

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: P545923

Luminaire Tested: **FMR-12-4-LD4-1LO-35-UNV-81-88-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: P545923
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-12-4-LD4-1LO-35-UNV-81-88-EDD
Description: 1X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

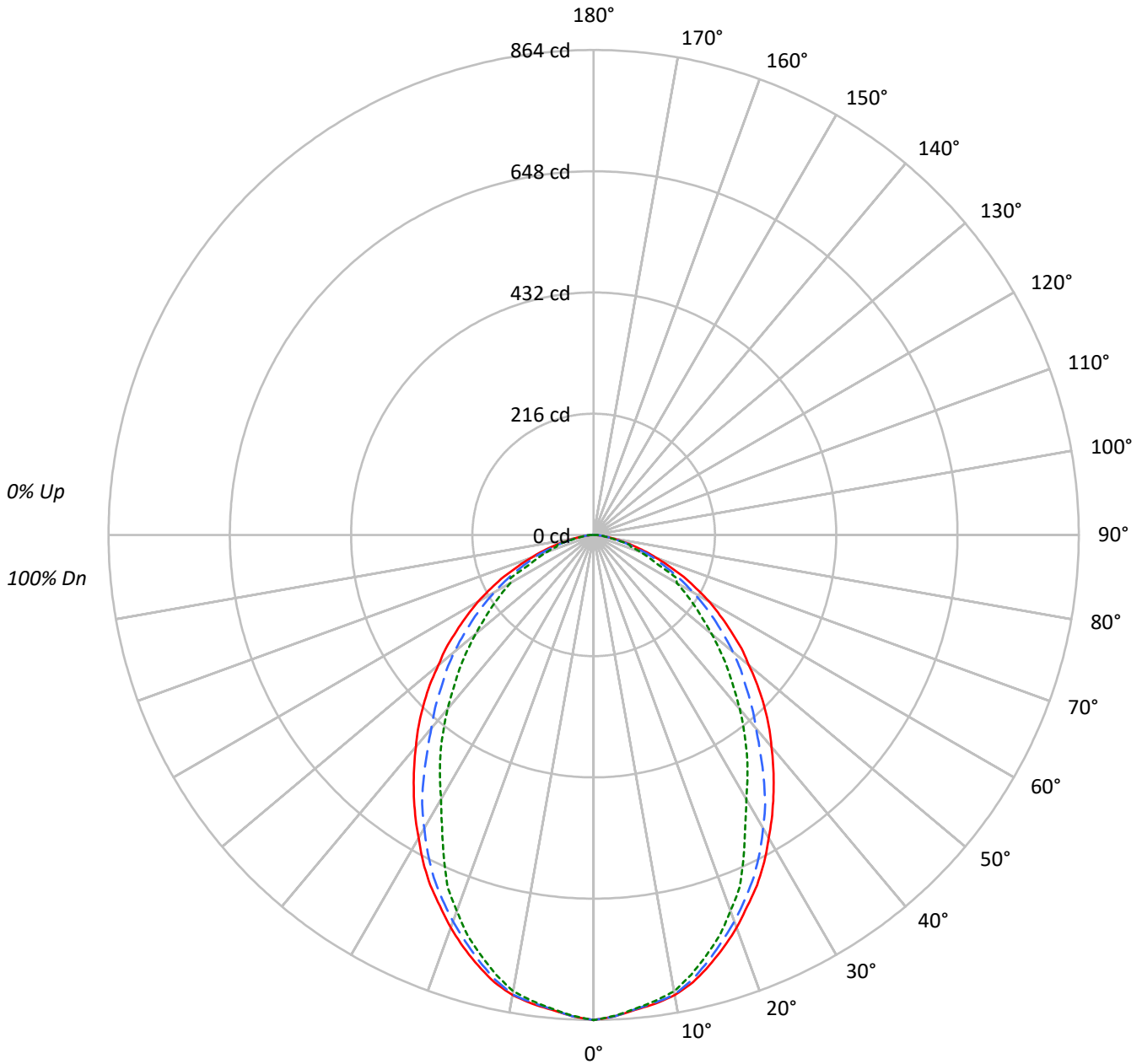
Lumens per Lamp: N/A
Luminaire Lumens: 1697.0 lumens
Efficiency: N/A
Efficacy: 72.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	2326	2326	2326
5°	2294	2292	2289
10°	2275	2272	2256
15°	2213	2191	2160
20°	2132	2098	2040
25°	2044	2000	1875
30°	1938	1876	1689
35°	1835	1734	1563
40°	1731	1580	1422
45°	1631	1460	1286
50°	1510	1356	1146
55°	1397	1228	1027
60°	1280	1097	920
65°	1126	961	814
70°	928	841	692
75°	738	645	676
80°	496	465	434
85°	309	371	432



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.5	4.7
10°-20°	220.8	13.0
20°-30°	305.7	18.0
30°-40°	326.0	19.2
40°-50°	297.4	17.5
50°-60°	233.0	13.7
60°-70°	151.9	8.9
70°-80°	67.3	4.0
80°-90°	14.5	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°	607.0	35.8
0°-40°	933.0	55.0
0°-60°	1463.4	86.2
0°-90°	1697.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1697.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	864	864	864	864	864	
5°	849	848	848	847	847	81
15°	794	794	786	778	776	223
25°	688	684	674	650	632	316
35°	559	555	528	488	476	349
45°	429	420	384	352	338	330
55°	298	289	262	231	219	267
65°	177	167	151	154	128	174
75°	71	66	62	59	65	76
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	864.4	864.4	864.4	864.4	864.4
2.5°	858.4	858.4	858.4	857.4	857.4
5°	849.4	848.4	848.4	847.4	847.4
7.5°	842.4	841.4	840.4	839.4	837.4
10°	832.5	832.5	831.5	826.5	825.5
12.5°	816.5	815.5	811.5	804.5	802.5
15°	794.5	794.5	786.5	778.5	775.5
17.5°	770.5	769.5	759.5	751.5	747.5
20°	744.5	742.5	732.5	719.5	712.5
22.5°	715.5	715.5	703.5	686.5	679.6
25°	688.5	684.5	673.6	649.6	631.6
27.5°	657.6	651.6	639.6	605.6	584.6
30°	623.6	620.6	603.6	559.6	543.6
32.5°	591.6	586.6	568.6	522.7	509.7
35°	558.6	554.6	527.7	487.7	475.7
37.5°	525.7	520.7	486.7	454.7	439.7
40°	492.7	486.7	449.7	420.7	404.7
42.5°	461.7	453.7	417.7	386.7	368.8
45°	428.7	419.7	383.7	351.8	337.8
47.5°	395.7	387.7	354.8	321.8	305.8
50°	360.8	353.8	323.8	290.8	273.8
52.5°	331.8	320.8	291.8	258.8	244.8
55°	297.8	288.8	261.8	230.8	218.9
57.5°	266.8	257.8	232.8	203.9	193.9
60°	237.8	224.9	203.9	178.9	170.9
62.5°	205.9	195.9	177.9	156.9	166.9
65°	176.9	166.9	150.9	153.9	127.9
67.5°	144.9	139.9	125.9	111.9	107.9
70°	117.9	111.9	106.9	91.9	87.9
72.5°	93.9	87.9	80.9	73.0	70.0
75°	71.0	66.0	62.0	59.0	65.0
77.5°	49.0	47.0	44.0	41.0	40.0
80°	32.0	31.0	30.0	29.0	28.0
82.5°	19.0	19.0	19.0	19.0	19.0
85°	10.0	11.0	12.0	13.0	14.0
87.5°	6.0	6.0	7.0	8.0	9.0
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)