

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: P545695

Luminaire Tested: **FMR-12-2-LD4-2LO-50-UNV-81-84-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: P545695
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-LD4-2LO-50-UNV-81-84-EDD
Description: 1X2 FMR TROFFER WITH .156 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

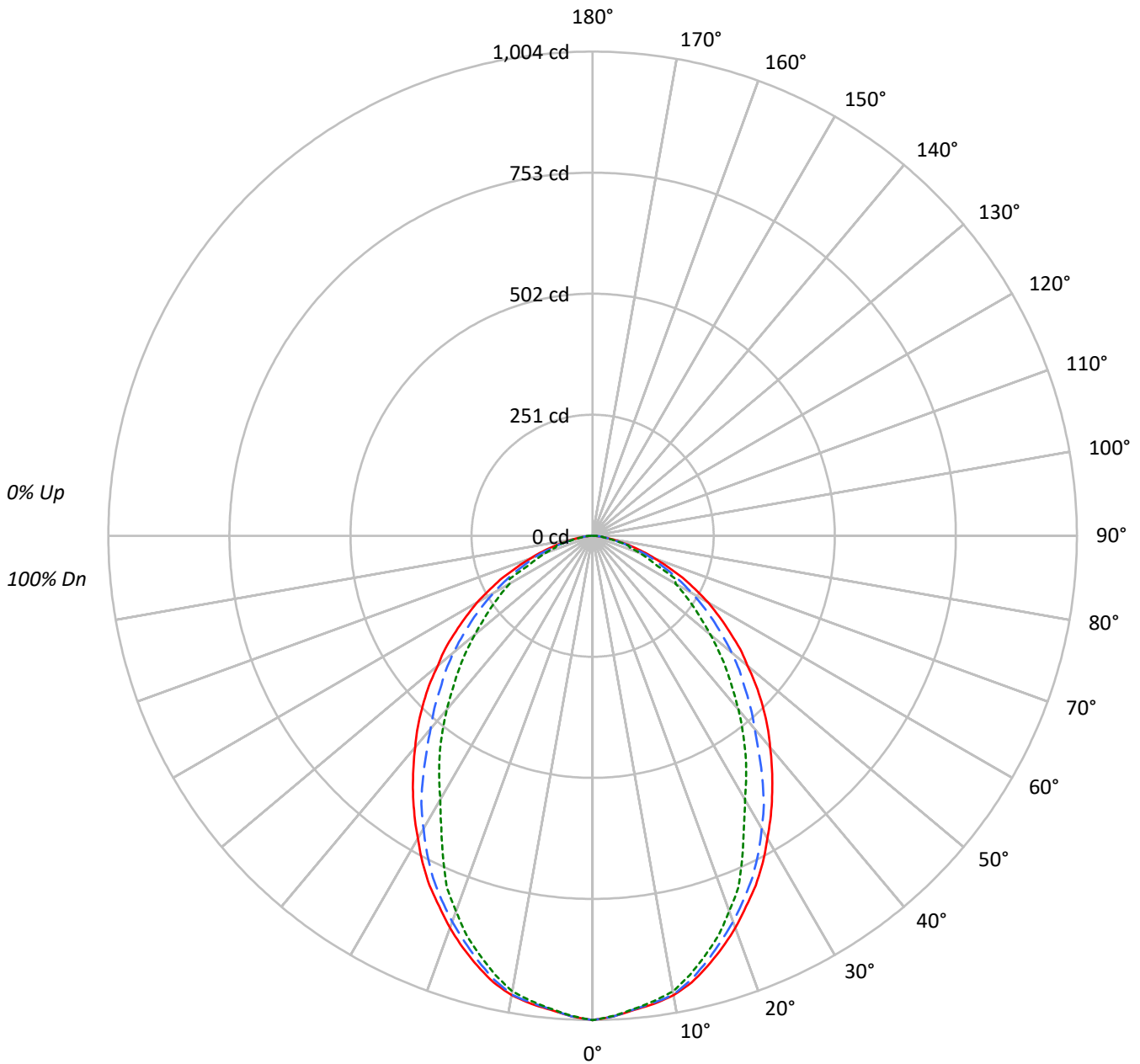
Lumens per Lamp: N/A
Luminaire Lumens: 1972.0 lumens
Efficiency: N/A
Efficacy: 84.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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: P545695

CATALOG NUMBER: FMR-12-2-LD4-2LO-50-UNV-81-84-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°	5406	5406	5406
5°	5333	5326	5320
10°	5286	5280	5242
15°	5144	5092	5021
20°	4955	4875	4742
25°	4751	4648	4358
30°	4503	4359	3926
35°	4265	4029	3632
40°	4022	3672	3304
45°	3792	3394	2987
50°	3510	3151	2664
55°	3248	2855	2386
60°	2975	2550	2138
65°	2617	2234	1892
70°	2156	1956	1608
75°	1716	1497	1570
80°	1153	1079	1007
85°	716	858	1007



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.5	4.7
10°-20°	256.6	13.0
20°-30°	355.3	18.0
30°-40°	378.8	19.2
40°-50°	345.6	17.5
50°-60°	270.8	13.7
60°-70°	176.5	8.9
70°-80°	78.2	4.0
80°-90°	16.8	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°	705.4	35.8
0°-40°	1084.2	55.0
0°-60°	1700.6	86.2
0°-90°	1972.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1972.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1004	1004	1004	1004	1004	
5°	987	986	986	985	985	94
15°	923	923	914	905	901	260
25°	800	796	783	755	734	367
35°	649	644	613	567	553	406
45°	498	488	446	409	392	384
55°	346	336	304	268	254	310
65°	206	194	175	179	149	203
75°	82	77	72	68	76	88
85°	12	13	14	15	16	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1004.5	1004.5	1004.5	1004.5	1004.5
2.5°	997.5	997.5	997.5	996.4	996.4
5°	987.1	985.9	985.9	984.8	984.8
7.5°	979.0	977.8	976.6	975.5	973.2
10°	967.3	967.3	966.2	960.4	959.2
12.5°	948.8	947.6	943.0	934.8	932.5
15°	923.2	923.2	913.9	904.6	901.2
17.5°	895.3	894.2	882.6	873.3	868.6
20°	865.2	862.8	851.2	836.1	828.0
22.5°	831.5	831.5	817.5	797.8	789.7
25°	800.1	795.5	782.7	754.8	733.9
27.5°	764.1	757.2	743.2	703.7	679.4
30°	724.6	721.2	701.4	650.3	631.7
32.5°	687.5	681.7	660.8	607.4	592.3
35°	649.2	644.5	613.2	566.7	552.8
37.5°	610.8	605.0	565.5	528.4	511.0
40°	572.5	565.5	522.6	488.9	470.3
42.5°	536.5	527.2	485.4	449.4	428.5
45°	498.2	487.7	445.9	408.8	392.5
47.5°	459.9	450.6	412.3	373.9	355.4
50°	419.2	411.1	376.3	337.9	318.2
52.5°	385.5	372.8	339.1	300.8	284.5
55°	346.1	335.6	304.3	268.3	254.3
57.5°	310.1	299.6	270.6	236.9	225.3
60°	276.4	261.3	236.9	207.9	198.6
62.5°	239.2	227.6	206.7	182.3	193.9
65°	205.5	193.9	175.4	178.8	148.6
67.5°	168.4	162.6	146.3	130.1	125.4
70°	137.0	130.1	124.3	106.8	102.2
72.5°	109.2	102.2	94.1	84.8	81.3
75°	82.5	76.6	72.0	68.5	75.5
77.5°	56.9	54.6	51.1	47.6	46.5
80°	37.2	36.0	34.8	33.7	32.5
82.5°	22.1	22.1	22.1	22.1	22.1
85°	11.6	12.8	13.9	15.1	16.3
87.5°	7.0	7.0	8.1	9.3	10.5
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)