

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: P545388

Luminaire Tested: **FMR-12-2-LD4-1LO-40-UNV-82-94-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: P545388
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-82-94-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

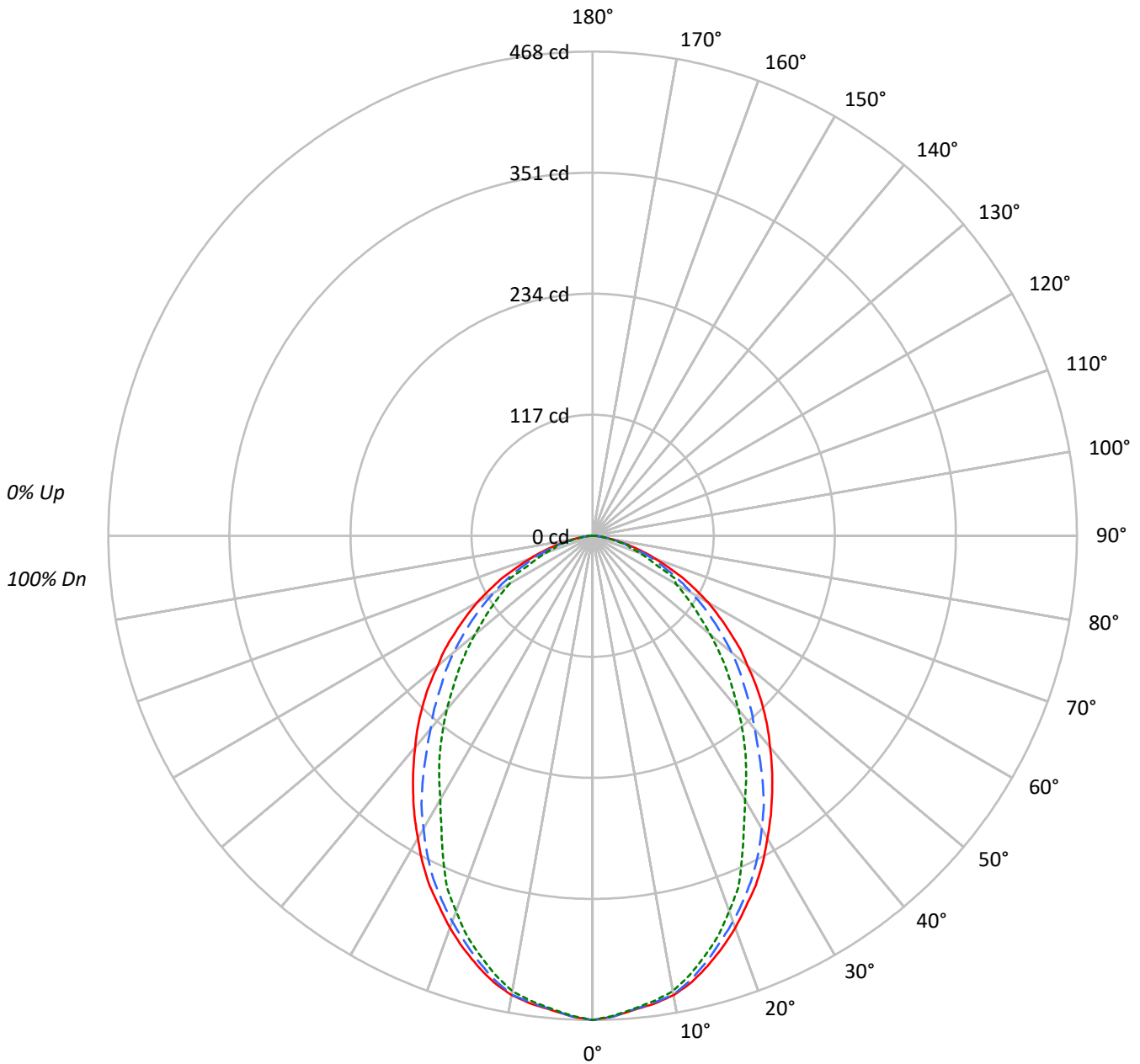
Lumens per Lamp: N/A
Luminaire Lumens: 919.0 lumens
Efficiency: N/A
Efficacy: 78.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	2519	2519	2519
5°	2485	2482	2479
10°	2464	2461	2443
15°	2397	2373	2340
20°	2309	2272	2210
25°	2214	2166	2031
30°	2099	2032	1830
35°	1987	1877	1692
40°	1874	1711	1540
45°	1767	1582	1392
50°	1636	1468	1242
55°	1514	1331	1112
60°	1386	1188	996
65°	1220	1040	883
70°	1006	911	749
75°	799	699	732
80°	536	502	471
85°	333	401	469



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.6	4.7
10°-20°	119.6	13.0
20°-30°	165.6	18.0
30°-40°	176.5	19.2
40°-50°	161.1	17.5
50°-60°	126.2	13.7
60°-70°	82.2	8.9
70°-80°	36.4	4.0
80°-90°	7.8	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°	328.7	35.8
0°-40°	505.3	55.0
0°-60°	792.5	86.2
0°-90°	919.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	919.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	468	468	468	468	468	
5°	460	460	460	459	459	44
15°	430	430	426	422	420	121
25°	373	371	365	352	342	171
35°	302	300	286	264	258	189
45°	232	227	208	190	183	179
55°	161	156	142	125	118	145
65°	96	90	82	83	69	94
75°	38	36	34	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°	468.1	468.1	468.1	468.1	468.1
2.5°	464.9	464.9	464.9	464.3	464.3
5°	460.0	459.5	459.5	458.9	458.9
7.5°	456.2	455.7	455.1	454.6	453.5
10°	450.8	450.8	450.3	447.6	447.0
12.5°	442.1	441.6	439.4	435.7	434.6
15°	430.2	430.2	425.9	421.6	420.0
17.5°	417.3	416.7	411.3	407.0	404.8
20°	403.2	402.1	396.7	389.7	385.9
22.5°	387.5	387.5	381.0	371.8	368.0
25°	372.9	370.7	364.8	351.8	342.0
27.5°	356.1	352.9	346.4	328.0	316.6
30°	337.7	336.1	326.9	303.1	294.4
32.5°	320.4	317.7	307.9	283.0	276.0
35°	302.5	300.4	285.7	264.1	257.6
37.5°	284.7	282.0	263.6	246.2	238.1
40°	266.8	263.6	243.5	227.8	219.2
42.5°	250.0	245.7	226.2	209.4	199.7
45°	232.2	227.3	207.8	190.5	182.9
47.5°	214.3	210.0	192.1	174.3	165.6
50°	195.4	191.6	175.3	157.5	148.3
52.5°	179.7	173.7	158.0	140.2	132.6
55°	161.3	156.4	141.8	125.0	118.5
57.5°	144.5	139.6	126.1	110.4	105.0
60°	128.8	121.8	110.4	96.9	92.5
62.5°	111.5	106.1	96.3	85.0	90.4
65°	95.8	90.4	81.7	83.3	69.3
67.5°	78.5	75.8	68.2	60.6	58.4
70°	63.9	60.6	57.9	49.8	47.6
72.5°	50.9	47.6	43.8	39.5	37.9
75°	38.4	35.7	33.6	31.9	35.2
77.5°	26.5	25.4	23.8	22.2	21.6
80°	17.3	16.8	16.2	15.7	15.2
82.5°	10.3	10.3	10.3	10.3	10.3
85°	5.4	6.0	6.5	7.0	7.6
87.5°	3.2	3.2	3.8	4.3	4.9
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)