

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: P545123

Luminaire Tested: **FMR-12-1-LD4-2LO-50-UNV-81-88-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: P545123
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-50-UNV-81-88-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

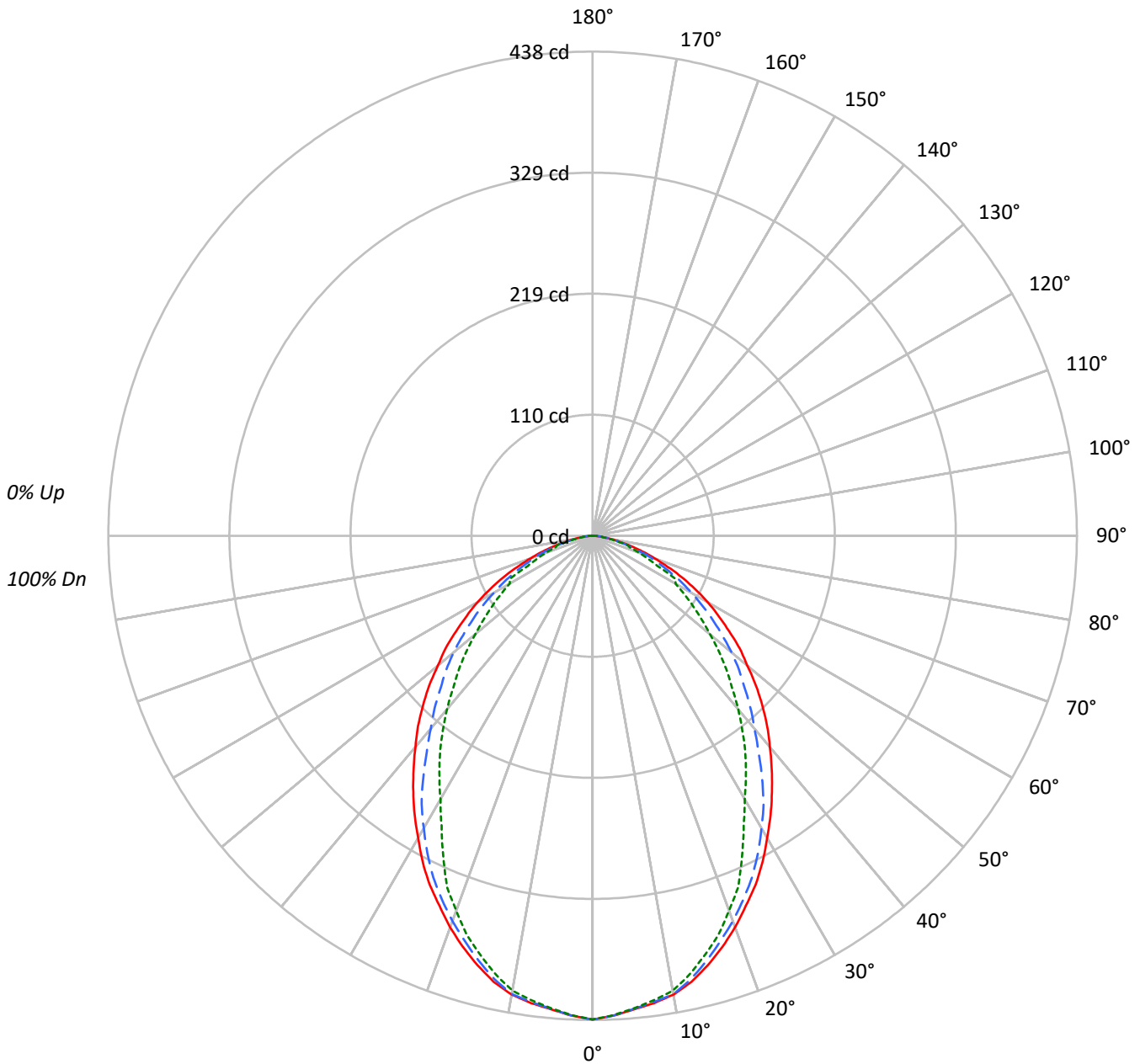
Lumens per Lamp: N/A
Luminaire Lumens: 859.0 lumens
Efficiency: N/A
Efficacy: 73.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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

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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°	4710	4710	4710
5°	4646	4641	4635
10°	4606	4600	4567
15°	4482	4436	4374
20°	4317	4247	4132
25°	4139	4049	3797
30°	3924	3797	3420
35°	3716	3510	3164
40°	3504	3198	2879
45°	3303	2956	2603
50°	3058	2745	2321
55°	2828	2487	2079
60°	2592	2222	1862
65°	2280	1946	1648
70°	1879	1703	1400
75°	1493	1306	1368
80°	1004	942	880
85°	630	753	877



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.7	4.7
10°-20°	111.8	13.0
20°-30°	154.8	18.0
30°-40°	165.0	19.2
40°-50°	150.6	17.5
50°-60°	117.9	13.7
60°-70°	76.9	8.9
70°-80°	34.1	4.0
80°-90°	7.3	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°	307.3	35.8
0°-40°	472.3	55.0
0°-60°	740.8	86.2
0°-90°	859.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	859.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	438	438	438	438	438	
5°	430	430	430	429	429	41
15°	402	402	398	394	392	113
25°	348	346	341	329	320	160
35°	283	281	267	247	241	177
45°	217	212	194	178	171	167
55°	151	146	132	117	111	135
65°	90	84	76	78	65	88
75°	36	33	31	30	33	39
85°	5	6	6	7	7	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	437.6	437.6	437.6	437.6	437.6
2.5°	434.5	434.5	434.5	434.0	434.0
5°	430.0	429.5	429.5	429.0	429.0
7.5°	426.4	425.9	425.4	424.9	423.9
10°	421.4	421.4	420.9	418.3	417.8
12.5°	413.3	412.8	410.8	407.2	406.2
15°	402.2	402.2	398.1	394.1	392.5
17.5°	390.0	389.5	384.4	380.4	378.4
20°	376.9	375.8	370.8	364.2	360.7
22.5°	362.2	362.2	356.1	347.5	344.0
25°	348.5	346.5	340.9	328.8	319.7
27.5°	332.9	329.8	323.7	306.5	295.9
30°	315.7	314.1	305.5	283.3	275.2
32.5°	299.5	296.9	287.8	264.6	258.0
35°	282.8	280.7	267.1	246.9	240.8
37.5°	266.1	263.5	246.4	230.2	222.6
40°	249.4	246.4	227.6	213.0	204.9
42.5°	233.7	229.7	211.4	195.8	186.7
45°	217.0	212.5	194.2	178.1	171.0
47.5°	200.3	196.3	179.6	162.9	154.8
50°	182.6	179.1	163.9	147.2	138.6
52.5°	167.9	162.4	147.7	131.0	123.9
55°	150.7	146.2	132.5	116.9	110.8
57.5°	135.1	130.5	117.9	103.2	98.1
60°	120.4	113.8	103.2	90.5	86.5
62.5°	104.2	99.1	90.0	79.4	84.5
65°	89.5	84.5	76.4	77.9	64.7
67.5°	73.3	70.8	63.7	56.7	54.6
70°	59.7	56.7	54.1	46.5	44.5
72.5°	47.6	44.5	41.0	36.9	35.4
75°	35.9	33.4	31.4	29.8	32.9
77.5°	24.8	23.8	22.3	20.7	20.2
80°	16.2	15.7	15.2	14.7	14.2
82.5°	9.6	9.6	9.6	9.6	9.6
85°	5.1	5.6	6.1	6.6	7.1
87.5°	3.0	3.0	3.5	4.0	4.6
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)