

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: P545090

Luminaire Tested: **FMR-12-1-LD4-2LO-40-UNV-81-87-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: P545090
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-12-1-LD4-2LO-40-UNV-81-87-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

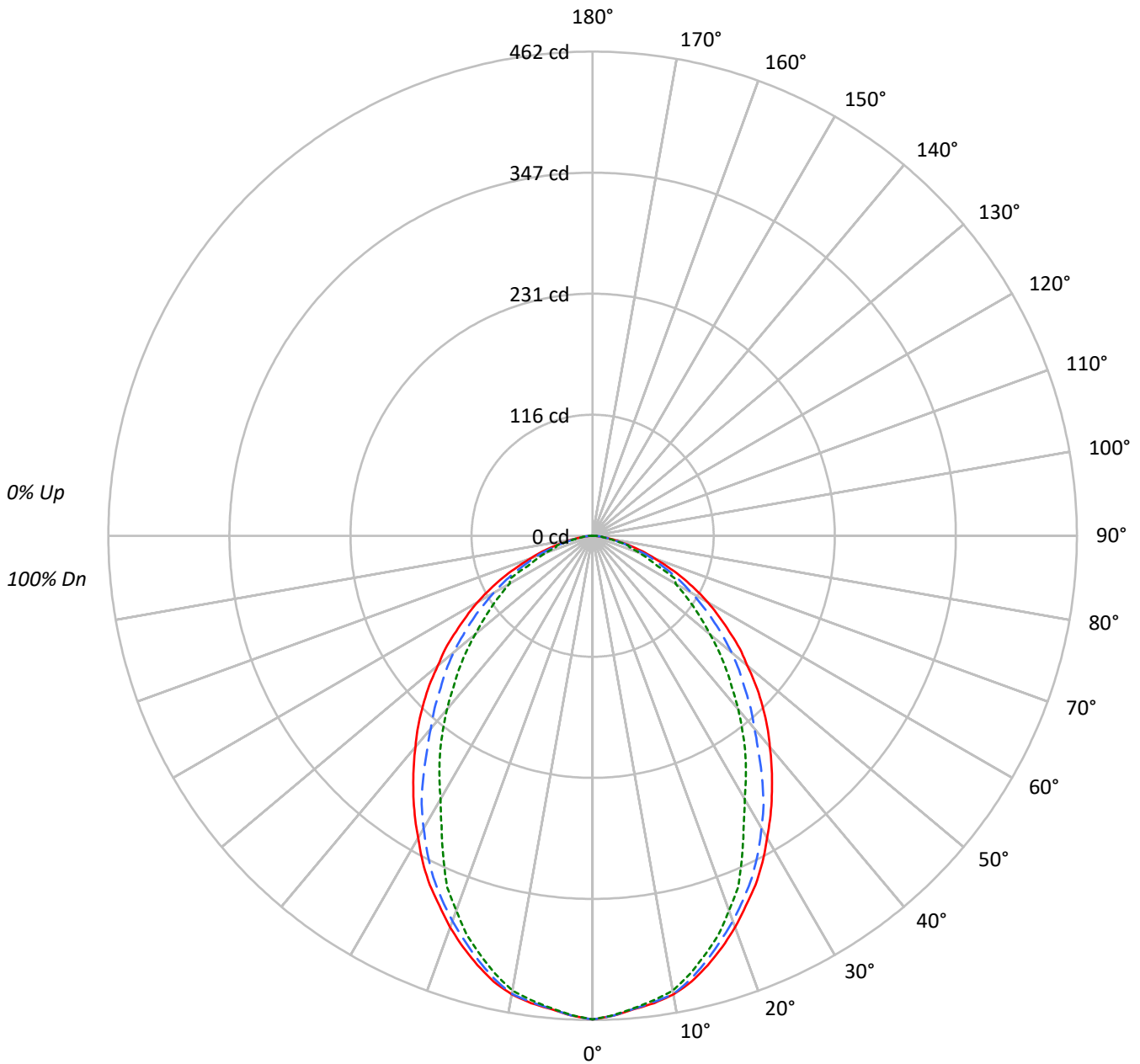
Lumens per Lamp: N/A
Luminaire Lumens: 906.0 lumens
Efficiency: N/A
Efficacy: 77.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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: P545090

CATALOG NUMBER: FMR-12-1-LD4-2LO-40-UNV-81-87-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°	4968	4968	4968
5°	4900	4895	4888
10°	4857	4852	4817
15°	4727	4679	4613
20°	4553	4480	4357
25°	4366	4271	4005
30°	4138	4006	3607
35°	3918	3702	3338
40°	3695	3374	3036
45°	3484	3119	2745
50°	3225	2895	2448
55°	2984	2624	2192
60°	2734	2342	1963
65°	2404	2053	1740
70°	1983	1797	1479
75°	1576	1377	1443
80°	1060	992	924
85°	655	790	926



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.0	4.7
10°-20°	117.9	13.0
20°-30°	163.2	18.0
30°-40°	174.0	19.2
40°-50°	158.8	17.5
50°-60°	124.4	13.7
60°-70°	81.1	8.9
70°-80°	35.9	4.0
80°-90°	7.7	0.8
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°	324.1	35.8
0°-40°	498.1	55.0
0°-60°	781.3	86.2
0°-90°	906.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	906.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	462	462	462	462	462	
5°	454	453	453	452	452	43
15°	424	424	420	416	414	119
25°	368	366	360	347	337	169
35°	298	296	282	260	254	186
45°	229	224	205	188	180	176
55°	159	154	140	123	117	143
65°	94	89	81	82	68	93
75°	38	35	33	32	35	41
85°	5	6	6	7	8	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	461.5	461.5	461.5	461.5	461.5
2.5°	458.3	458.3	458.3	457.8	457.8
5°	453.5	453.0	453.0	452.4	452.4
7.5°	449.8	449.2	448.7	448.2	447.1
10°	444.4	444.4	443.9	441.2	440.7
12.5°	435.9	435.4	433.2	429.5	428.4
15°	424.2	424.2	419.9	415.6	414.0
17.5°	411.4	410.8	405.5	401.2	399.1
20°	397.5	396.4	391.1	384.1	380.4
22.5°	382.0	382.0	375.6	366.5	362.8
25°	367.6	365.5	359.6	346.8	337.2
27.5°	351.1	347.9	341.5	323.3	312.1
30°	332.9	331.3	322.3	298.8	290.2
32.5°	315.9	313.2	303.6	279.0	272.1
35°	298.2	296.1	281.7	260.4	254.0
37.5°	280.6	278.0	259.8	242.8	234.8
40°	263.0	259.8	240.1	224.6	216.1
42.5°	246.5	242.2	223.0	206.5	196.9
45°	228.9	224.1	204.9	187.8	180.3
47.5°	211.3	207.0	189.4	171.8	163.3
50°	192.6	188.9	172.9	155.3	146.2
52.5°	177.1	171.3	155.8	138.2	130.7
55°	159.0	154.2	139.8	123.2	116.8
57.5°	142.5	137.7	124.3	108.8	103.5
60°	127.0	120.0	108.8	95.5	91.2
62.5°	109.9	104.6	95.0	83.8	89.1
65°	94.4	89.1	80.6	82.2	68.3
67.5°	77.4	74.7	67.2	59.8	57.6
70°	63.0	59.8	57.1	49.1	47.0
72.5°	50.2	47.0	43.2	38.9	37.3
75°	37.9	35.2	33.1	31.5	34.7
77.5°	26.1	25.1	23.5	21.9	21.3
80°	17.1	16.5	16.0	15.5	14.9
82.5°	10.1	10.1	10.1	10.1	10.1
85°	5.3	5.9	6.4	6.9	7.5
87.5°	3.2	3.2	3.7	4.3	4.8
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)