.8	491.4
47.5°	575.8	564.1	516.2	468.2	444.9
50°	524.9	514.7	471.1	423.1	398.4
52.5°	482.7	466.7	424.6	376.6	356.2
55°	433.3	420.2	380.9	335.9	318.4
57.5°	388.2	375.1	338.8	296.6	282.1
60°	346.0	327.1	296.6	260.3	248.6
62.5°	299.5	285.0	258.8	228.3	242.8
65°	257.4	242.8	219.5	223.9	186.1
67.5°	210.8	203.6	183.2	162.8	157.0
70°	171.6	162.8	155.6	133.8	127.9
72.5°	136.7	127.9	117.8	106.1	101.8
75°	103.2	96.0	90.1	85.8	94.5
77.5°	71.2	68.3	64.0	59.6	58.2
80°	46.5	45.1	43.6	42.2	40.7
82.5°	27.6	27.6	27.6	27.6	27.6
85°	14.5	16.0	17.4	18.9	20.4
87.5°	8.7	8.7	10.2	11.6	13.1
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)