

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: P545384

Luminaire Tested: **FMR-12-2-LD4-1LO-40-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: P545384
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-LD4-1LO-40-UNV-82-85-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC 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

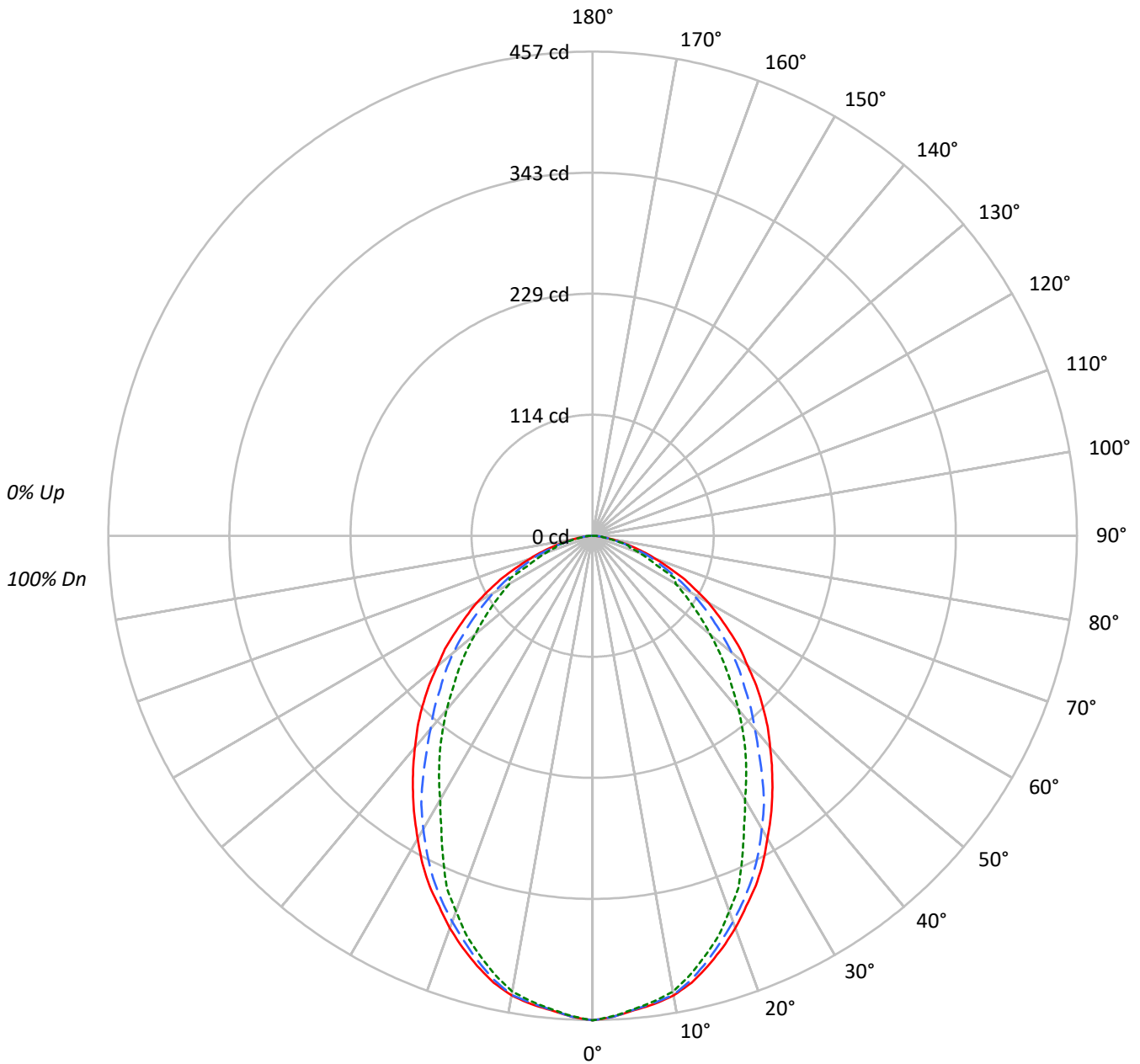
Lumens per Lamp: N/A
Luminaire Lumens: 898.0 lumens
Efficiency: N/A
Efficacy: 76.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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°	2462	2462	2462
5°	2428	2426	2422
10°	2407	2405	2387
15°	2342	2319	2287
20°	2257	2220	2159
25°	2164	2116	1985
30°	2051	1985	1788
35°	1942	1834	1654
40°	1832	1672	1505
45°	1727	1546	1360
50°	1598	1434	1213
55°	1479	1301	1087
60°	1355	1161	973
65°	1192	1018	862
70°	982	891	732
75°	780	682	715
80°	524	493	459
85°	327	389	457



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.6	4.7
10°-20°	116.9	13.0
20°-30°	161.8	18.0
30°-40°	172.5	19.2
40°-50°	157.4	17.5
50°-60°	123.3	13.7
60°-70°	80.3	8.9
70°-80°	35.6	4.0
80°-90°	7.6	0.8
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°	321.2	35.8
0°-40°	493.7	55.0
0°-60°	774.4	86.2
0°-90°	898.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	898.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	457	457	457	457	457	
5°	450	449	449	448	448	43
15°	420	420	416	412	410	118
25°	364	362	356	344	334	167
35°	296	294	279	258	252	185
45°	227	222	203	186	179	175
55°	158	153	139	122	116	141
65°	94	88	80	81	68	92
75°	38	35	33	31	34	40
85°	5	6	6	7	7	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	457.4	457.4	457.4	457.4	457.4
2.5°	454.3	454.3	454.3	453.7	453.7
5°	449.5	449.0	449.0	448.4	448.4
7.5°	445.8	445.3	444.7	444.2	443.2
10°	440.5	440.5	440.0	437.3	436.8
12.5°	432.0	431.5	429.4	425.7	424.6
15°	420.4	420.4	416.2	412.0	410.4
17.5°	407.7	407.2	401.9	397.7	395.6
20°	394.0	392.9	387.6	380.8	377.0
22.5°	378.6	378.6	372.3	363.3	359.6
25°	364.4	362.2	356.4	343.7	334.2
27.5°	348.0	344.8	338.4	320.5	309.4
30°	330.0	328.4	319.4	296.1	287.7
32.5°	313.1	310.4	300.9	276.6	269.7
35°	295.6	293.5	279.2	258.1	251.7
37.5°	278.2	275.5	257.5	240.6	232.7
40°	260.7	257.5	238.0	222.6	214.2
42.5°	244.3	240.1	221.0	204.7	195.1
45°	226.9	222.1	203.1	186.1	178.7
47.5°	209.4	205.2	187.7	170.3	161.8
50°	190.9	187.2	171.3	153.9	144.9
52.5°	175.6	169.8	154.4	137.0	129.6
55°	157.6	152.8	138.6	122.2	115.8
57.5°	141.2	136.4	123.2	107.9	102.6
60°	125.9	119.0	107.9	94.7	90.4
62.5°	108.9	103.6	94.1	83.0	88.3
65°	93.6	88.3	79.9	81.4	67.7
67.5°	76.7	74.0	66.6	59.2	57.1
70°	62.4	59.2	56.6	48.7	46.5
72.5°	49.7	46.5	42.8	38.6	37.0
75°	37.5	34.9	32.8	31.2	34.4
77.5°	25.9	24.9	23.3	21.7	21.2
80°	16.9	16.4	15.9	15.3	14.8
82.5°	10.0	10.0	10.0	10.0	10.0
85°	5.3	5.8	6.3	6.9	7.4
87.5°	3.2	3.2	3.7	4.2	4.8
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)