

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: P545666

Luminaire Tested: **FMR-12-2-LD4-2LO-40-UNV-81-87-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: P545666
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-LD4-2LO-40-UNV-81-87-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

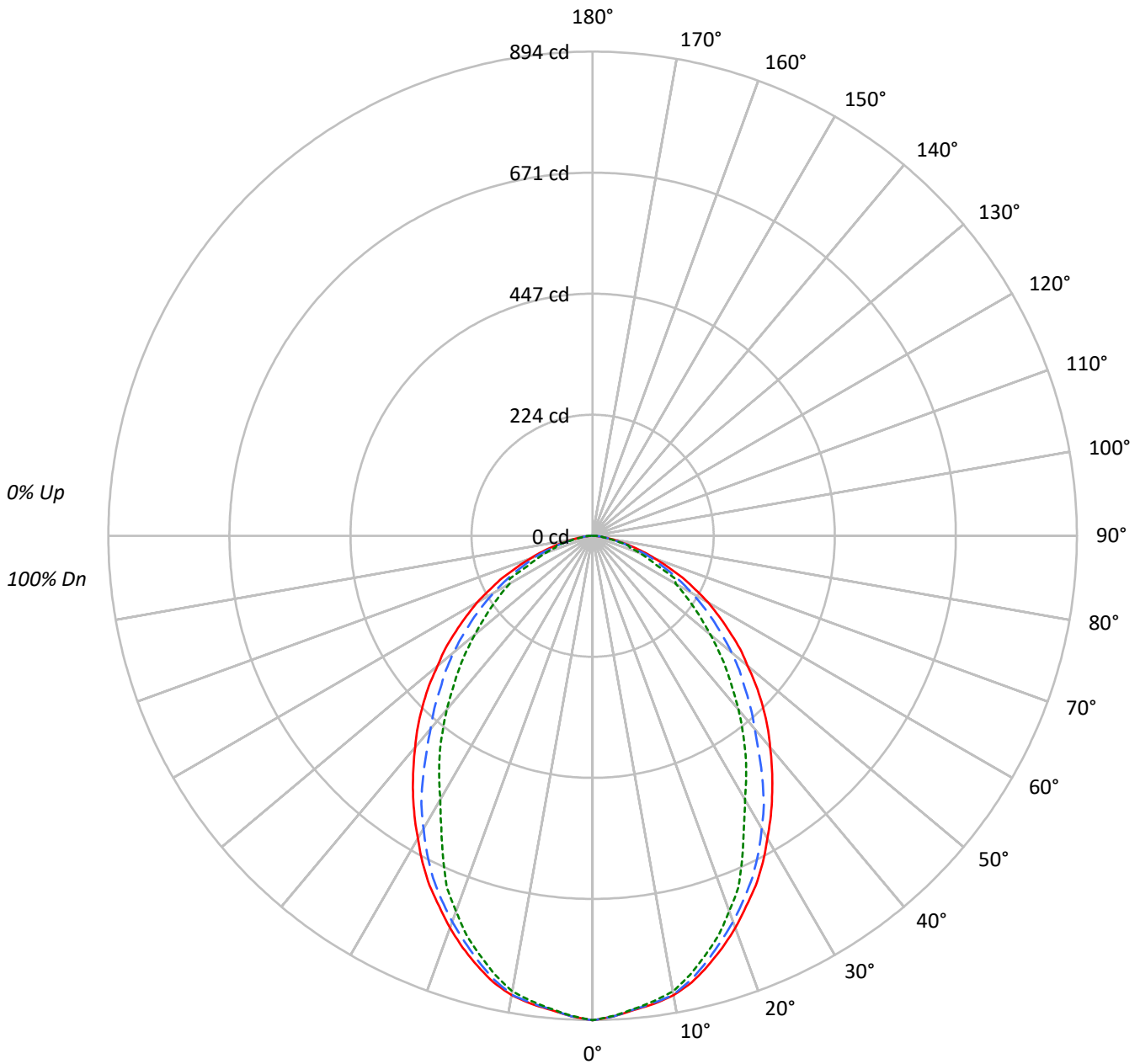
Lumens per Lamp: N/A
Luminaire Lumens: 1756.0 lumens
Efficiency: N/A
Efficacy: 75.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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					20					
RC	80					70					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°	4814	4814	4814
5°	4749	4743	4737
10°	4708	4702	4668
15°	4581	4534	4471
20°	4412	4341	4223
25°	4231	4139	3881
30°	4010	3882	3496
35°	3798	3587	3234
40°	3582	3269	2942
45°	3376	3022	2660
50°	3126	2805	2372
55°	2892	2542	2125
60°	2649	2271	1903
65°	2330	1988	1686
70°	1920	1740	1432
75°	1526	1333	1397
80°	1026	961	899
85°	636	766	895



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.3	4.7
10°-20°	228.5	13.0
20°-30°	316.4	18.0
30°-40°	337.3	19.2
40°-50°	307.7	17.5
50°-60°	241.1	13.7
60°-70°	157.1	8.9
70°-80°	69.6	4.0
80°-90°	14.9	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°	628.1	35.8
0°-40°	965.5	55.0
0°-60°	1514.3	86.2
0°-90°	1756.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1756.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	894	894	894	894	894	
5°	879	878	878	877	877	83
15°	822	822	814	806	802	231
25°	712	708	697	672	654	327
35°	578	574	546	505	492	361
45°	444	434	397	364	350	342
55°	308	299	271	239	226	276
65°	183	173	156	159	132	180
75°	73	68	64	61	67	79
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	894.5	894.5	894.5	894.5	894.5
2.5°	888.3	888.3	888.3	887.2	887.2
5°	879.0	877.9	877.9	876.9	876.9
7.5°	871.7	870.7	869.7	868.6	866.6
10°	861.4	861.4	860.4	855.2	854.2
12.5°	844.8	843.8	839.7	832.4	830.4
15°	822.1	822.1	813.8	805.6	802.4
17.5°	797.3	796.2	785.9	777.6	773.5
20°	770.4	768.3	758.0	744.5	737.3
22.5°	740.4	740.4	728.0	710.4	703.2
25°	712.5	708.3	697.0	672.2	653.5
27.5°	680.4	674.2	661.8	626.7	604.9
30°	645.3	642.2	624.6	579.1	562.5
32.5°	612.2	607.0	588.4	540.8	527.4
35°	578.1	573.9	546.0	504.6	492.2
37.5°	543.9	538.8	503.6	470.5	455.0
40°	509.8	503.6	465.3	435.3	418.8
42.5°	477.7	469.5	432.2	400.2	381.6
45°	443.6	434.3	397.1	364.0	349.5
47.5°	409.5	401.2	367.1	333.0	316.4
50°	373.3	366.1	335.0	300.9	283.3
52.5°	343.3	331.9	302.0	267.8	253.4
55°	308.2	298.9	270.9	238.9	226.5
57.5°	276.1	266.8	240.9	211.0	200.6
60°	246.1	232.7	211.0	185.1	176.8
62.5°	213.0	202.7	184.1	162.4	172.7
65°	183.0	172.7	156.1	159.2	132.4
67.5°	149.9	144.8	130.3	115.8	111.7
70°	122.0	115.8	110.6	95.1	91.0
72.5°	97.2	91.0	83.8	75.5	72.4
75°	73.4	68.2	64.1	61.0	67.2
77.5°	50.7	48.6	45.5	42.4	41.4
80°	33.1	32.1	31.0	30.0	29.0
82.5°	19.6	19.6	19.6	19.6	19.6
85°	10.3	11.4	12.4	13.4	14.5
87.5°	6.2	6.2	7.2	8.3	9.3
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)