

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: P545385

Luminaire Tested: **FMR-12-2-LD4-1LO-40-UNV-82-86-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: P545385
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-82-86-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

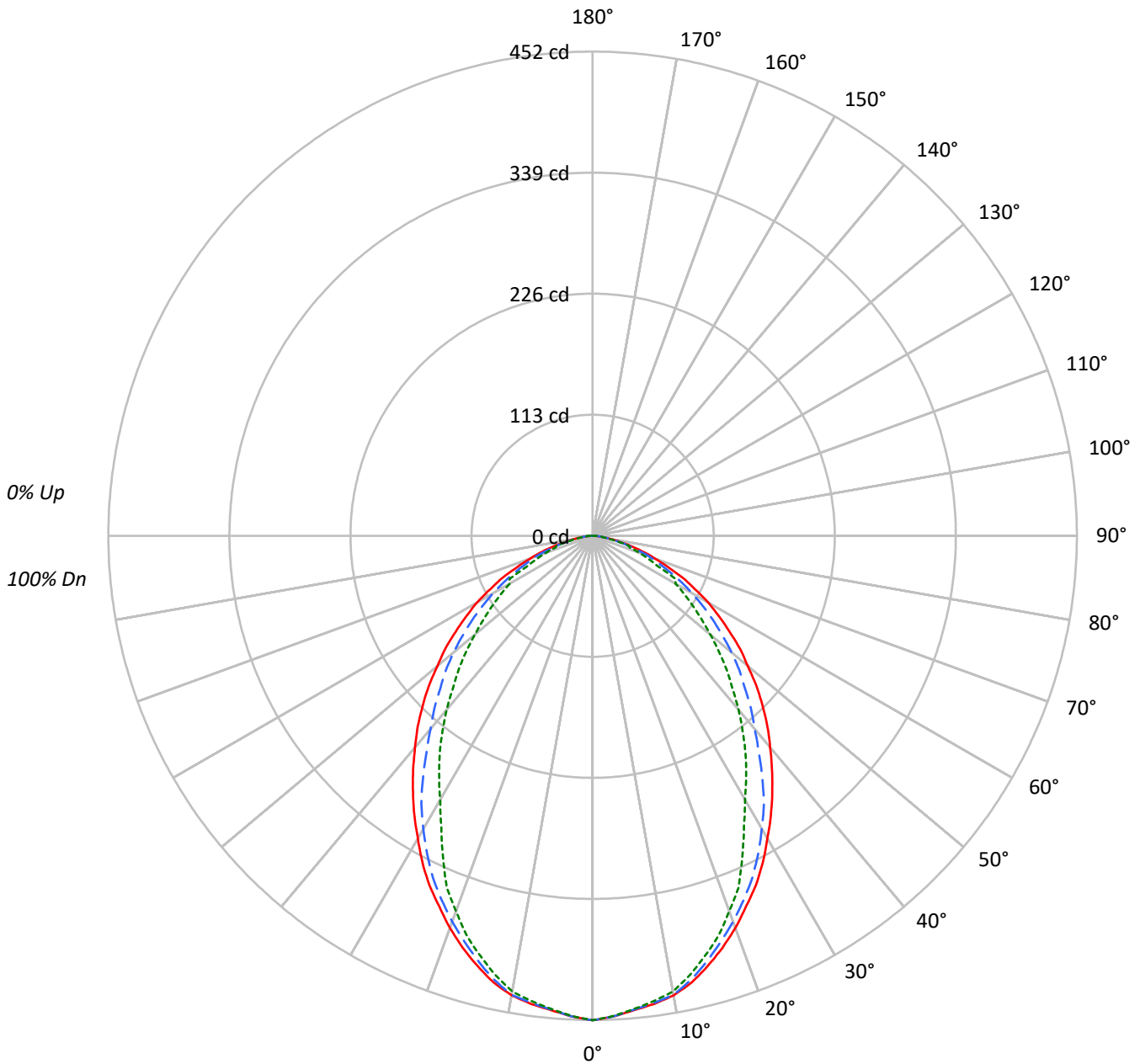
Lumens per Lamp: N/A
Luminaire Lumens: 888.0 lumens
Efficiency: N/A
Efficacy: 75.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	2434	2434	2434
5°	2401	2399	2395
10°	2381	2378	2360
15°	2316	2293	2261
20°	2231	2195	2135
25°	2140	2093	1963
30°	2028	1963	1768
35°	1920	1814	1635
40°	1811	1653	1488
45°	1707	1528	1346
50°	1581	1418	1200
55°	1462	1285	1074
60°	1340	1149	962
65°	1179	1006	852
70°	971	881	724
75°	771	674	707
80°	518	487	453
85°	321	389	451



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.1	4.7
10°-20°	115.6	13.0
20°-30°	160.0	18.0
30°-40°	170.6	19.2
40°-50°	155.6	17.5
50°-60°	121.9	13.7
60°-70°	79.5	8.9
70°-80°	35.2	4.0
80°-90°	7.6	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°	317.6	35.8
0°-40°	488.2	55.0
0°-60°	765.8	86.2
0°-90°	888.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	888.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	452	452	452	452	452	
5°	444	444	444	443	443	42
15°	416	416	412	407	406	117
25°	360	358	352	340	330	165
35°	292	290	276	255	249	183
45°	224	220	201	184	177	173
55°	156	151	137	121	114	140
65°	93	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°	452.3	452.3	452.3	452.3	452.3
2.5°	449.2	449.2	449.2	448.7	448.7
5°	444.5	444.0	444.0	443.4	443.4
7.5°	440.8	440.3	439.8	439.3	438.2
10°	435.6	435.6	435.1	432.5	431.9
12.5°	427.2	426.7	424.6	421.0	419.9
15°	415.7	415.7	411.5	407.4	405.8
17.5°	403.2	402.7	397.4	393.2	391.2
20°	389.6	388.5	383.3	376.5	372.8
22.5°	374.4	374.4	368.1	359.3	355.6
25°	360.3	358.2	352.5	339.9	330.5
27.5°	344.1	341.0	334.7	316.9	305.9
30°	326.3	324.7	315.9	292.8	284.5
32.5°	309.6	307.0	297.5	273.5	266.7
35°	292.3	290.2	276.1	255.2	248.9
37.5°	275.1	272.4	254.7	237.9	230.1
40°	257.8	254.7	235.3	220.2	211.8
42.5°	241.6	237.4	218.6	202.4	193.0
45°	224.3	219.6	200.8	184.1	176.8
47.5°	207.1	202.9	185.6	168.4	160.0
50°	188.8	185.1	169.4	152.2	143.3
52.5°	173.6	167.9	152.7	135.4	128.1
55°	155.8	151.1	137.0	120.8	114.5
57.5°	139.6	134.9	121.8	106.7	101.4
60°	124.5	117.7	106.7	93.6	89.4
62.5°	107.7	102.5	93.1	82.1	87.3
65°	92.6	87.3	79.0	80.5	66.9
67.5°	75.8	73.2	65.9	58.6	56.5
70°	61.7	58.6	56.0	48.1	46.0
72.5°	49.2	46.0	42.4	38.2	36.6
75°	37.1	34.5	32.4	30.9	34.0
77.5°	25.6	24.6	23.0	21.4	20.9
80°	16.7	16.2	15.7	15.2	14.6
82.5°	9.9	9.9	9.9	9.9	9.9
85°	5.2	5.8	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)