

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: P545352

Luminaire Tested: **FMR-12-2-LD4-1LO-35-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: P545352
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-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

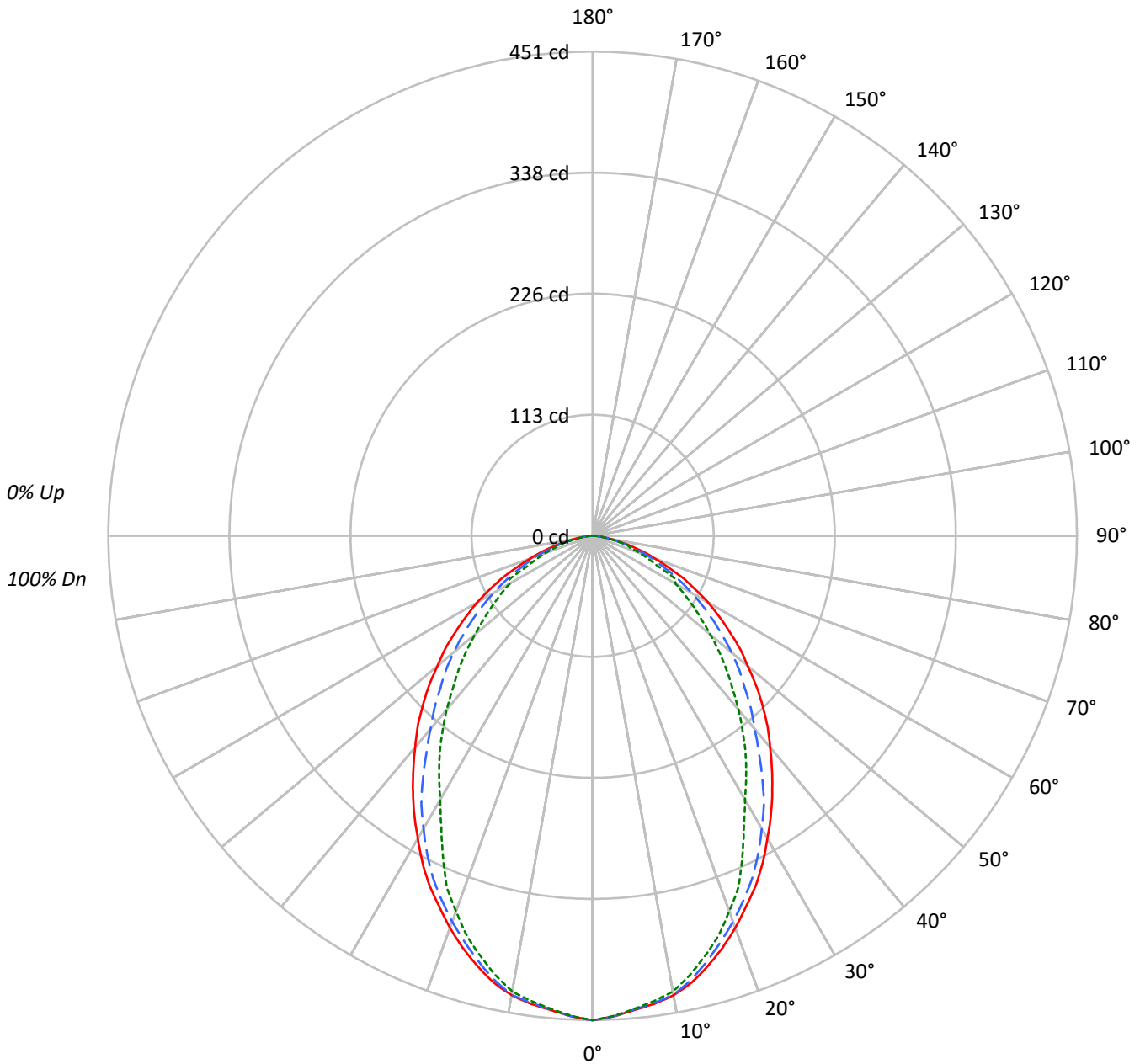
Lumens per Lamp: N/A
Luminaire Lumens: 886.0 lumens
Efficiency: N/A
Efficacy: 75.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	2429	2429	2429
5°	2396	2393	2390
10°	2375	2372	2355
15°	2311	2288	2256
20°	2226	2190	2131
25°	2135	2089	1958
30°	2023	1958	1764
35°	1917	1810	1632
40°	1807	1650	1485
45°	1703	1525	1343
50°	1577	1415	1197
55°	1459	1283	1072
60°	1337	1145	960
65°	1177	1004	851
70°	969	878	722
75°	769	672	705
80°	518	487	453
85°	321	389	451



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.0	4.7
10°-20°	115.3	13.0
20°-30°	159.6	18.0
30°-40°	170.2	19.2
40°-50°	155.3	17.5
50°-60°	121.6	13.7
60°-70°	79.3	8.9
70°-80°	35.1	4.0
80°-90°	7.5	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°	316.9	35.8
0°-40°	487.1	55.0
0°-60°	764.1	86.2
0°-90°	886.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	886.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	451	451	451	451	451	
5°	444	443	443	442	442	42
15°	415	415	411	406	405	117
25°	360	357	352	339	330	165
35°	292	290	276	255	248	182
45°	224	219	200	184	176	172
55°	156	151	137	120	114	139
65°	92	87	79	80	67	91
75°	37	34	32	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°	451.3	451.3	451.3	451.3	451.3
2.5°	448.2	448.2	448.2	447.7	447.7
5°	443.5	443.0	443.0	442.4	442.4
7.5°	439.8	439.3	438.8	438.3	437.2
10°	434.6	434.6	434.1	431.5	431.0
12.5°	426.3	425.8	423.7	420.0	419.0
15°	414.8	414.8	410.6	406.4	404.9
17.5°	402.3	401.8	396.5	392.4	390.3
20°	388.7	387.7	382.4	375.7	372.0
22.5°	373.6	373.6	367.3	358.4	354.8
25°	359.5	357.4	351.7	339.1	329.7
27.5°	343.3	340.2	333.9	316.2	305.2
30°	325.6	324.0	315.1	292.2	283.8
32.5°	308.9	306.3	296.9	272.9	266.1
35°	291.7	289.6	275.5	254.6	248.4
37.5°	274.4	271.8	254.1	237.4	229.6
40°	257.2	254.1	234.8	219.7	211.3
42.5°	241.1	236.9	218.1	201.9	192.5
45°	223.8	219.1	200.4	183.7	176.4
47.5°	206.6	202.4	185.2	168.0	159.7
50°	188.4	184.7	169.0	151.8	143.0
52.5°	173.2	167.5	152.4	135.1	127.8
55°	155.5	150.8	136.7	120.5	114.3
57.5°	139.3	134.6	121.6	106.4	101.2
60°	124.2	117.4	106.4	93.4	89.2
62.5°	107.5	102.3	92.9	81.9	87.1
65°	92.4	87.1	78.8	80.4	66.8
67.5°	75.7	73.0	65.7	58.4	56.3
70°	61.6	58.4	55.8	48.0	45.9
72.5°	49.0	45.9	42.3	38.1	36.5
75°	37.0	34.4	32.3	30.8	33.9
77.5°	25.6	24.5	23.0	21.4	20.9
80°	16.7	16.2	15.7	15.1	14.6
82.5°	9.9	9.9	9.9	9.9	9.9
85°	5.2	5.7	6.3	6.8	7.3
87.5°	3.1	3.1	3.7	4.2	4.7
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)