

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: P545349

Luminaire Tested: **FMR-12-2-LD4-1LO-35-UNV-81-96-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: P545349
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-81-96-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

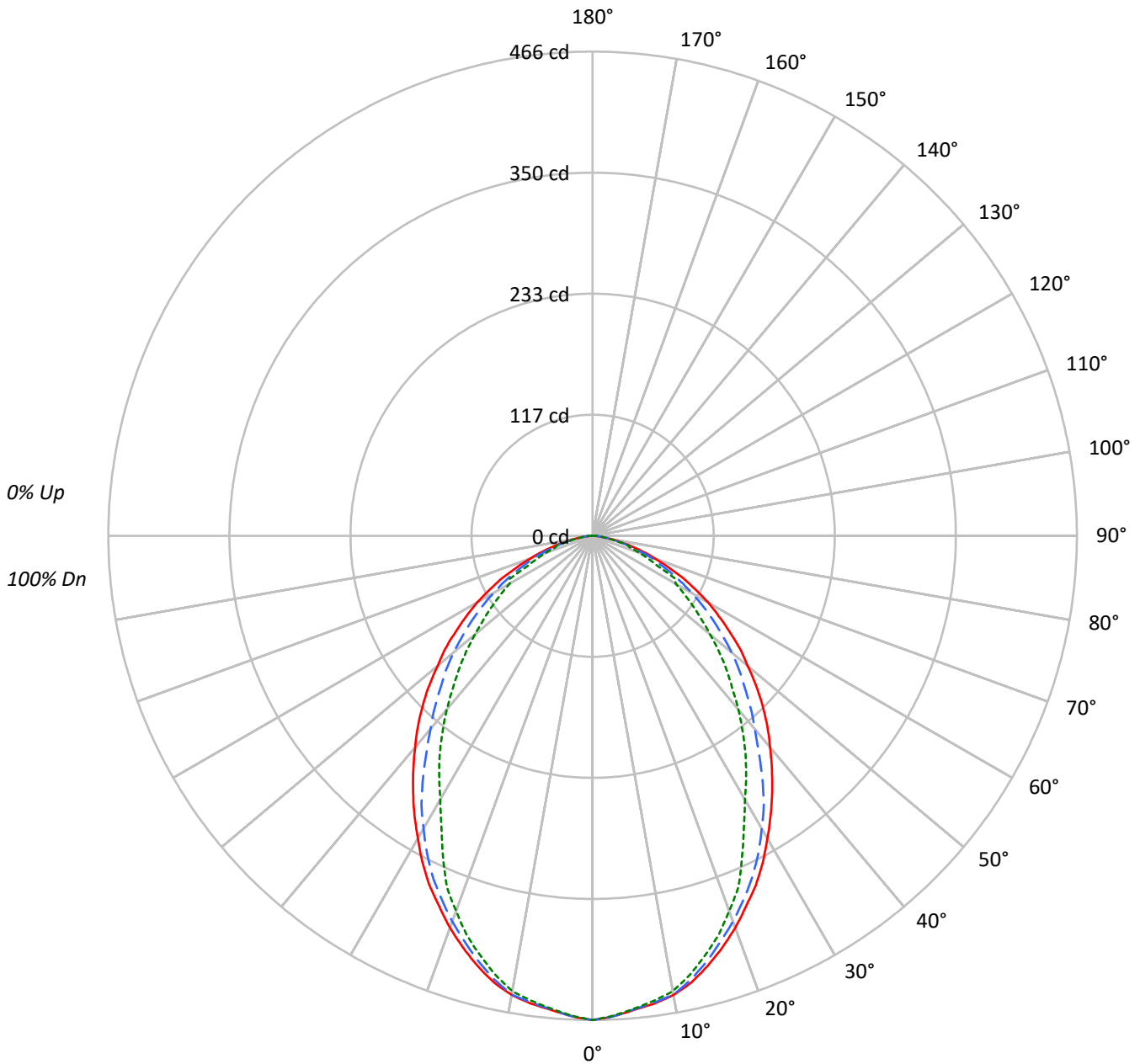
Lumens per Lamp: N/A
Luminaire Lumens: 915.0 lumens
Efficiency: N/A
Efficacy: 78.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
Input Voltage (V): NR
Input Current (A_{in}): 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°	2509	2509	2509
5°	2474	2472	2468
10°	2453	2450	2432
15°	2387	2363	2330
20°	2299	2262	2200
25°	2205	2157	2022
30°	2089	2023	1821
35°	1979	1869	1685
40°	1866	1704	1533
45°	1760	1575	1386
50°	1629	1462	1236
55°	1507	1325	1107
60°	1380	1183	991
65°	1215	1037	879
70°	1001	908	746
75°	796	695	728
80°	533	502	468
85°	333	401	463



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.4	4.7
10°-20°	119.1	13.0
20°-30°	164.8	18.0
30°-40°	175.8	19.2
40°-50°	160.4	17.5
50°-60°	125.6	13.7
60°-70°	81.9	8.9
70°-80°	36.3	4.0
80°-90°	7.8	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°	327.3	35.8
0°-40°	503.1	55.0
0°-60°	789.0	86.2
0°-90°	915.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	915.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	466	466	466	466	466	
5°	458	458	458	457	457	43
15°	428	428	424	420	418	120
25°	371	369	363	350	340	170
35°	301	299	284	263	256	188
45°	231	226	207	190	182	178
55°	161	156	141	124	118	144
65°	95	90	81	83	69	94
75°	38	36	33	32	35	41
85°	5	6	6	7	8	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	466.1	466.1	466.1	466.1	466.1
2.5°	462.9	462.9	462.9	462.3	462.3
5°	458.0	457.5	457.5	456.9	456.9
7.5°	454.2	453.7	453.2	452.6	451.5
10°	448.8	448.8	448.3	445.6	445.1
12.5°	440.2	439.7	437.5	433.8	432.7
15°	428.4	428.4	424.1	419.7	418.1
17.5°	415.4	414.9	409.5	405.2	403.0
20°	401.4	400.4	395.0	388.0	384.2
22.5°	385.8	385.8	379.3	370.2	366.4
25°	371.3	369.1	363.2	350.2	340.5
27.5°	354.6	351.3	344.9	326.5	315.2
30°	336.2	334.6	325.5	301.7	293.1
32.5°	319.0	316.3	306.6	281.8	274.8
35°	301.2	299.1	284.5	262.9	256.5
37.5°	283.4	280.7	262.4	245.2	237.1
40°	265.6	262.4	242.5	226.8	218.2
42.5°	248.9	244.6	225.2	208.5	198.8
45°	231.2	226.3	206.9	189.7	182.1
47.5°	213.4	209.1	191.3	173.5	164.9
50°	194.5	190.7	174.6	156.8	147.6
52.5°	178.9	173.0	157.3	139.6	132.0
55°	160.6	155.7	141.2	124.5	118.0
57.5°	143.9	139.0	125.5	109.9	104.5
60°	128.2	121.2	109.9	96.5	92.1
62.5°	111.0	105.6	95.9	84.6	90.0
65°	95.4	90.0	81.4	83.0	69.0
67.5°	78.1	75.4	67.9	60.3	58.2
70°	63.6	60.3	57.7	49.6	47.4
72.5°	50.7	47.4	43.6	39.3	37.7
75°	38.3	35.6	33.4	31.8	35.0
77.5°	26.4	25.3	23.7	22.1	21.6
80°	17.2	16.7	16.2	15.6	15.1
82.5°	10.2	10.2	10.2	10.2	10.2
85°	5.4	5.9	6.5	7.0	7.5
87.5°	3.2	3.2	3.8	4.3	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)