

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: P545651

Luminaire Tested: **FMR-12-2-LD4-2LO-35-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: P545651
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-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

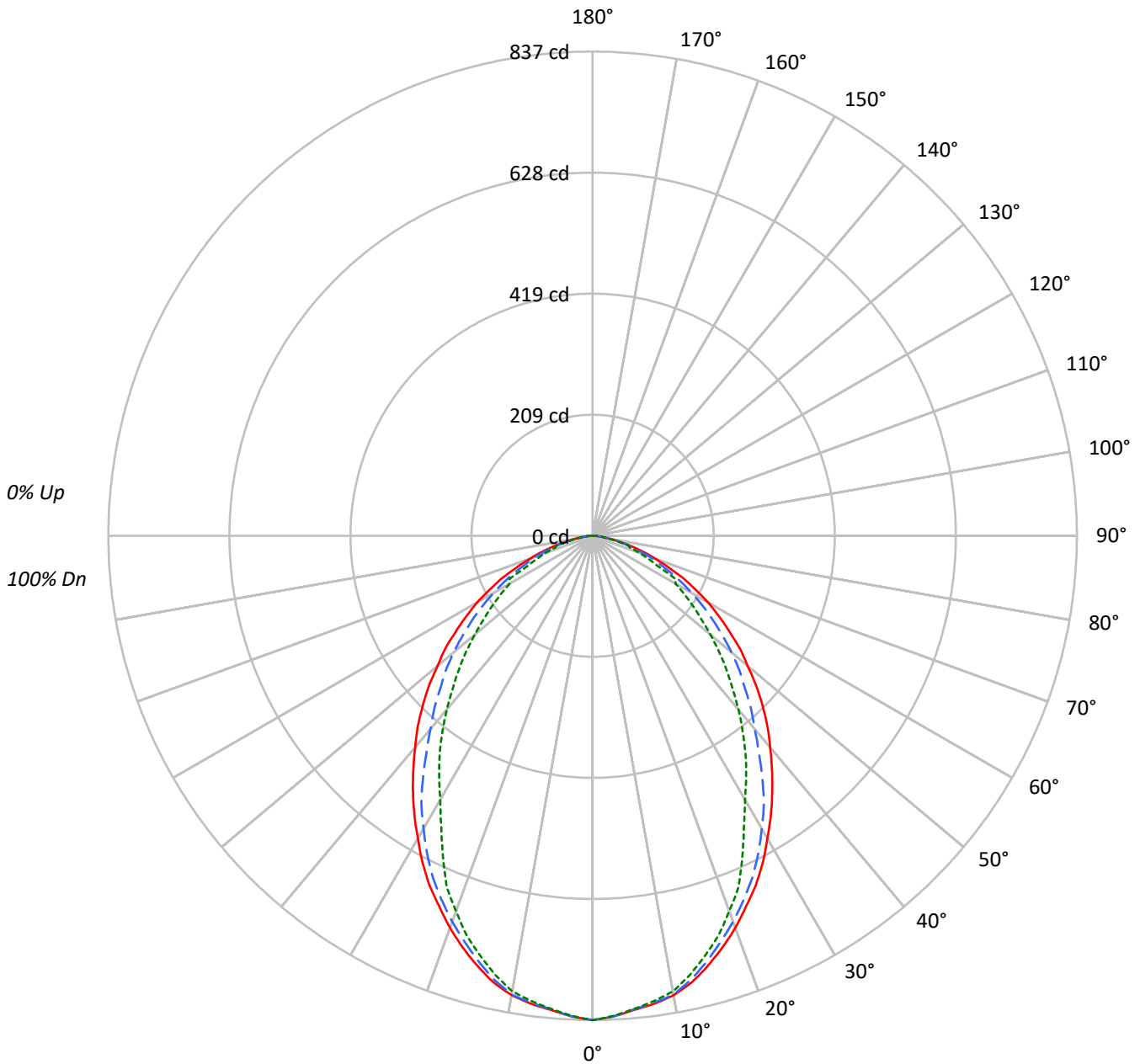
Lumens per Lamp: N/A
Luminaire Lumens: 1644.0 lumens
Efficiency: N/A
Efficacy: 70.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	4507	4507	4507
5°	4446	4440	4435
10°	4408	4402	4370
15°	4289	4245	4186
20°	4131	4064	3954
25°	3961	3875	3634
30°	3754	3634	3273
35°	3556	3359	3028
40°	3353	3061	2755
45°	3161	2830	2490
50°	2926	2627	2221
55°	2707	2380	1989
60°	2480	2126	1783
65°	2183	1862	1578
70°	1797	1630	1341
75°	1429	1248	1308
80°	961	899	840
85°	599	716	840



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.0	4.7
10°-20°	213.9	13.0
20°-30°	296.2	18.0
30°-40°	315.8	19.2
40°-50°	288.1	17.5
50°-60°	225.7	13.7
60°-70°	147.1	8.9
70°-80°	65.2	4.0
80°-90°	14.0	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°	588.1	35.8
0°-40°	903.9	55.0
0°-60°	1417.7	86.2
0°-90°	1644.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1644.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	837	837	837	837	837	
5°	823	822	822	821	821	78
15°	770	770	762	754	751	216
25°	667	663	652	629	612	306
35°	541	537	511	472	461	338
45°	415	407	372	341	327	320
55°	288	280	254	224	212	259
65°	171	162	146	149	124	169
75°	69	64	60	57	63	74
85°	10	11	12	13	14	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	837.4	837.4	837.4	837.4	837.4
2.5°	831.6	831.6	831.6	830.7	830.7
5°	822.9	821.9	821.9	821.0	821.0
7.5°	816.1	815.2	814.2	813.2	811.3
10°	806.5	806.5	805.5	800.6	799.7
12.5°	791.0	790.0	786.1	779.3	777.4
15°	769.7	769.7	761.9	754.2	751.3
17.5°	746.4	745.5	735.8	728.0	724.2
20°	721.3	719.3	709.6	697.1	690.3
22.5°	693.2	693.2	681.6	665.1	658.3
25°	667.0	663.2	652.5	629.3	611.9
27.5°	637.0	631.2	619.6	586.7	566.4
30°	604.1	601.2	584.7	542.2	526.7
32.5°	573.1	568.3	550.9	506.3	493.7
35°	541.2	537.3	511.2	472.4	460.8
37.5°	509.2	504.4	471.5	440.5	426.0
40°	477.3	471.5	435.7	407.6	392.1
42.5°	447.3	439.5	404.7	374.7	357.2
45°	415.3	406.6	371.8	340.8	327.2
47.5°	383.4	375.6	343.7	311.7	296.2
50°	349.5	342.7	313.7	281.7	265.3
52.5°	321.4	310.8	282.7	250.7	237.2
55°	288.5	279.8	253.6	223.6	212.0
57.5°	258.5	249.8	225.6	197.5	187.8
60°	230.4	217.8	197.5	173.3	165.6
62.5°	199.4	189.8	172.3	152.0	161.7
65°	171.4	161.7	146.2	149.1	123.9
67.5°	140.4	135.5	122.0	108.4	104.6
70°	114.2	108.4	103.6	89.1	85.2
72.5°	91.0	85.2	78.4	70.7	67.8
75°	68.7	63.9	60.0	57.1	62.9
77.5°	47.4	45.5	42.6	39.7	38.7
80°	31.0	30.0	29.0	28.1	27.1
82.5°	18.4	18.4	18.4	18.4	18.4
85°	9.7	10.6	11.6	12.6	13.6
87.5°	5.8	5.8	6.8	7.7	8.7
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)