

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: P544912

Luminaire Tested: **FMR-12-1-LD4-1STD-40-UNV-93-85-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: P544912
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-LD4-1STD-40-UNV-93-85-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

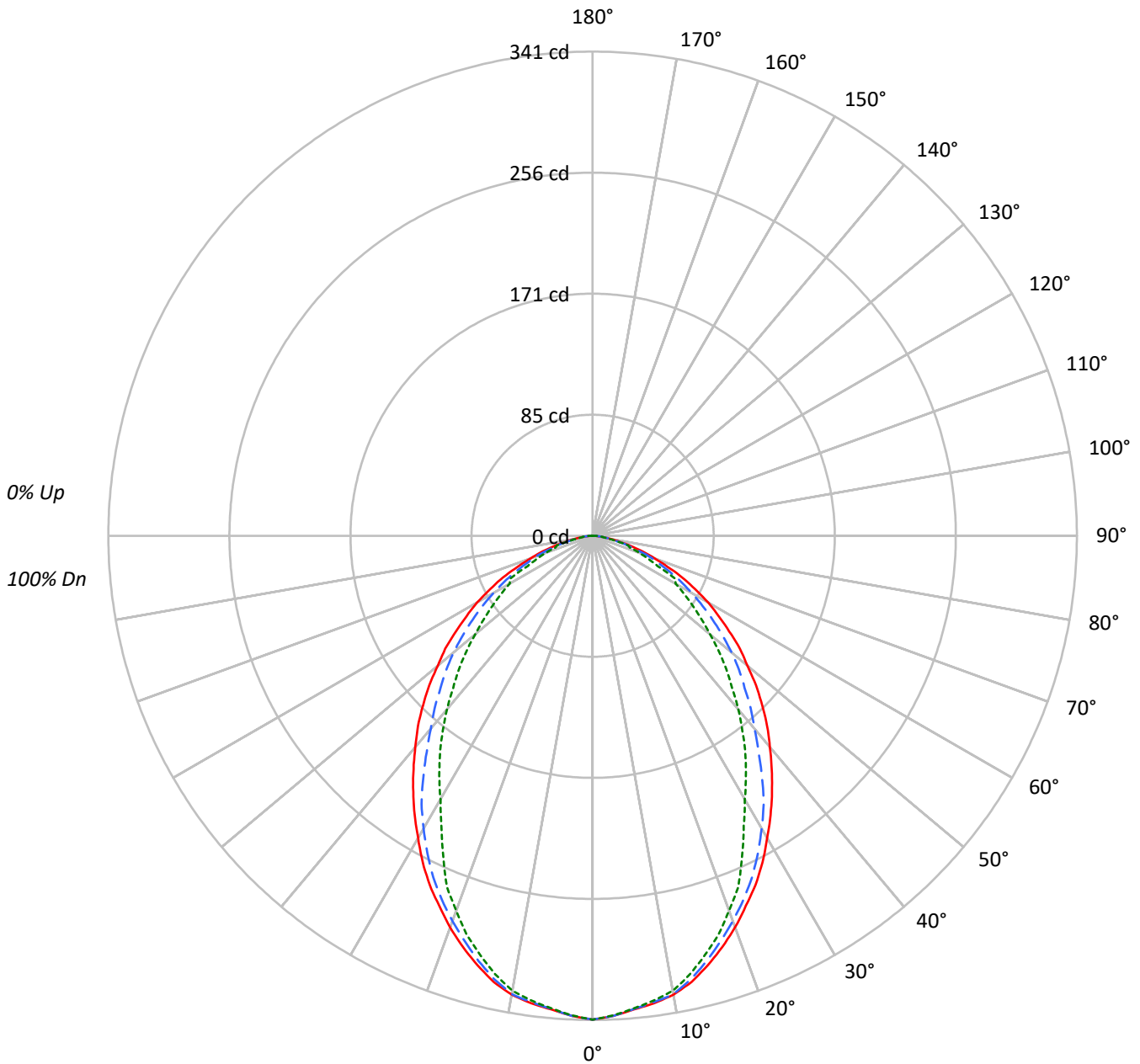
Lumens per Lamp: N/A
Luminaire Lumens: 669.0 lumens
Efficiency: N/A
Efficacy: 80.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 8.3
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°	3668	3668	3668
5°	3619	3614	3610
10°	3587	3583	3557
15°	3490	3456	3407
20°	3362	3308	3218
25°	3223	3153	2957
30°	3055	2958	2664
35°	2893	2733	2464
40°	2729	2491	2243
45°	2573	2303	2028
50°	2381	2137	1807
55°	2203	1937	1620
60°	2019	1731	1451
65°	1775	1515	1284
70°	1463	1328	1092
75°	1164	1015	1065
80°	781	731	682
85°	482	580	679



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.7	4.7
10°-20°	87.1	13.0
20°-30°	120.5	18.0
30°-40°	128.5	19.2
40°-50°	117.3	17.5
50°-60°	91.8	13.7
60°-70°	59.9	8.9
70°-80°	26.5	4.0
80°-90°	5.7	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°	239.3	35.8
0°-40°	367.8	55.0
0°-60°	576.9	86.2
0°-90°	669.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	669.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	341	341	341	341	341	
5°	335	334	334	334	334	32
15°	313	313	310	307	306	88
25°	271	270	266	256	249	125
35°	220	219	208	192	188	138
45°	169	166	151	139	133	130
55°	117	114	103	91	86	105
65°	70	66	60	61	50	69
75°	28	26	24	23	26	30
85°	4	4	5	5	6	5
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	340.8	340.8	340.8	340.8	340.8
2.5°	338.4	338.4	338.4	338.0	338.0
5°	334.9	334.5	334.5	334.1	334.1
7.5°	332.1	331.7	331.3	330.9	330.1
10°	328.2	328.2	327.8	325.8	325.4
12.5°	321.9	321.5	319.9	317.1	316.4
15°	313.2	313.2	310.1	306.9	305.7
17.5°	303.7	303.4	299.4	296.3	294.7
20°	293.5	292.7	288.8	283.7	280.9
22.5°	282.1	282.1	277.4	270.7	267.9
25°	271.4	269.9	265.5	256.1	249.0
27.5°	259.2	256.9	252.1	238.7	230.5
30°	245.8	244.7	238.0	220.6	214.3
32.5°	233.2	231.3	224.2	206.0	200.9
35°	220.2	218.7	208.0	192.3	187.5
37.5°	207.2	205.3	191.9	179.3	173.3
40°	194.2	191.9	177.3	165.9	159.6
42.5°	182.0	178.9	164.7	152.5	145.4
45°	169.0	165.5	151.3	138.7	133.2
47.5°	156.0	152.9	139.9	126.9	120.6
50°	142.2	139.5	127.6	114.6	107.9
52.5°	130.8	126.5	115.0	102.0	96.5
55°	117.4	113.9	103.2	91.0	86.3
57.5°	105.2	101.6	91.8	80.4	76.4
60°	93.8	88.6	80.4	70.5	67.4
62.5°	81.2	77.2	70.1	61.9	65.8
65°	69.7	65.8	59.5	60.7	50.4
67.5°	57.1	55.2	49.6	44.1	42.5
70°	46.5	44.1	42.2	36.2	34.7
72.5°	37.0	34.7	31.9	28.8	27.6
75°	28.0	26.0	24.4	23.2	25.6
77.5°	19.3	18.5	17.3	16.2	15.8
80°	12.6	12.2	11.8	11.4	11.0
82.5°	7.5	7.5	7.5	7.5	7.5
85°	3.9	4.3	4.7	5.1	5.5
87.5°	2.4	2.4	2.8	3.2	3.5
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)