

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: P545041

Luminaire Tested: **FMR-12-1-LD4-2HI-50-UNV-93-86-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: P545041
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-12-1-LD4-2HI-50-UNV-93-86-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

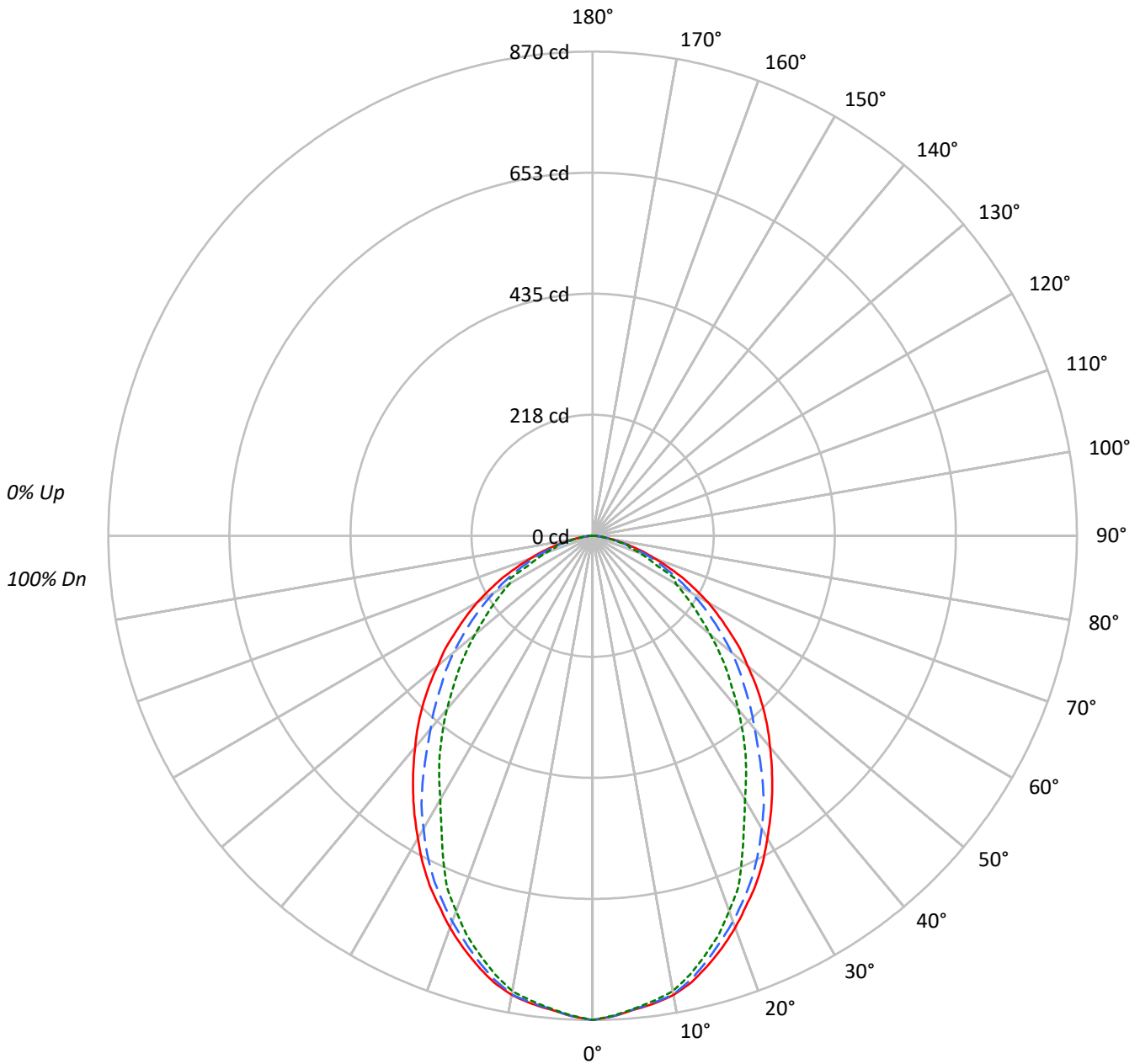
Lumens per Lamp: N/A
Luminaire Lumens: 1708.0 lumens
Efficiency: N/A
Efficacy: 79.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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°	9365	9365	9365
5°	9237	9226	9216
10°	9157	9146	9081
15°	8910	8821	8698
20°	8583	8446	8214
25°	8231	8051	7550
30°	7801	7551	6801
35°	7389	6979	6292
40°	6968	6360	5724
45°	6568	5879	5176
50°	6080	5457	4615
55°	5624	4945	4134
60°	5154	4418	3703
65°	4534	3869	3278
70°	3736	3386	2785
75°	2969	2595	2720
80°	1996	1872	1748
85°	1247	1494	1741



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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)