

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: P545674

Luminaire Tested: **FMR-12-2-LD4-2LO-40-UNV-82-87-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: P545674
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-82-87-EDD
Description: 1X2 FMR TROFFER WITH .187 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

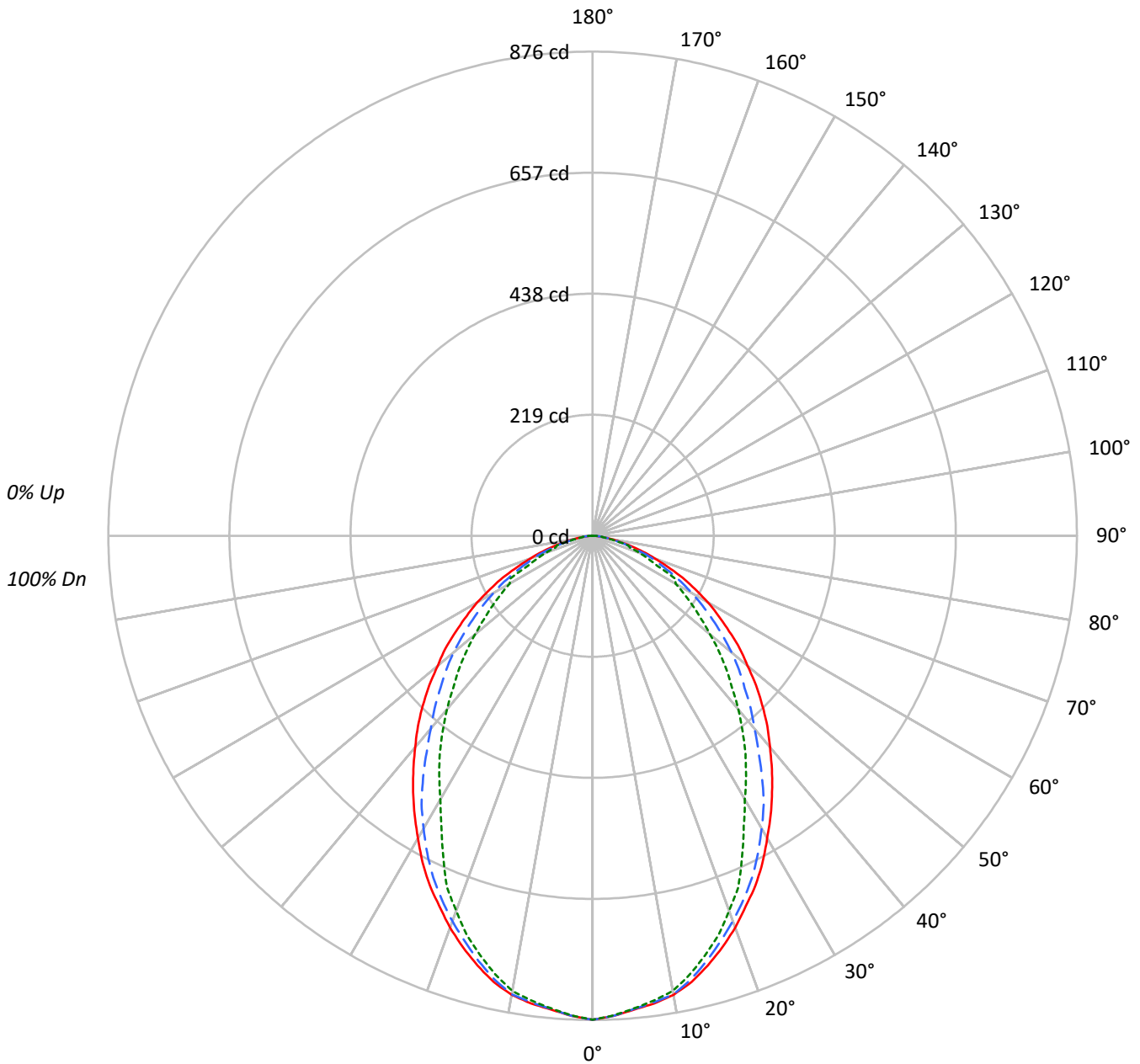
Lumens per Lamp: N/A
Luminaire Lumens: 1719.0 lumens
Efficiency: N/A
Efficacy: 73.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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									
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°	4712	4712	4712
5°	4649	4643	4638
10°	4608	4603	4570
15°	4484	4439	4377
20°	4320	4250	4134
25°	4142	4052	3799
30°	3926	3800	3422
35°	3718	3512	3166
40°	3507	3200	2881
45°	3306	2958	2605
50°	3059	2746	2323
55°	2831	2488	2080
60°	2593	2223	1863
65°	2282	1947	1650
70°	1880	1704	1402
75°	1495	1306	1368
80°	1004	942	877
85°	624	747	877



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.5	4.7
10°-20°	223.7	13.0
20°-30°	309.7	18.0
30°-40°	330.2	19.2
40°-50°	301.3	17.5
50°-60°	236.0	13.7
60°-70°	153.8	8.9
70°-80°	68.2	4.0
80°-90°	14.6	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°	614.9	35.8
0°-40°	945.1	55.0
0°-60°	1482.4	86.2
0°-90°	1719.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1719.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	876	876	876	876	876	
5°	860	859	859	858	858	82
15°	805	805	797	789	786	226
25°	698	693	682	658	640	320
35°	566	562	534	494	482	354
45°	434	425	389	356	342	335
55°	302	293	265	234	222	271
65°	179	169	153	156	130	177
75°	72	67	63	60	66	77
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°	875.6	875.6	875.6	875.6	875.6
2.5°	869.6	869.6	869.6	868.5	868.5
5°	860.5	859.4	859.4	858.4	858.4
7.5°	853.4	852.4	851.3	850.3	848.3
10°	843.2	843.2	842.2	837.2	836.2
12.5°	827.0	826.0	822.0	814.9	812.9
15°	804.8	804.8	796.7	788.6	785.5
17.5°	780.5	779.5	769.3	761.2	757.2
20°	754.2	752.1	742.0	728.9	721.8
22.5°	724.8	724.8	712.7	695.4	688.4
25°	697.5	693.4	682.3	658.0	639.8
27.5°	666.1	660.0	647.9	613.5	592.2
30°	631.7	628.6	611.4	566.9	550.7
32.5°	599.3	594.2	576.0	529.4	516.3
35°	565.9	561.8	534.5	494.0	481.9
37.5°	532.5	527.4	493.0	460.6	445.4
40°	499.1	493.0	455.5	426.2	410.0
42.5°	467.7	459.6	423.1	391.8	373.5
45°	434.3	425.2	388.7	356.3	342.2
47.5°	400.9	392.8	359.4	326.0	309.8
50°	365.4	358.4	328.0	294.6	277.4
52.5°	336.1	324.9	295.6	262.2	248.0
55°	301.7	292.6	265.2	233.8	221.7
57.5°	270.3	261.2	235.9	206.5	196.4
60°	240.9	227.8	206.5	181.2	173.1
62.5°	208.5	198.4	180.2	158.9	169.1
65°	179.2	169.1	152.9	155.9	129.6
67.5°	146.8	141.7	127.5	113.4	109.3
70°	119.5	113.4	108.3	93.1	89.1
72.5°	95.2	89.1	82.0	73.9	70.9
75°	71.9	66.8	62.8	59.7	65.8
77.5°	49.6	47.6	44.5	41.5	40.5
80°	32.4	31.4	30.4	29.4	28.3
82.5°	19.2	19.2	19.2	19.2	19.2
85°	10.1	11.1	12.1	13.2	14.2
87.5°	6.1	6.1	7.1	8.1	9.1
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)