

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: P545091

Luminaire Tested: **FMR-12-1-LD4-2LO-40-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: P545091
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-81-88-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

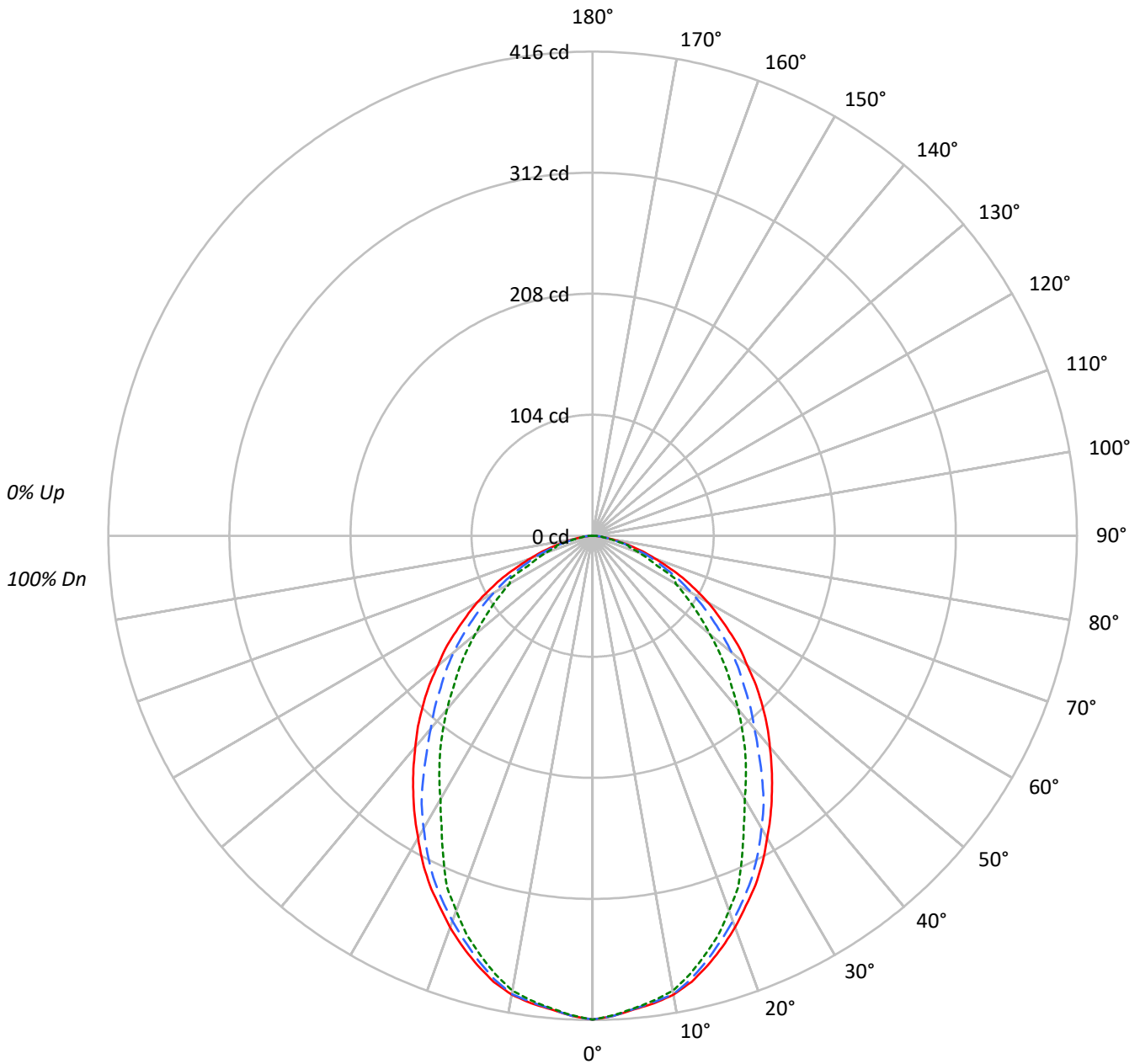
Lumens per Lamp: N/A
Luminaire Lumens: 816.0 lumens
Efficiency: N/A
Efficacy: 69.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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°	4475	4475	4475
5°	4414	4408	4403
10°	4375	4370	4338
15°	4257	4215	4155
20°	4101	4034	3924
25°	3932	3847	3607
30°	3727	3607	3249
35°	3529	3334	3005
40°	3329	3038	2734
45°	3137	2809	2472
50°	2905	2607	2205
55°	2687	2363	1974
60°	2463	2110	1770
65°	2167	1849	1566
70°	1784	1618	1331
75°	1418	1239	1298
80°	955	893	837
85°	593	716	827



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.7	4.7
10°-20°	106.2	13.0
20°-30°	147.0	18.0
30°-40°	156.8	19.2
40°-50°	143.0	17.5
50°-60°	112.0	13.7
60°-70°	73.0	8.9
70°-80°	32.3	4.0
80°-90°	6.9	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°	291.9	35.8
0°-40°	448.6	55.0
0°-60°	703.7	86.2
0°-90°	816.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	816.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	416	416	416	416	416	
5°	408	408	408	408	408	39
15°	382	382	378	374	373	107
25°	331	329	324	312	304	152
35°	269	267	254	234	229	168
45°	206	202	184	169	162	159
55°	143	139	126	111	105	128
65°	85	80	73	74	62	84
75°	34	32	30	28	31	37
85°	5	5	6	6	7	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	415.7	415.7	415.7	415.7	415.7
2.5°	412.8	412.8	412.8	412.3	412.3
5°	408.5	408.0	408.0	407.5	407.5
7.5°	405.1	404.6	404.1	403.6	402.7
10°	400.3	400.3	399.8	397.4	396.9
12.5°	392.6	392.1	390.2	386.8	385.9
15°	382.0	382.0	378.2	374.3	372.9
17.5°	370.5	370.0	365.2	361.4	359.4
20°	358.0	357.0	352.2	346.0	342.6
22.5°	344.1	344.1	338.3	330.1	326.8
25°	331.1	329.2	323.9	312.3	303.7
27.5°	316.2	313.3	307.5	291.2	281.1
30°	299.9	298.4	290.2	269.1	261.4
32.5°	284.5	282.1	273.4	251.3	245.1
35°	268.6	266.7	253.7	234.5	228.7
37.5°	252.8	250.4	234.0	218.6	211.4
40°	236.9	234.0	216.2	202.3	194.6
42.5°	222.0	218.2	200.9	186.0	177.3
45°	206.1	201.8	184.5	169.1	162.4
47.5°	190.3	186.4	170.6	154.7	147.0
50°	173.5	170.1	155.7	139.8	131.7
52.5°	159.5	154.3	140.3	124.5	117.7
55°	143.2	138.9	125.9	111.0	105.2
57.5°	128.3	124.0	112.0	98.0	93.2
60°	114.4	108.1	98.0	86.0	82.2
62.5°	99.0	94.2	85.5	75.4	80.2
65°	85.1	80.2	72.6	74.0	61.5
67.5°	69.7	67.3	60.5	53.8	51.9
70°	56.7	53.8	51.4	44.2	42.3
72.5°	45.2	42.3	38.9	35.1	33.6
75°	34.1	31.7	29.8	28.4	31.2
77.5°	23.5	22.6	21.1	19.7	19.2
80°	15.4	14.9	14.4	13.9	13.5
82.5°	9.1	9.1	9.1	9.1	9.1
85°	4.8	5.3	5.8	6.2	6.7
87.5°	2.9	2.9	3.4	3.8	4.3
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)