

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: P545231

Luminaire Tested: **FMR-12-1-LD4-2STD-50-UNV-93-84-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: P545231
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-LD4-2STD-50-UNV-93-84-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

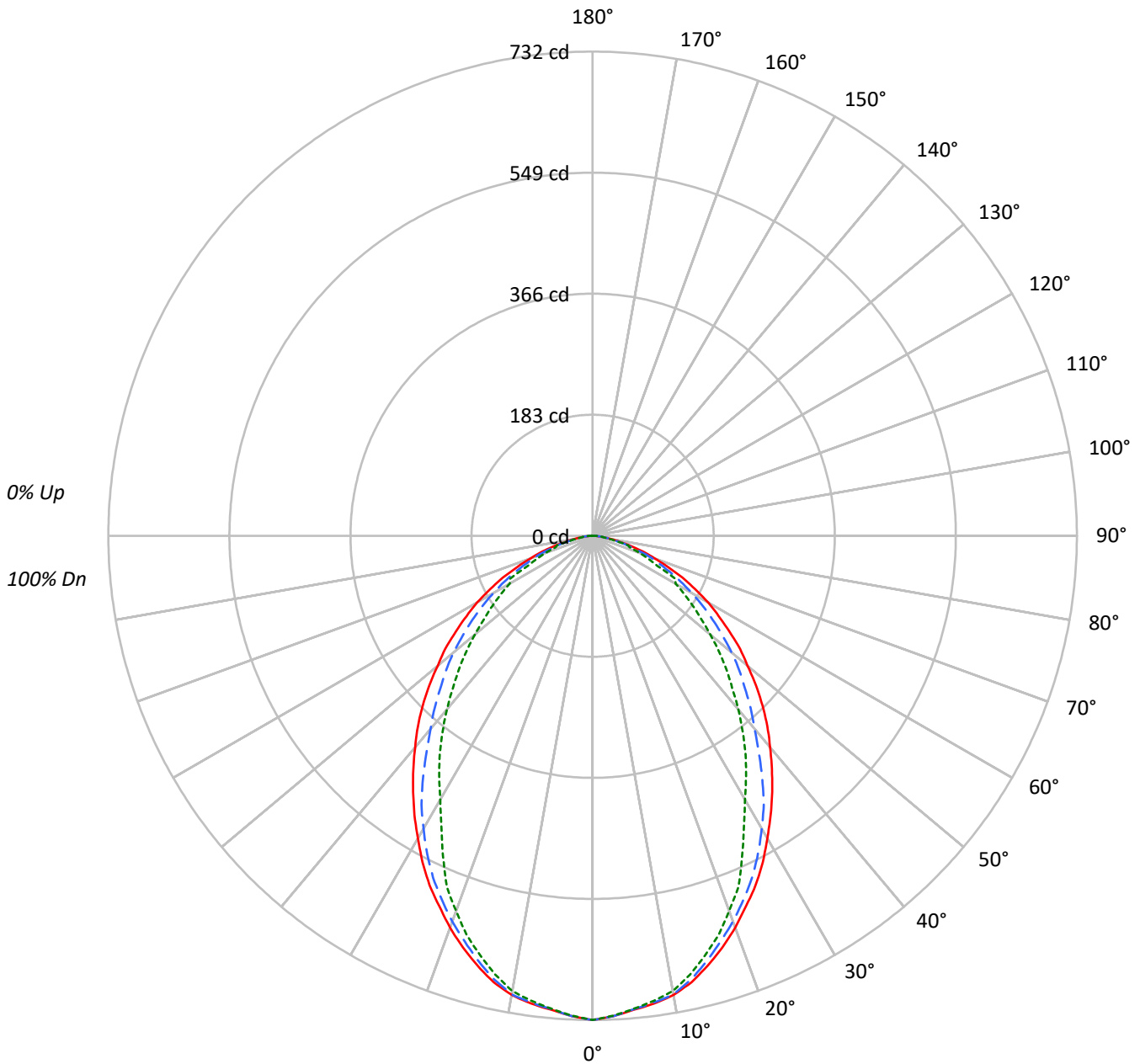
Lumens per Lamp: N/A
Luminaire Lumens: 1437.0 lumens
Efficiency: N/A
Efficacy: 86.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	7879	7879	7879
5°	7772	7762	7754
10°	7705	7696	7640
15°	7497	7422	7318
20°	7221	7105	6912
25°	6925	6774	6352
30°	6563	6353	5721
35°	6215	5871	5293
40°	5862	5351	4815
45°	5526	4947	4354
50°	5116	4592	3883
55°	4733	4160	3477
60°	4336	3716	3115
65°	3815	3255	2758
70°	3144	2848	2345
75°	2499	2183	2287
80°	1680	1574	1469
85°	1050	1260	1457



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.1	4.7
10°-20°	187.0	13.0
20°-30°	258.9	18.0
30°-40°	276.0	19.2
40°-50°	251.8	17.5
50°-60°	197.3	13.7
60°-70°	128.6	8.9
70°-80°	57.0	4.0
80°-90°	12.2	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°	514.0	35.8
0°-40°	790.1	55.0
0°-60°	1239.2	86.2
0°-90°	1437.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1437.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	732	732	732	732	732	
5°	719	718	718	718	718	68
15°	673	673	666	659	657	189
25°	583	580	570	550	535	268
35°	473	470	447	413	403	296
45°	363	355	325	298	286	280
55°	252	245	222	196	185	226
65°	150	141	128	130	108	148
75°	60	56	52	50	55	64
85°	8	9	10	11	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	732.0	732.0	732.0	732.0	732.0
2.5°	726.9	726.9	726.9	726.1	726.1
5°	719.3	718.4	718.4	717.6	717.6
7.5°	713.4	712.5	711.7	710.8	709.1
10°	704.9	704.9	704.1	699.8	699.0
12.5°	691.4	690.5	687.1	681.2	679.5
15°	672.8	672.8	666.0	659.2	656.7
17.5°	652.4	651.6	643.1	636.4	633.0
20°	630.4	628.7	620.3	609.3	603.4
22.5°	605.9	605.9	595.7	581.4	575.4
25°	583.1	579.7	570.4	550.0	534.8
27.5°	556.8	551.7	541.6	512.8	495.0
30°	528.0	525.5	511.1	473.9	460.3
32.5°	501.0	496.7	481.5	442.6	431.6
35°	473.0	469.7	446.8	413.0	402.8
37.5°	445.1	440.9	412.1	385.0	372.3
40°	417.2	412.1	380.8	356.3	342.7
42.5°	391.0	384.2	353.7	327.5	312.3
45°	363.0	355.4	325.0	297.9	286.0
47.5°	335.1	328.3	300.4	272.5	258.9
50°	305.5	299.6	274.2	246.3	231.9
52.5°	280.9	271.6	247.1	219.2	207.3
55°	252.2	244.6	221.7	195.5	185.3
57.5°	225.9	218.3	197.2	172.6	164.2
60°	201.4	190.4	172.6	151.5	144.7
62.5°	174.3	165.9	150.6	132.9	141.3
65°	149.8	141.3	127.8	130.3	108.3
67.5°	122.7	118.5	106.6	94.8	91.4
70°	99.9	94.8	90.5	77.9	74.5
72.5°	79.5	74.5	68.5	61.8	59.2
75°	60.1	55.9	52.5	49.9	55.0
77.5°	41.5	39.8	37.2	34.7	33.8
80°	27.1	26.2	25.4	24.5	23.7
82.5°	16.1	16.1	16.1	16.1	16.1
85°	8.5	9.3	10.2	11.0	11.8
87.5°	5.1	5.1	5.9	6.8	7.6
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)