

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: P545397

Luminaire Tested: **FMR-12-2-LD4-1LO-40-UNV-93-96-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: P545397
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-93-96-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

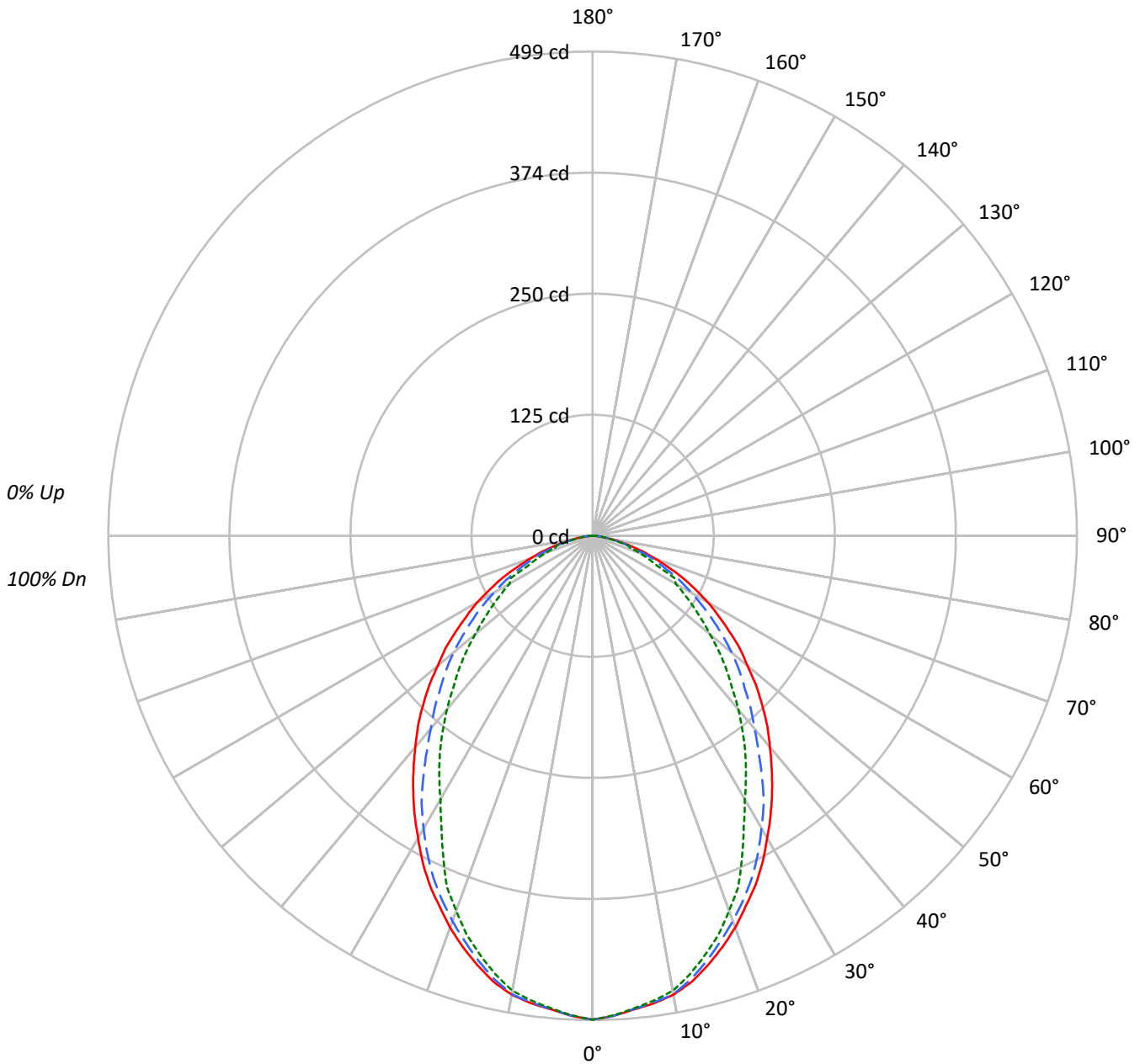
Lumens per Lamp: N/A
Luminaire Lumens: 979.0 lumens
Efficiency: N/A
Efficacy: 83.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
Input Voltage (V): NR
Input Current (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°	2684	2684	2684
5°	2647	2645	2641
10°	2624	2622	2602
15°	2554	2528	2493
20°	2460	2420	2355
25°	2359	2308	2164
30°	2235	2164	1949
35°	2118	2000	1803
40°	1997	1822	1640
45°	1882	1685	1483
50°	1742	1564	1323
55°	1612	1417	1185
60°	1477	1266	1061
65°	1299	1109	940
70°	1070	971	798
75°	850	742	780
80°	570	536	499
85°	358	426	500



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.4	4.7
10°-20°	127.4	13.0
20°-30°	176.4	18.0
30°-40°	188.1	19.2
40°-50°	171.6	17.5
50°-60°	134.4	13.7
60°-70°	87.6	8.9
70°-80°	38.8	4.0
80°-90°	8.3	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°	350.2	35.8
0°-40°	538.3	55.0
0°-60°	844.2	86.2
0°-90°	979.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	979.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	499	499	499	499	499	
5°	490	490	490	489	489	47
15°	458	458	454	449	447	129
25°	397	395	389	375	364	182
35°	322	320	304	281	274	201
45°	247	242	221	203	195	191
55°	172	167	151	133	126	154
65°	102	96	87	89	74	101
75°	41	38	36	34	38	44
85°	6	6	7	8	8	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	498.7	498.7	498.7	498.7	498.7
2.5°	495.2	495.2	495.2	494.7	494.7
5°	490.0	489.5	489.5	488.9	488.9
7.5°	486.0	485.4	484.9	484.3	483.1
10°	480.2	480.2	479.7	476.8	476.2
12.5°	471.0	470.4	468.1	464.1	462.9
15°	458.3	458.3	453.7	449.1	447.4
17.5°	444.5	443.9	438.2	433.5	431.2
20°	429.5	428.4	422.6	415.1	411.1
22.5°	412.8	412.8	405.9	396.1	392.0
25°	397.2	394.9	388.6	374.7	364.4
27.5°	379.3	375.9	369.0	349.4	337.3
30°	359.7	358.0	348.2	322.9	313.6
32.5°	341.3	338.4	328.0	301.5	294.0
35°	322.3	320.0	304.4	281.3	274.4
37.5°	303.2	300.4	280.8	262.3	253.7
40°	284.2	280.8	259.4	242.7	233.5
42.5°	266.4	261.7	241.0	223.1	212.7
45°	247.3	242.1	221.4	202.9	194.9
47.5°	228.3	223.7	204.7	185.6	176.4
50°	208.1	204.1	186.8	167.8	158.0
52.5°	191.4	185.1	168.3	149.3	141.2
55°	171.8	166.6	151.0	133.2	126.3
57.5°	153.9	148.7	134.3	117.6	111.8
60°	137.2	129.7	117.6	103.2	98.6
62.5°	118.8	113.0	102.6	90.5	96.3
65°	102.0	96.3	87.1	88.8	73.8
67.5°	83.6	80.7	72.6	64.6	62.3
70°	68.0	64.6	61.7	53.0	50.7
72.5°	54.2	50.7	46.7	42.1	40.4
75°	40.9	38.1	35.7	34.0	37.5
77.5°	28.2	27.1	25.4	23.6	23.1
80°	18.4	17.9	17.3	16.7	16.1
82.5°	11.0	11.0	11.0	11.0	11.0
85°	5.8	6.3	6.9	7.5	8.1
87.5°	3.5	3.5	4.0	4.6	5.2
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)