

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: P545809

Luminaire Tested: **FMR-12-2-LD4-2STD-50-UNV-93-86-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: P545809
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-12-2-LD4-2STD-50-UNV-93-86-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

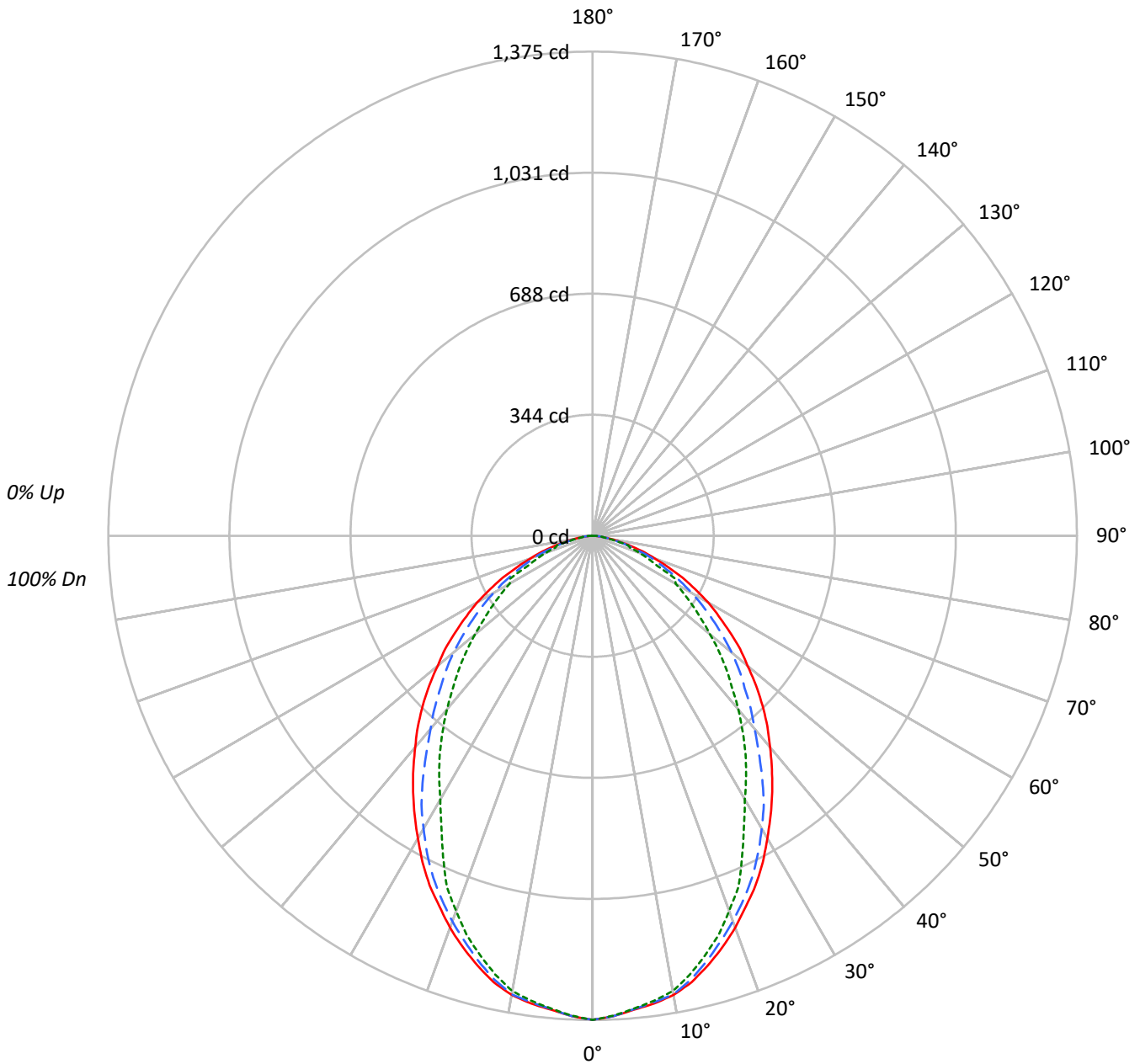
Lumens per Lamp: N/A
Luminaire Lumens: 2699.0 lumens
Efficiency: N/A
Efficacy: 81.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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: P545809

CATALOG NUMBER: FMR-12-2-LD4-2STD-50-UNV-93-86-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°	7399	7399	7399
5°	7299	7290	7282
10°	7236	7227	7174
15°	7041	6970	6872
20°	6782	6672	6490
25°	6503	6362	5965
30°	6164	5966	5373
35°	5838	5514	4971
40°	5505	5025	4522
45°	5190	4645	4089
50°	4804	4312	3646
55°	4444	3907	3266
60°	4072	3490	2926
65°	3582	3056	2590
70°	2950	2677	2201
75°	2346	2048	2148
80°	1578	1478	1379
85°	982	1179	1377



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.0	4.7
10°-20°	351.2	13.0
20°-30°	486.2	18.0
30°-40°	518.5	19.2
40°-50°	473.0	17.5
50°-60°	370.6	13.7
60°-70°	241.5	8.9
70°-80°	107.0	4.0
80°-90°	23.0	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°	965.4	35.8
0°-40°	1483.9	55.0
0°-60°	2327.5	86.2
0°-90°	2699.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2699.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1375	1375	1375	1375	1375	
5°	1351	1349	1349	1348	1348	128
15°	1264	1264	1251	1238	1233	355
25°	1095	1089	1071	1033	1004	503
35°	888	882	839	776	757	555
45°	682	668	610	560	537	525
55°	474	459	416	367	348	425
65°	281	265	240	245	203	277
75°	113	105	98	94	103	121
85°	16	18	19	21	22	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1374.8	1374.8	1374.8	1374.8	1374.8
2.5°	1365.3	1365.3	1365.3	1363.7	1363.7
5°	1351.0	1349.4	1349.4	1347.8	1347.8
7.5°	1339.9	1338.3	1336.7	1335.1	1331.9
10°	1324.0	1324.0	1322.4	1314.4	1312.8
12.5°	1298.5	1297.0	1290.6	1279.5	1276.3
15°	1263.6	1263.6	1250.9	1238.1	1233.4
17.5°	1225.4	1223.8	1207.9	1195.2	1188.9
20°	1184.1	1180.9	1165.0	1144.4	1133.2
22.5°	1138.0	1138.0	1118.9	1091.9	1080.8
25°	1095.1	1088.7	1071.3	1033.1	1004.5
27.5°	1045.8	1036.3	1017.2	963.2	929.8
30°	991.8	987.0	960.0	890.1	864.6
32.5°	940.9	933.0	904.4	831.3	810.6
35°	888.5	882.1	839.2	775.6	756.6
37.5°	836.0	828.1	774.0	723.2	699.3
40°	783.6	774.0	715.2	669.1	643.7
42.5°	734.3	721.6	664.4	615.1	586.5
45°	681.9	667.5	610.3	559.5	537.2
47.5°	629.4	616.7	564.2	511.8	486.4
50°	573.8	562.6	515.0	462.5	435.5
52.5°	527.7	510.2	464.1	411.7	389.4
55°	473.6	459.3	416.4	367.2	348.1
57.5°	424.4	410.1	370.3	324.2	308.3
60°	378.3	357.6	324.2	284.5	271.8
62.5°	327.4	311.5	282.9	249.5	265.4
65°	281.3	265.4	240.0	244.8	203.4
67.5°	230.5	222.5	200.3	178.0	171.7
70°	187.5	178.0	170.1	146.2	139.9
72.5°	149.4	139.9	128.7	116.0	111.3
75°	112.8	104.9	98.5	93.8	103.3
77.5°	77.9	74.7	69.9	65.2	63.6
80°	50.9	49.3	47.7	46.1	44.5
82.5°	30.2	30.2	30.2	30.2	30.2
85°	15.9	17.5	19.1	20.7	22.3
87.5°	9.5	9.5	11.1	12.7	14.3
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)