

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: P545313

Luminaire Tested: **FMR-12-2-LD4-1HI-50-UNV-81-86-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: P545313
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-81-86-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC 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

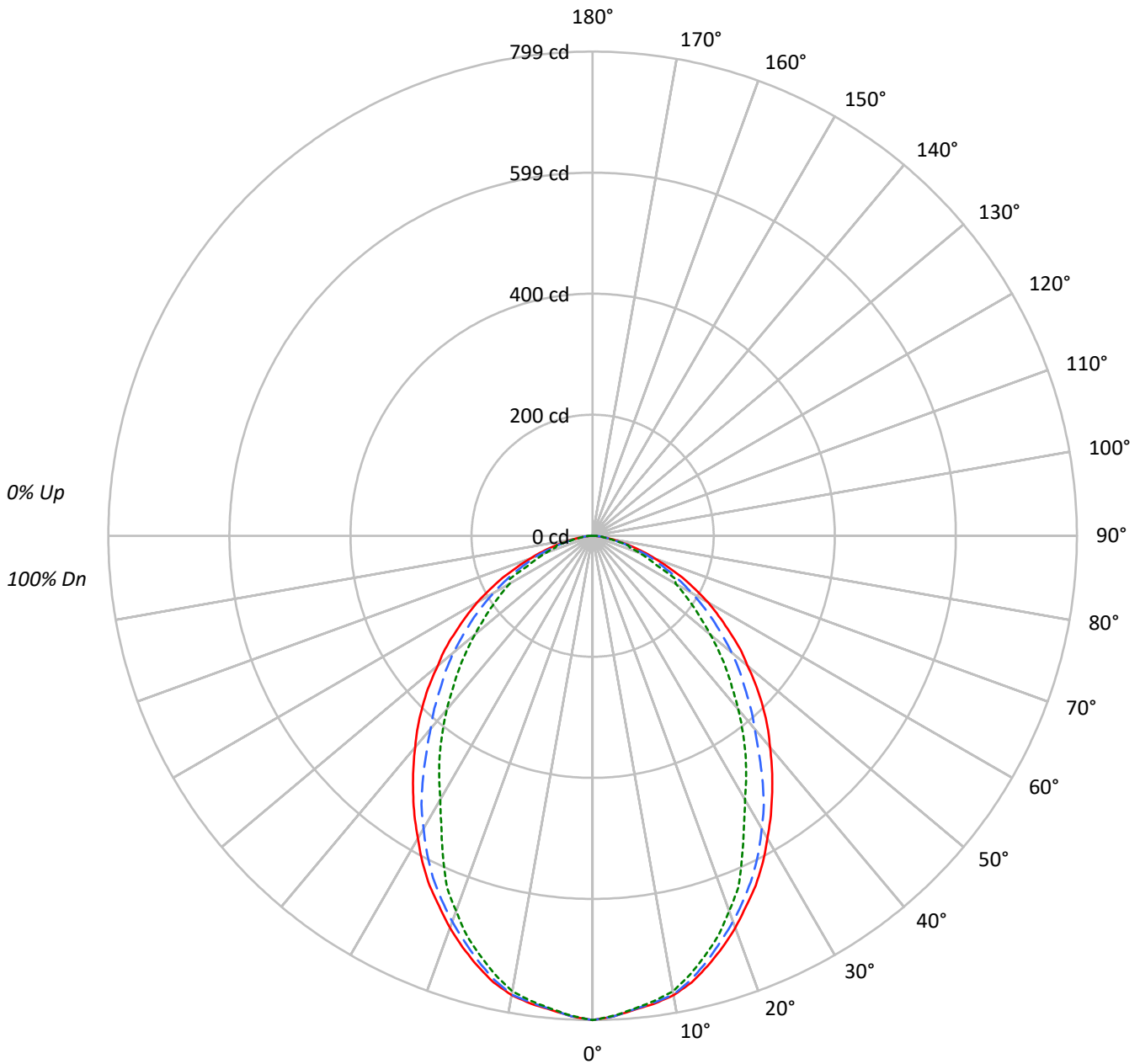
Lumens per Lamp: N/A
Luminaire Lumens: 1569.0 lumens
Efficiency: N/A
Efficacy: 72.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (A_{in}): 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°	4301	4301	4301
5°	4243	4238	4233
10°	4206	4201	4171
15°	4093	4052	3995
20°	3943	3879	3773
25°	3780	3698	3467
30°	3583	3468	3123
35°	3393	3206	2890
40°	3200	2921	2629
45°	3017	2700	2377
50°	2793	2507	2120
55°	2583	2272	1898
60°	2367	2029	1701
65°	2082	1777	1507
70°	1715	1556	1279
75°	1364	1192	1250
80°	917	859	803
85°	568	685	797



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.4	4.7
10°-20°	204.2	13.0
20°-30°	282.7	18.0
30°-40°	301.4	19.2
40°-50°	275.0	17.5
50°-60°	215.4	13.7
60°-70°	140.4	8.9
70°-80°	62.2	4.0
80°-90°	13.4	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°	561.3	35.8
0°-40°	862.7	55.0
0°-60°	1353.1	86.2
0°-90°	1569.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1569.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	799	799	799	799	799	
5°	785	784	784	784	784	75
15°	735	735	727	720	717	207
25°	637	633	623	601	584	292
35°	516	513	488	451	440	323
45°	396	388	355	325	312	305
55°	275	267	242	213	202	247
65°	164	154	140	142	118	161
75°	66	61	57	54	60	70
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	799.2	799.2	799.2	799.2	799.2
2.5°	793.7	793.7	793.7	792.8	792.8
5°	785.4	784.4	784.4	783.5	783.5
7.5°	778.9	778.0	777.1	776.1	774.3
10°	769.7	769.7	768.7	764.1	763.2
12.5°	754.9	754.0	750.3	743.8	741.9
15°	734.6	734.6	727.2	719.8	717.0
17.5°	712.4	711.5	702.2	694.8	691.1
20°	688.4	686.5	677.3	665.3	658.8
22.5°	661.6	661.6	650.5	634.8	628.3
25°	636.6	632.9	622.8	600.6	583.9
27.5°	608.0	602.4	591.3	559.9	540.5
30°	576.6	573.8	558.1	517.4	502.6
32.5°	547.0	542.4	525.7	483.2	471.2
35°	516.5	512.8	487.9	450.9	439.8
37.5°	486.0	481.4	450.0	420.4	406.5
40°	455.5	450.0	415.8	389.0	374.2
42.5°	426.9	419.5	386.2	357.6	340.9
45°	396.4	388.1	354.8	325.2	312.3
47.5°	365.9	358.5	328.0	297.5	282.7
50°	333.6	327.1	299.4	268.9	253.2
52.5°	306.8	296.6	269.8	239.3	226.4
55°	275.3	267.0	242.1	213.4	202.3
57.5°	246.7	238.4	215.3	188.5	179.2
60°	219.9	207.9	188.5	165.4	158.0
62.5°	190.3	181.1	164.5	145.1	154.3
65°	163.5	154.3	139.5	142.3	118.3
67.5°	134.0	129.4	116.4	103.5	99.8
70°	109.0	103.5	98.9	85.0	81.3
72.5°	86.9	81.3	74.8	67.4	64.7
75°	65.6	61.0	57.3	54.5	60.1
77.5°	45.3	43.4	40.7	37.9	37.0
80°	29.6	28.6	27.7	26.8	25.9
82.5°	17.6	17.6	17.6	17.6	17.6
85°	9.2	10.2	11.1	12.0	12.9
87.5°	5.5	5.5	6.5	7.4	8.3
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)