

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: P545327

Luminaire Tested: **FMR-12-2-LD4-1HI-50-UNV-93-84-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: P545327
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-LD4-1HI-50-UNV-93-84-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

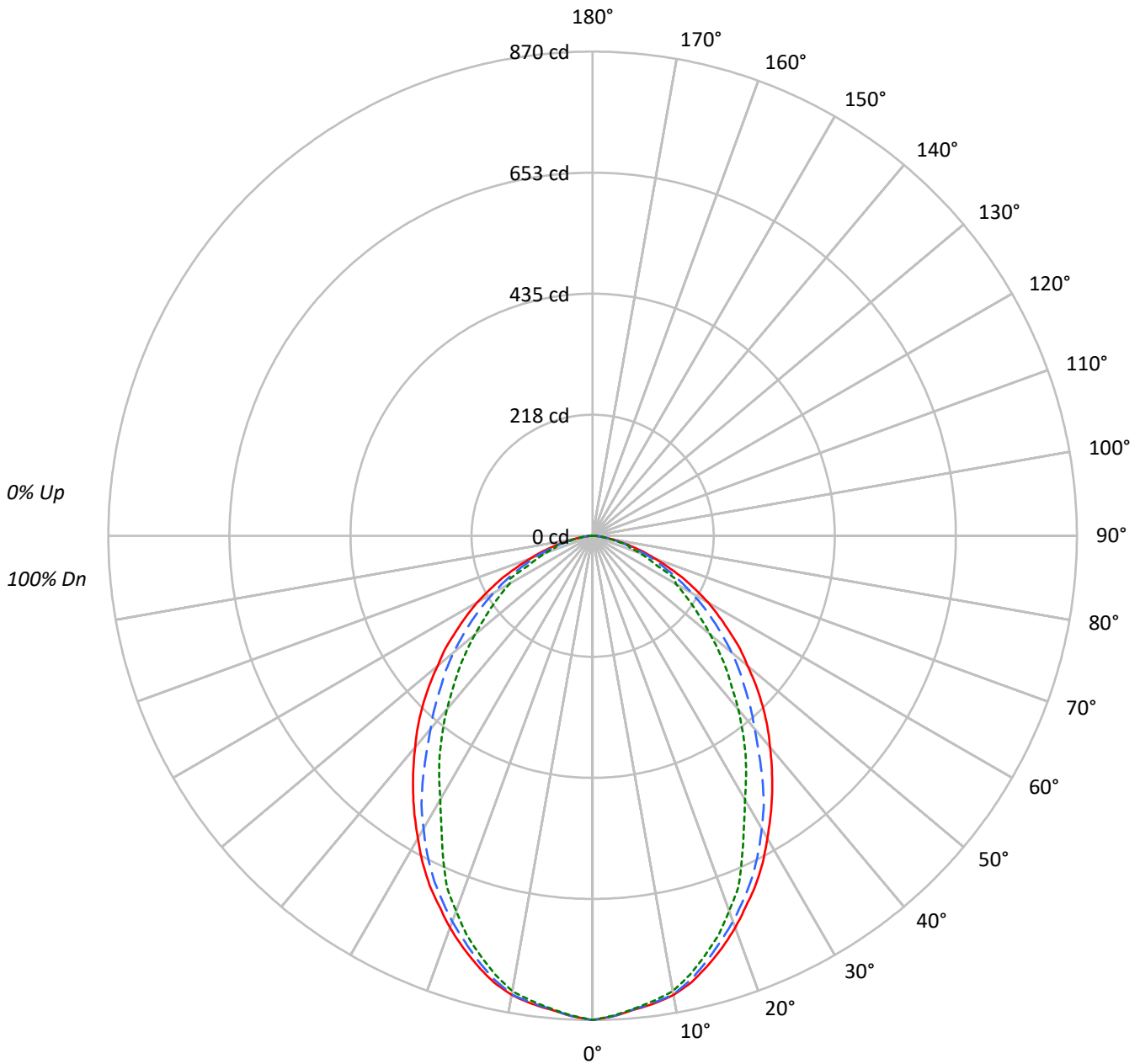
Lumens per Lamp: N/A
Luminaire Lumens: 1708.0 lumens
Efficiency: N/A
Efficacy: 79.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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°	4682	4682	4682
5°	4619	4613	4608
10°	4579	4573	4540
15°	4455	4411	4349
20°	4292	4223	4107
25°	4115	4026	3775
30°	3900	3775	3401
35°	3694	3489	3146
40°	3484	3180	2862
45°	3284	2939	2588
50°	3040	2729	2308
55°	2812	2472	2067
60°	2577	2209	1851
65°	2267	1934	1639
70°	1868	1693	1393
75°	1485	1298	1360
80°	998	936	874
85°	624	747	871



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.0	4.7
10°-20°	222.3	13.0
20°-30°	307.7	18.0
30°-40°	328.1	19.2
40°-50°	299.3	17.5
50°-60°	234.5	13.7
60°-70°	152.8	8.9
70°-80°	67.7	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°	611.0	35.8
0°-40°	939.1	55.0
0°-60°	1472.9	86.2
0°-90°	1708.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1708.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	870	870	870	870	870	
5°	855	854	854	853	853	81
15°	800	800	792	784	780	225
25°	693	689	678	654	636	318
35°	562	558	531	491	479	352
45°	432	422	386	354	340	332
55°	300	291	264	232	220	269
65°	178	168	152	155	129	175
75°	71	66	62	59	65	77
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°	870.0	870.0	870.0	870.0	870.0
2.5°	864.0	864.0	864.0	863.0	863.0
5°	854.9	853.9	853.9	852.9	852.9
7.5°	847.9	846.9	845.9	844.9	842.9
10°	837.8	837.8	836.8	831.8	830.8
12.5°	821.8	820.7	816.7	809.7	807.7
15°	799.6	799.6	791.6	783.5	780.5
17.5°	775.5	774.5	764.4	756.4	752.4
20°	749.3	747.3	737.3	724.2	717.1
22.5°	720.2	720.2	708.1	691.0	684.0
25°	693.0	689.0	677.9	653.8	635.7
27.5°	661.8	655.8	643.7	609.5	588.4
30°	627.6	624.6	607.5	563.3	547.2
32.5°	595.4	590.4	572.3	526.0	513.0
35°	562.3	558.2	531.1	490.8	478.8
37.5°	529.1	524.0	489.8	457.6	442.6
40°	495.9	489.8	452.6	423.4	407.4
42.5°	464.7	456.6	420.4	389.3	371.1
45°	431.5	422.4	386.2	354.0	340.0
47.5°	398.3	390.3	357.1	323.9	307.8
50°	363.1	356.1	325.9	292.7	275.6
52.5°	333.9	322.9	293.7	260.5	246.4
55°	299.7	290.7	263.5	232.3	220.3
57.5°	268.6	259.5	234.4	205.2	195.1
60°	239.4	226.3	205.2	180.0	172.0
62.5°	207.2	197.1	179.0	157.9	168.0
65°	178.0	168.0	151.9	154.9	128.7
67.5°	145.8	140.8	126.7	112.7	108.6
70°	118.7	112.7	107.6	92.5	88.5
72.5°	94.5	88.5	81.5	73.4	70.4
75°	71.4	66.4	62.4	59.3	65.4
77.5°	49.3	47.3	44.3	41.2	40.2
80°	32.2	31.2	30.2	29.2	28.2
82.5°	19.1	19.1	19.1	19.1	19.1
85°	10.1	11.1	12.1	13.1	14.1
87.5°	6.0	6.0	7.0	8.0	9.1
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)