

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: P545683

Luminaire Tested: **FMR-12-2-LD4-2LO-40-UNV-93-88-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: P545683
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-40-UNV-93-88-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

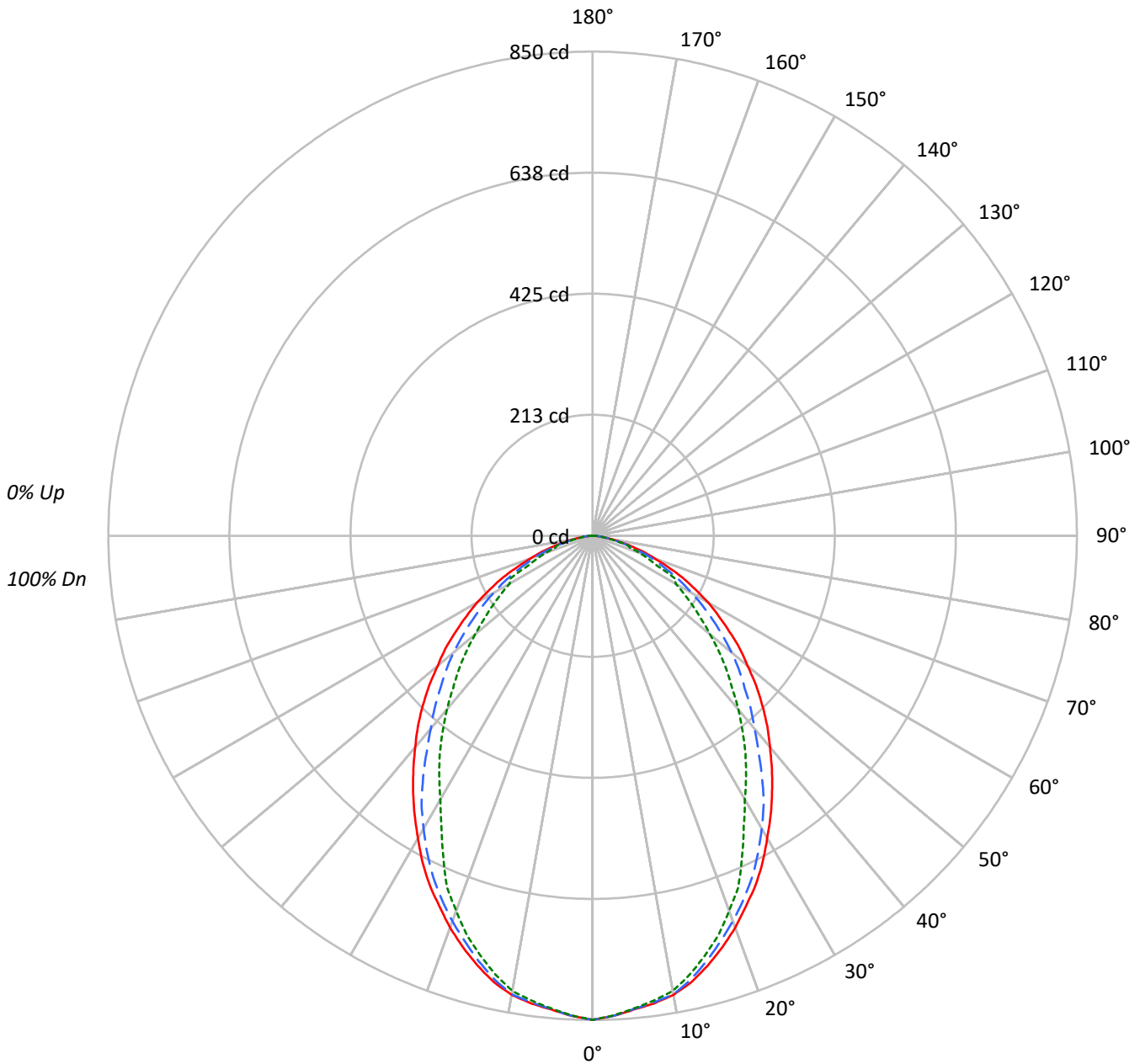
Lumens per Lamp: N/A
Luminaire Lumens: 1668.0 lumens
Efficiency: N/A
Efficacy: 71.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	4573	4573	4573
5°	4511	4505	4500
10°	4471	4466	4434
15°	4351	4307	4247
20°	4191	4124	4011
25°	4019	3931	3687
30°	3809	3687	3321
35°	3608	3407	3072
40°	3403	3105	2795
45°	3207	2871	2527
50°	2969	2665	2253
55°	2746	2415	2018
60°	2517	2157	1808
65°	2215	1889	1601
70°	1824	1654	1360
75°	1449	1266	1327
80°	973	914	852
85°	605	729	852



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.1	4.7
10°-20°	217.1	13.0
20°-30°	300.5	18.0
30°-40°	320.4	19.2
40°-50°	292.3	17.5
50°-60°	229.0	13.7
60°-70°	149.2	8.9
70°-80°	66.1	4.0
80°-90°	14.2	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°	596.7	35.8
0°-40°	917.1	55.0
0°-60°	1438.4	86.2
0°-90°	1668.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1668.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	850	850	850	850	850	
5°	835	834	834	833	833	79
15°	781	781	773	765	762	220
25°	677	673	662	638	621	311
35°	549	545	519	479	468	343
45°	421	413	377	346	332	325
55°	293	284	257	227	215	263
65°	174	164	148	151	126	171
75°	70	65	61	58	64	75
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°	849.7	849.7	849.7	849.7	849.7
2.5°	843.8	843.8	843.8	842.8	842.8
5°	834.9	833.9	833.9	833.0	833.0
7.5°	828.0	827.1	826.1	825.1	823.1
10°	818.2	818.2	817.2	812.3	811.3
12.5°	802.5	801.5	797.6	790.7	788.8
15°	780.9	780.9	773.0	765.2	762.2
17.5°	757.3	756.3	746.5	738.7	734.7
20°	731.8	729.8	720.0	707.2	700.4
22.5°	703.3	703.3	691.5	674.8	667.9
25°	676.8	672.8	662.0	638.5	620.8
27.5°	646.3	640.4	628.6	595.3	574.6
30°	612.9	610.0	593.3	550.1	534.4
32.5°	581.5	576.6	558.9	513.7	501.0
35°	549.1	545.2	518.6	479.3	467.6
37.5°	516.7	511.8	478.4	446.9	432.2
40°	484.3	478.4	442.0	413.5	397.8
42.5°	453.8	445.9	410.6	380.1	362.5
45°	421.4	412.6	377.2	345.8	332.0
47.5°	389.0	381.1	348.7	316.3	300.6
50°	354.6	347.7	318.3	285.8	269.1
52.5°	326.1	315.3	286.8	254.4	240.7
55°	292.7	283.9	257.4	226.9	215.1
57.5°	262.3	253.4	228.9	200.4	190.6
60°	233.8	221.0	200.4	175.8	168.0
62.5°	202.3	192.5	174.8	154.2	164.0
65°	173.9	164.0	148.3	151.3	125.7
67.5°	142.4	137.5	123.8	110.0	106.1
70°	115.9	110.0	105.1	90.4	86.4
72.5°	92.3	86.4	79.6	71.7	68.8
75°	69.7	64.8	60.9	58.0	63.8
77.5°	48.1	46.2	43.2	40.3	39.3
80°	31.4	30.5	29.5	28.5	27.5
82.5°	18.7	18.7	18.7	18.7	18.7
85°	9.8	10.8	11.8	12.8	13.8
87.5°	5.9	5.9	6.9	7.9	8.8
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)