

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: P545634

Luminaire Tested: **FMR-12-2-LD4-2LO-35-UNV-81-87-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: P545634
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-35-UNV-81-87-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

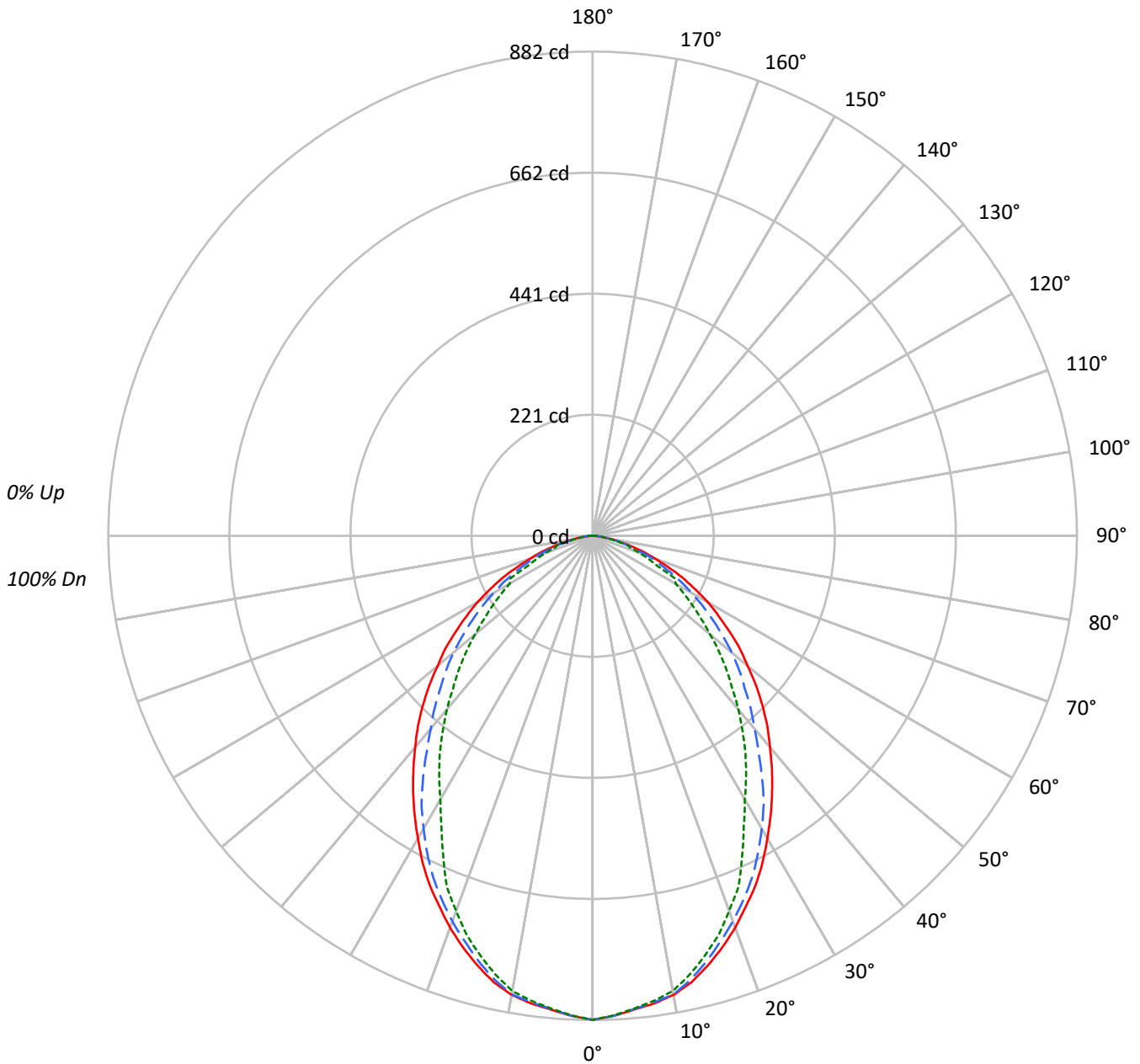
Lumens per Lamp: N/A
Luminaire Lumens: 1731.0 lumens
Efficiency: N/A
Efficacy: 74.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	4745	4745	4745
5°	4681	4675	4670
10°	4640	4635	4602
15°	4515	4470	4407
20°	4349	4279	4163
25°	4170	4080	3825
30°	3953	3826	3446
35°	3744	3536	3188
40°	3530	3223	2900
45°	3328	2979	2622
50°	3081	2766	2339
55°	2851	2506	2094
60°	2611	2238	1876
65°	2297	1960	1662
70°	1893	1717	1412
75°	1506	1314	1379
80°	1010	948	883
85°	630	753	883



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.1	4.7
10°-20°	225.3	13.0
20°-30°	311.9	18.0
30°-40°	332.5	19.2
40°-50°	303.4	17.5
50°-60°	237.7	13.7
60°-70°	154.9	8.9
70°-80°	68.6	4.0
80°-90°	14.7	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°	619.2	35.8
0°-40°	951.7	55.0
0°-60°	1492.7	86.2
0°-90°	1731.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1731.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	882	882	882	882	882	
5°	866	865	865	864	864	82
15°	810	810	802	794	791	228
25°	702	698	687	663	644	322
35°	570	566	538	497	485	356
45°	437	428	391	359	344	337
55°	304	295	267	236	223	272
65°	180	170	154	157	130	178
75°	72	67	63	60	66	78
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°	881.7	881.7	881.7	881.7	881.7
2.5°	875.6	875.6	875.6	874.6	874.6
5°	866.5	865.4	865.4	864.4	864.4
7.5°	859.3	858.3	857.3	856.3	854.2
10°	849.1	849.1	848.1	843.0	842.0
12.5°	832.8	831.8	827.7	820.6	818.5
15°	810.4	810.4	802.2	794.1	791.0
17.5°	785.9	784.9	774.7	766.6	762.5
20°	759.4	757.4	747.2	733.9	726.8
22.5°	729.9	729.9	717.6	700.3	693.2
25°	702.3	698.3	687.1	662.6	644.2
27.5°	670.7	664.6	652.4	617.7	596.3
30°	636.1	633.0	615.7	570.8	554.5
32.5°	603.5	598.4	580.0	533.1	519.9
35°	569.8	565.7	538.2	497.4	485.2
37.5°	536.2	531.1	496.4	463.8	448.5
40°	502.5	496.4	458.7	429.2	412.8
42.5°	470.9	462.8	426.1	394.5	376.1
45°	437.3	428.1	391.4	358.8	344.5
47.5°	403.7	395.5	361.9	328.2	311.9
50°	368.0	360.9	330.3	296.6	279.3
52.5°	338.4	327.2	297.7	264.0	249.7
55°	303.8	294.6	267.1	235.5	223.2
57.5°	272.2	263.0	237.5	207.9	197.8
60°	242.6	229.4	207.9	182.5	174.3
62.5°	210.0	199.8	181.4	160.0	170.2
65°	180.4	170.2	153.9	157.0	130.5
67.5°	147.8	142.7	128.4	114.2	110.1
70°	120.3	114.2	109.1	93.8	89.7
72.5°	95.8	89.7	82.6	74.4	71.4
75°	72.4	67.3	63.2	60.1	66.3
77.5°	49.9	47.9	44.9	41.8	40.8
80°	32.6	31.6	30.6	29.6	28.5
82.5°	19.4	19.4	19.4	19.4	19.4
85°	10.2	11.2	12.2	13.3	14.3
87.5°	6.1	6.1	7.1	8.2	9.2
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)