

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: P545992

Luminaire Tested: **FMR-12-4-LD4-1LO-50-UNV-82-85-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: P545992
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-12-4-LD4-1LO-50-UNV-82-85-EDD
Description: 1X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

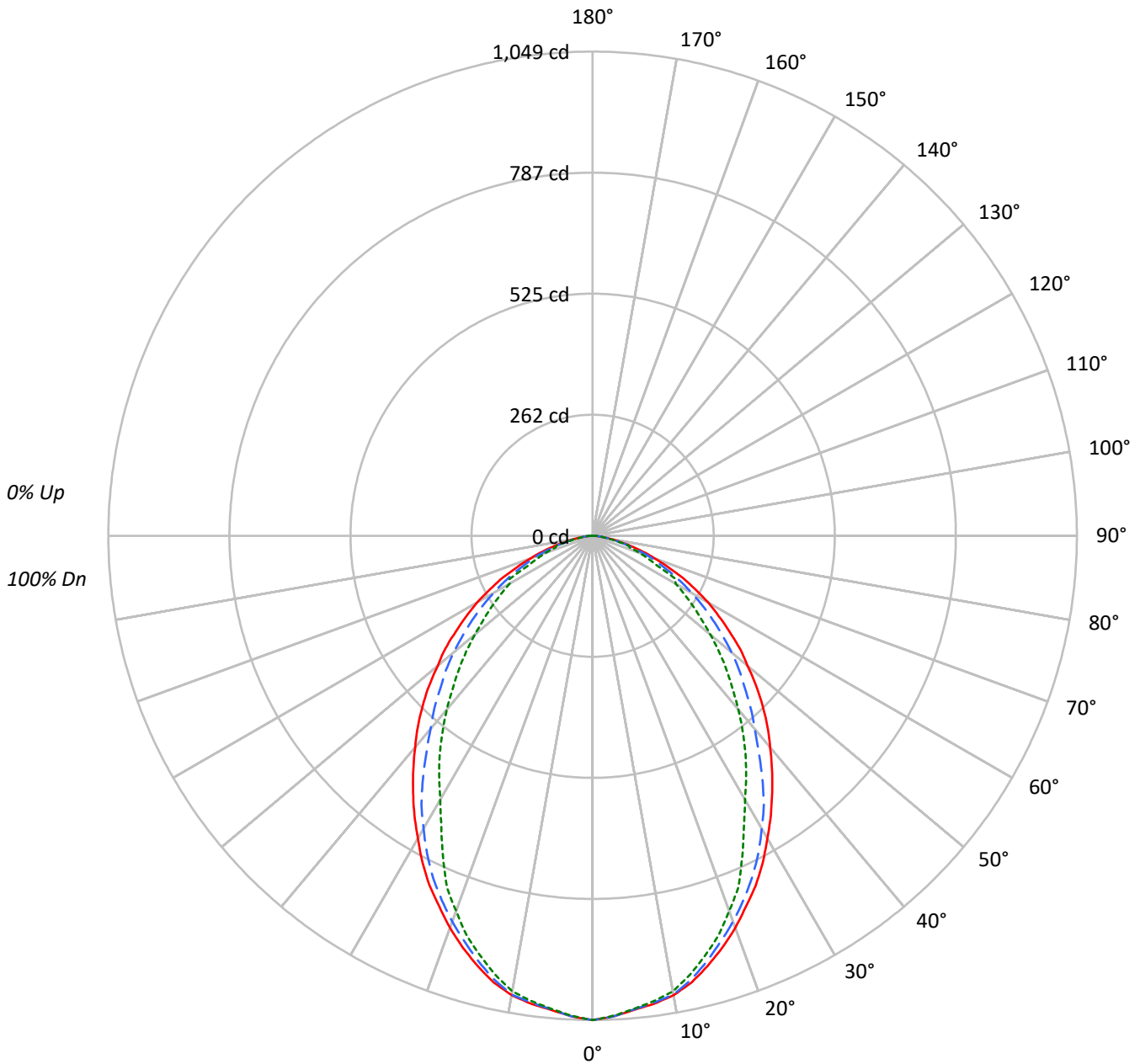
Lumens per Lamp: N/A
Luminaire Lumens: 2060.0 lumens
Efficiency: N/A
Efficacy: 88.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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				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	100	100	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2824	2824	2824
5°	2785	2782	2779
10°	2761	2758	2738
15°	2687	2660	2623
20°	2588	2546	2477
25°	2482	2428	2276
30°	2352	2277	2050
35°	2228	2104	1897
40°	2101	1918	1726
45°	1980	1773	1560
50°	1833	1645	1392
55°	1696	1491	1247
60°	1554	1332	1116
65°	1367	1167	989
70°	1126	1021	840
75°	895	782	820
80°	601	564	527
85°	374	451	525



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.7	4.7
10°-20°	268.1	13.0
20°-30°	371.1	18.0
30°-40°	395.7	19.2
40°-50°	361.0	17.5
50°-60°	282.8	13.7
60°-70°	184.3	8.9
70°-80°	81.7	4.0
80°-90°	17.5	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°	736.9	35.8
0°-40°	1132.6	55.0
0°-60°	1776.5	86.2
0°-90°	2060.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2060.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1049	1049	1049	1049	1049	
5°	1031	1030	1030	1029	1029	98
15°	964	964	955	945	941	271
25°	836	831	818	788	767	384
35°	678	673	640	592	577	424
45°	520	510	466	427	410	401
55°	362	351	318	280	266	324
65°	215	203	183	187	155	212
75°	86	80	75	72	79	92
85°	12	13	15	16	17	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1049.3	1049.3	1049.3	1049.3	1049.3
2.5°	1042.1	1042.1	1042.1	1040.8	1040.8
5°	1031.1	1029.9	1029.9	1028.7	1028.7
7.5°	1022.6	1021.4	1020.2	1019.0	1016.6
10°	1010.5	1010.5	1009.3	1003.2	1002.0
12.5°	991.1	989.9	985.0	976.6	974.1
15°	964.4	964.4	954.7	945.0	941.4
17.5°	935.3	934.1	922.0	912.3	907.4
20°	903.8	901.3	889.2	873.4	864.9
22.5°	868.6	868.6	854.0	833.4	824.9
25°	835.8	831.0	817.6	788.5	766.7
27.5°	798.2	790.9	776.4	735.1	709.7
30°	757.0	753.3	732.7	679.3	659.9
32.5°	718.2	712.1	690.3	634.5	618.7
35°	678.1	673.3	640.5	592.0	577.4
37.5°	638.1	632.0	590.8	552.0	533.8
40°	598.1	590.8	545.9	510.7	491.3
42.5°	560.5	550.8	507.1	469.5	447.6
45°	520.4	509.5	465.8	427.0	410.0
47.5°	480.4	470.7	430.7	390.6	371.2
50°	437.9	429.4	393.0	353.0	332.4
52.5°	402.8	389.4	354.2	314.2	297.2
55°	361.5	350.6	317.8	280.2	265.7
57.5°	323.9	313.0	282.7	247.5	235.3
60°	288.7	272.9	247.5	217.1	207.4
62.5°	249.9	237.8	215.9	190.5	202.6
65°	214.7	202.6	183.2	186.8	155.3
67.5°	175.9	169.8	152.9	135.9	131.0
70°	143.1	135.9	129.8	111.6	106.8
72.5°	114.0	106.8	98.3	88.6	84.9
75°	86.1	80.1	75.2	71.6	78.9
77.5°	59.4	57.0	53.4	49.7	48.5
80°	38.8	37.6	36.4	35.2	34.0
82.5°	23.0	23.0	23.0	23.0	23.0
85°	12.1	13.3	14.6	15.8	17.0
87.5°	7.3	7.3	8.5	9.7	10.9
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)