

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: P545228

Luminaire Tested: **FMR-12-1-LD4-2STD-50-UNV-82-94-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: P545228
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-LD4-2STD-50-UNV-82-94-EDD
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

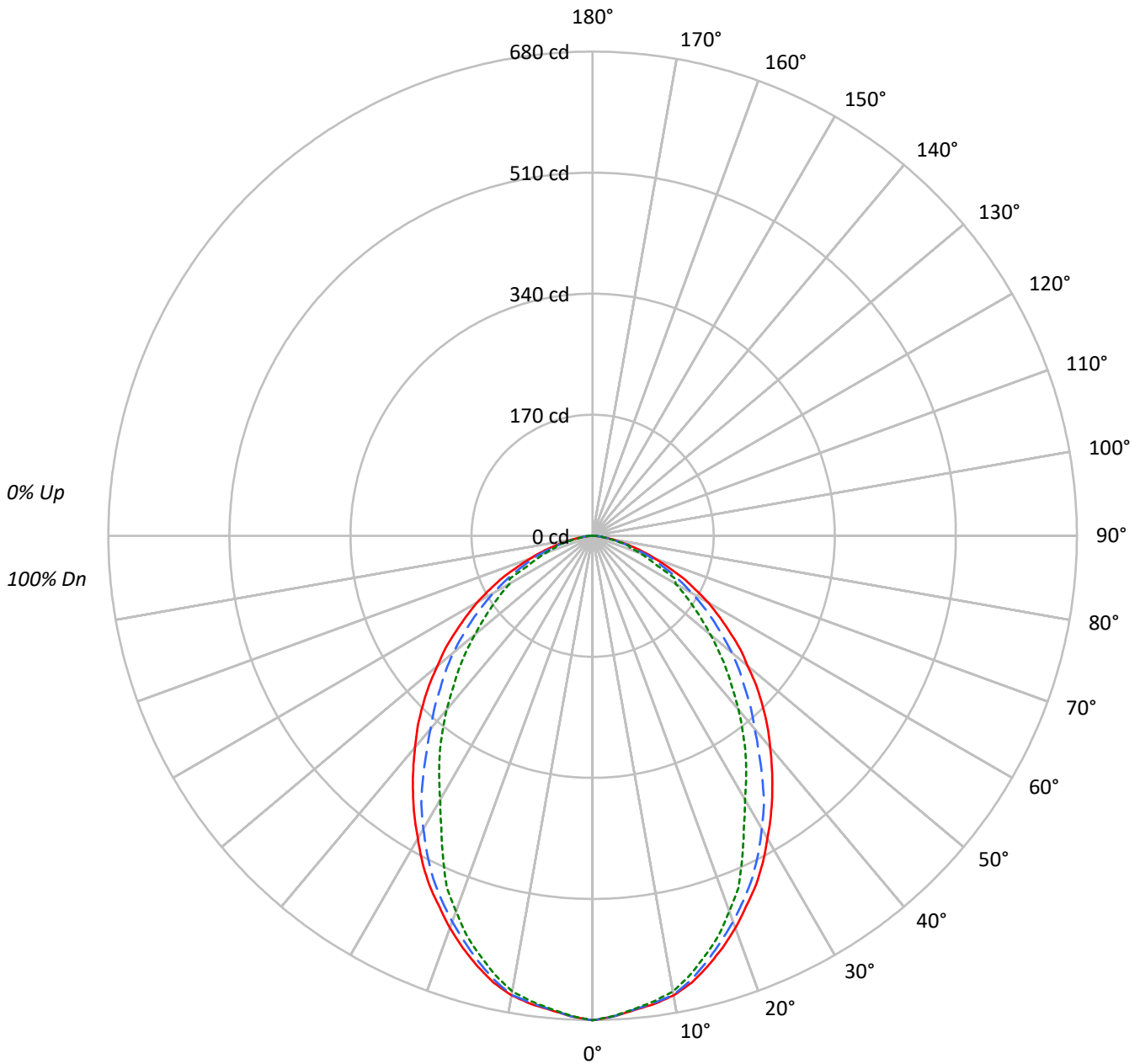
Lumens per Lamp: N/A
Luminaire Lumens: 1336.0 lumens
Efficiency: N/A
Efficacy: 80.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
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°	7325	7325	7325
5°	7225	7218	7209
10°	7163	7155	7103
15°	6970	6900	6803
20°	6714	6606	6426
25°	6438	6298	5905
30°	6101	5906	5320
35°	5779	5458	4921
40°	5450	4974	4477
45°	5138	4599	4048
50°	4756	4268	3610
55°	4401	3868	3233
60°	4030	3455	2895
65°	3548	3026	2565
70°	2921	2650	2178
75°	2325	2030	2125
80°	1562	1463	1364
85°	976	1161	1359



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.3	4.7
10°-20°	173.9	13.0
20°-30°	240.7	18.0
30°-40°	256.6	19.2
40°-50°	234.1	17.5
50°-60°	183.4	13.7
60°-70°	119.5	8.9
70°-80°	53.0	4.0
80°-90°	11.4	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°	477.9	35.8
0°-40°	734.5	55.0
0°-60°	1152.1	86.2
0°-90°	1336.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1336.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	680	680	680	680	680	
5°	669	668	668	667	667	63
15°	626	626	619	613	610	176
25°	542	539	530	511	497	249
35°	440	437	415	384	374	275
45°	338	330	302	277	266	260
55°	234	227	206	182	172	210
65°	139	131	119	121	101	137
75°	56	52	49	46	51	60
85°	8	9	9	10	11	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	680.5	680.5	680.5	680.5	680.5
2.5°	675.8	675.8	675.8	675.0	675.0
5°	668.7	668.0	668.0	667.2	667.2
7.5°	663.2	662.4	661.7	660.9	659.3
10°	655.4	655.4	654.6	650.6	649.9
12.5°	642.8	642.0	638.8	633.3	631.8
15°	625.5	625.5	619.2	612.9	610.5
17.5°	606.6	605.8	597.9	591.6	588.5
20°	586.1	584.6	576.7	566.5	561.0
22.5°	563.3	563.3	553.9	540.5	535.0
25°	542.1	538.9	530.3	511.4	497.2
27.5°	517.7	513.0	503.5	476.8	460.2
30°	490.9	488.6	475.2	440.6	428.0
32.5°	465.8	461.8	447.7	411.5	401.2
35°	439.8	436.6	415.4	383.9	374.5
37.5°	413.8	409.9	383.1	358.0	346.2
40°	387.9	383.1	354.0	331.2	318.6
42.5°	363.5	357.2	328.9	304.5	290.3
45°	337.5	330.4	302.1	276.9	265.9
47.5°	311.6	305.3	279.3	253.3	240.7
50°	284.0	278.5	254.9	228.9	215.6
52.5°	261.2	252.5	229.7	203.8	192.8
55°	234.5	227.4	206.1	181.7	172.3
57.5°	210.1	203.0	183.3	160.5	152.6
60°	187.2	177.0	160.5	140.8	134.5
62.5°	162.1	154.2	140.0	123.5	131.4
65°	139.3	131.4	118.8	121.2	100.7
67.5°	114.1	110.1	99.1	88.1	85.0
70°	92.8	88.1	84.2	72.4	69.2
72.5°	74.0	69.2	63.7	57.4	55.1
75°	55.9	51.9	48.8	46.4	51.1
77.5°	38.6	37.0	34.6	32.3	31.5
80°	25.2	24.4	23.6	22.8	22.0
82.5°	14.9	14.9	14.9	14.9	14.9
85°	7.9	8.7	9.4	10.2	11.0
87.5°	4.7	4.7	5.5	6.3	7.1
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)