

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: P545475

Luminaire Tested: **FMR-12-2-LD4-1STD-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: P545475
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-LD4-1STD-40-UNV-81-88-EDD
Description: 1X2 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

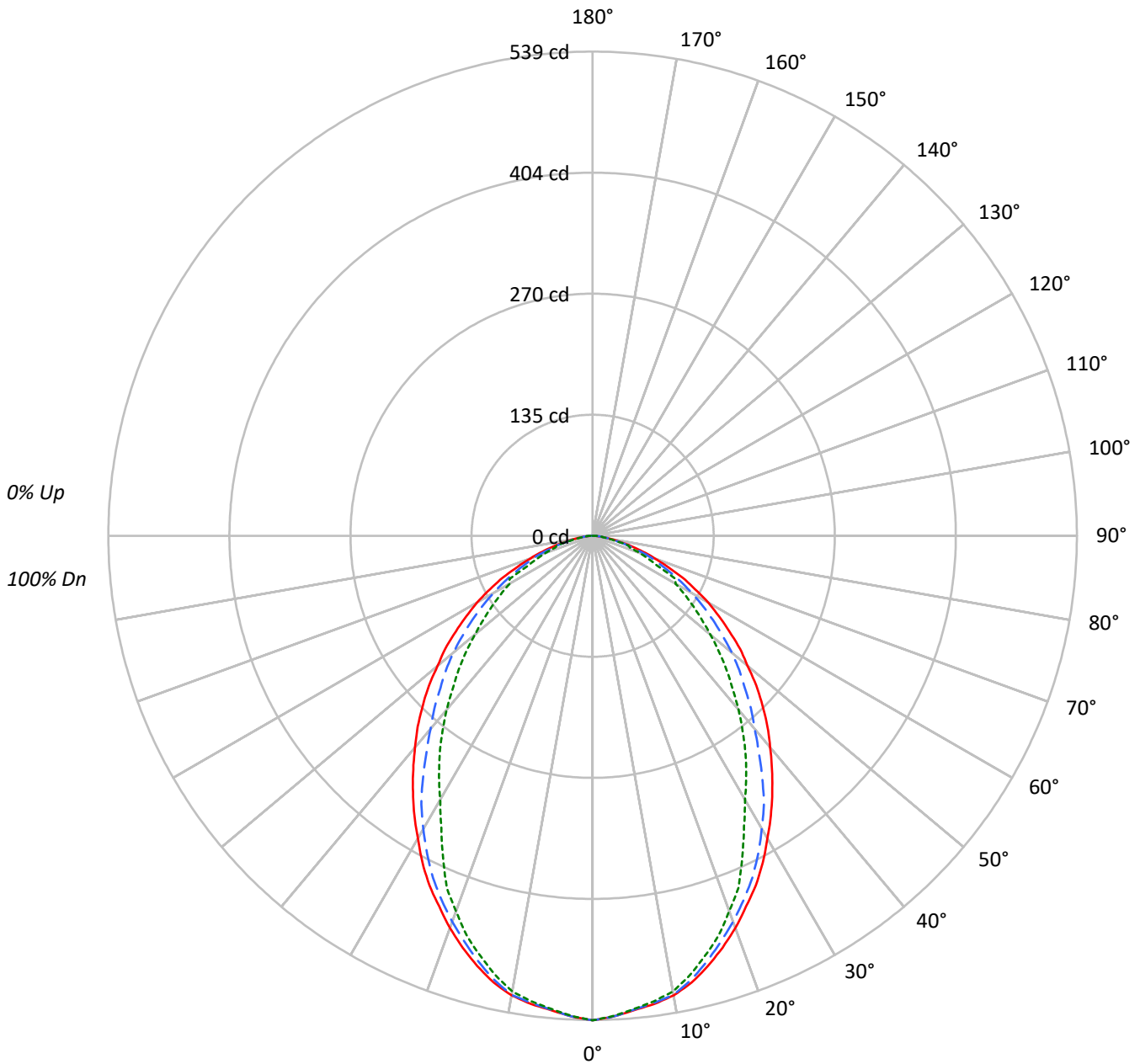
Lumens per Lamp: N/A
Luminaire Lumens: 1059.0 lumens
Efficiency: N/A
Efficacy: 63.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
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°	2903	2903	2903
5°	2864	2861	2857
10°	2839	2836	2815
15°	2763	2735	2696
20°	2661	2618	2546
25°	2552	2496	2340
30°	2418	2341	2109
35°	2290	2164	1950
40°	2160	1971	1775
45°	2036	1823	1604
50°	1885	1692	1431
55°	1743	1533	1282
60°	1597	1369	1147
65°	1406	1200	1016
70°	1158	1050	864
75°	921	805	842
80°	620	580	542
85°	383	463	537



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.2	4.7
10°-20°	137.8	13.0
20°-30°	190.8	18.0
30°-40°	203.4	19.2
40°-50°	185.6	17.5
50°-60°	145.4	13.7
60°-70°	94.8	8.9
70°-80°	42.0	4.0
80°-90°	9.0	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°	378.8	35.8
0°-40°	582.2	55.0
0°-60°	913.2	86.2
0°-90°	1059.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1059.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	539	539	539	539	539	
5°	530	530	530	529	529	50
15°	496	496	491	486	484	139
25°	430	427	420	405	394	197
35°	349	346	329	304	297	218
45°	268	262	240	220	211	206
55°	186	180	163	144	137	167
65°	110	104	94	96	80	109
75°	44	41	39	37	40	47
85°	6	7	8	8	9	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	539.4	539.4	539.4	539.4	539.4
2.5°	535.7	535.7	535.7	535.1	535.1
5°	530.1	529.5	529.5	528.8	528.8
7.5°	525.7	525.1	524.5	523.8	522.6
10°	519.5	519.5	518.9	515.7	515.1
12.5°	509.5	508.9	506.4	502.0	500.8
15°	495.8	495.8	490.8	485.8	483.9
17.5°	480.8	480.2	474.0	469.0	466.5
20°	464.6	463.4	457.1	449.0	444.6
22.5°	446.5	446.5	439.0	428.4	424.1
25°	429.7	427.2	420.3	405.4	394.1
27.5°	410.3	406.6	399.1	377.9	364.8
30°	389.1	387.3	376.7	349.2	339.3
32.5°	369.2	366.1	354.8	326.2	318.1
35°	348.6	346.1	329.3	304.3	296.8
37.5°	328.0	324.9	303.7	283.8	274.4
40°	307.4	303.7	280.6	262.5	252.6
42.5°	288.1	283.1	260.7	241.3	230.1
45°	267.5	261.9	239.5	219.5	210.8
47.5°	247.0	242.0	221.4	200.8	190.8
50°	225.1	220.8	202.1	181.5	170.9
52.5°	207.0	200.2	182.1	161.5	152.8
55°	185.8	180.2	163.4	144.1	136.6
57.5°	166.5	160.9	145.3	127.2	121.0
60°	148.4	140.3	127.2	111.6	106.6
62.5°	128.5	122.2	111.0	97.9	104.1
65°	110.4	104.1	94.2	96.0	79.8
67.5°	90.4	87.3	78.6	69.8	67.4
70°	73.6	69.8	66.7	57.4	54.9
72.5°	58.6	54.9	50.5	45.5	43.7
75°	44.3	41.2	38.7	36.8	40.5
77.5°	30.6	29.3	27.4	25.6	24.9
80°	20.0	19.3	18.7	18.1	17.5
82.5°	11.8	11.8	11.8	11.8	11.8
85°	6.2	6.9	7.5	8.1	8.7
87.5°	3.7	3.7	4.4	5.0	5.6
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)