

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: P545701

Luminaire Tested: **FMR-12-2-LD4-2LO-50-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: P545701
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-LD4-2LO-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

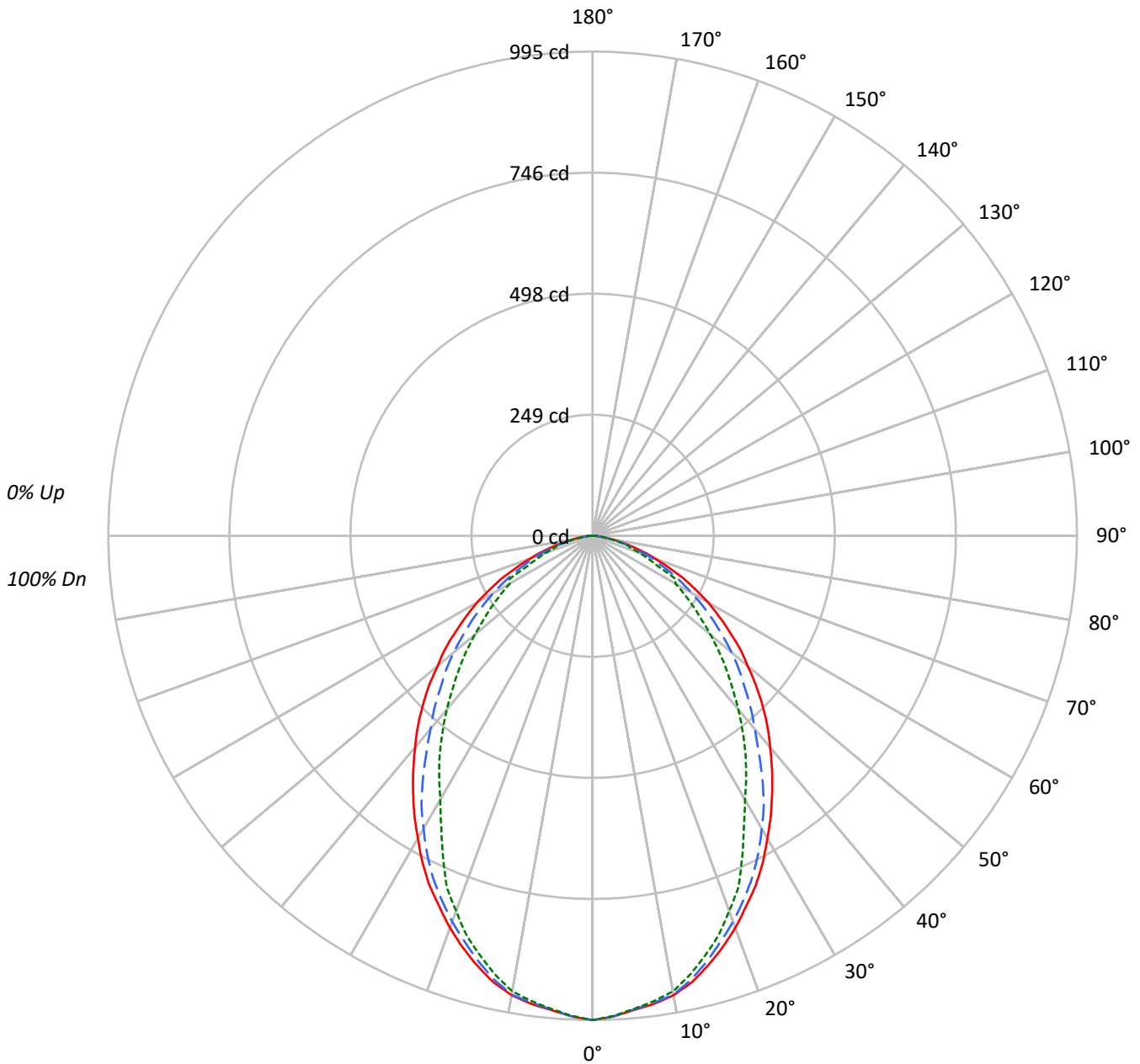
Lumens per Lamp: N/A
Luminaire Lumens: 1954.0 lumens
Efficiency: N/A
Efficacy: 83.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	5357	5357	5357
5°	5284	5278	5272
10°	5238	5232	5194
15°	5097	5046	4975
20°	4910	4831	4699
25°	4708	4606	4318
30°	4462	4319	3890
35°	4226	3992	3598
40°	3986	3638	3274
45°	3757	3363	2960
50°	3478	3121	2640
55°	3217	2829	2365
60°	2948	2526	2118
65°	2594	2213	1876
70°	2137	1937	1594
75°	1699	1483	1555
80°	1141	1069	998
85°	710	852	994



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.7	4.7
10°-20°	254.3	13.0
20°-30°	352.0	18.0
30°-40°	375.4	19.2
40°-50°	342.4	17.5
50°-60°	268.3	13.7
60°-70°	174.9	8.9
70°-80°	77.5	4.0
80°-90°	16.7	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°	699.0	35.8
0°-40°	1074.3	55.0
0°-60°	1685.0	86.2
0°-90°	1954.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1954.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	995	995	995	995	995	
5°	978	977	977	976	976	93
15°	915	915	906	896	893	257
25°	793	788	776	748	727	364
35°	643	639	608	562	548	402
45°	494	483	442	405	389	380
55°	343	332	302	266	252	308
65°	204	192	174	177	147	201
75°	82	76	71	68	75	88
85°	12	13	14	15	16	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	995.3	995.3	995.3	995.3	995.3
2.5°	988.4	988.4	988.4	987.3	987.3
5°	978.1	976.9	976.9	975.8	975.8
7.5°	970.0	968.9	967.7	966.6	964.3
10°	958.5	958.5	957.4	951.6	950.5
12.5°	940.1	939.0	934.4	926.3	924.0
15°	914.8	914.8	905.6	896.4	892.9
17.5°	887.2	886.0	874.5	865.3	860.7
20°	857.3	855.0	843.5	828.5	820.4
22.5°	823.9	823.9	810.1	790.5	782.5
25°	792.8	788.2	775.6	747.9	727.2
27.5°	757.1	750.2	736.4	697.3	673.2
30°	718.0	714.6	695.0	644.4	626.0
32.5°	681.2	675.5	654.7	601.8	586.8
35°	643.2	638.6	607.6	561.5	547.7
37.5°	605.3	599.5	560.4	523.6	506.3
40°	567.3	560.4	517.8	484.4	466.0
42.5°	531.6	522.4	481.0	445.3	424.6
45°	493.6	483.3	441.9	405.0	388.9
47.5°	455.7	446.5	408.5	370.5	352.1
50°	415.4	407.3	372.8	334.8	315.3
52.5°	382.0	369.4	336.0	298.0	281.9
55°	342.9	332.5	301.5	265.8	252.0
57.5°	307.2	296.9	268.1	234.7	223.2
60°	273.9	258.9	234.7	206.0	196.8
62.5°	237.0	225.5	204.8	180.7	192.2
65°	203.7	192.2	173.8	177.2	147.3
67.5°	166.8	161.1	145.0	128.9	124.3
70°	135.8	128.9	123.1	105.9	101.3
72.5°	108.2	101.3	93.2	84.0	80.5
75°	81.7	75.9	71.3	67.9	74.8
77.5°	56.4	54.1	50.6	47.2	46.0
80°	36.8	35.7	34.5	33.4	32.2
82.5°	21.9	21.9	21.9	21.9	21.9
85°	11.5	12.7	13.8	15.0	16.1
87.5°	6.9	6.9	8.1	9.2	10.4
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)