

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: P544963

Luminaire Tested: **FMR-12-1-LD4-2HI-35-UNV-81-88-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: P544963
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-35-UNV-81-88-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC 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

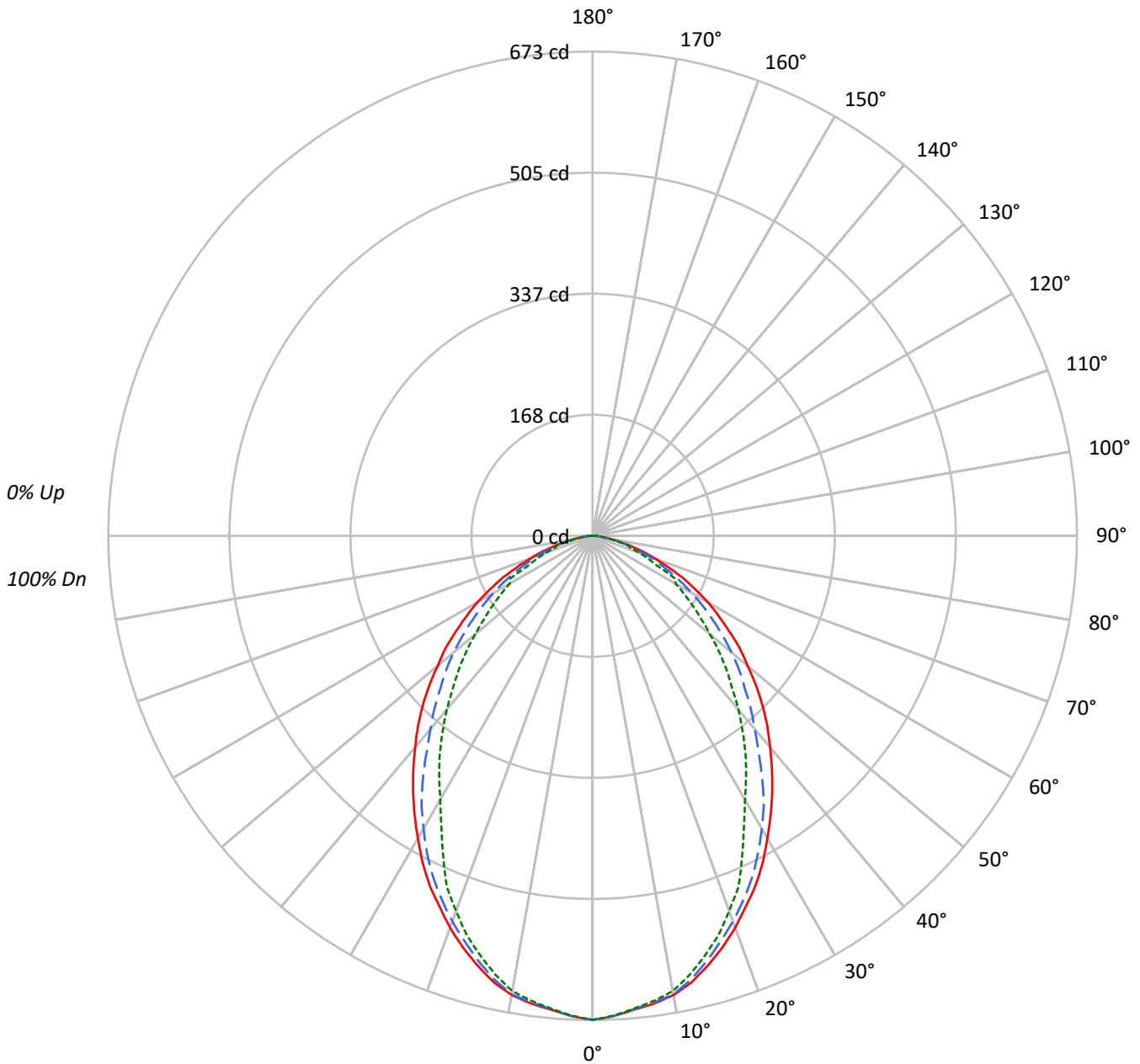
Lumens per Lamp: N/A
Luminaire Lumens: 1321.0 lumens
Efficiency: N/A
Efficacy: 61.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (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

TEST NUMBER: P544963

CATALOG NUMBER: FMR-12-1-LD4-2HI-35-UNV-81-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P544963

CATALOG NUMBER: FMR-12-1-LD4-2HI-35-UNV-81-88-EDD

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°	7243	7243	7243
5°	7144	7137	7128
10°	7083	7074	7024
15°	6891	6822	6727
20°	6638	6531	6354
25°	6366	6227	5839
30°	6033	5840	5260
35°	5715	5397	4866
40°	5389	4919	4428
45°	5080	4547	4002
50°	4702	4220	3569
55°	4350	3825	3198
60°	3985	3416	2863
65°	3507	2993	2537
70°	2889	2618	2156
75°	2296	2005	2104
80°	1543	1444	1351
85°	963	1149	1346



TEST NUMBER: P544963

CATALOG NUMBER: FMR-12-1-LD4-2HI-35-UNV-81-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.6	4.7
10°-20°	171.9	13.0
20°-30°	238.0	18.0
30°-40°	253.8	19.2
40°-50°	231.5	17.5
50°-60°	181.4	13.7
60°-70°	118.2	8.9
70°-80°	52.4	4.0
80°-90°	11.2	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°	472.5	35.8
0°-40°	726.3	55.0
0°-60°	1139.2	86.2
0°-90°	1321.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1321.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	673	673	673	673	673	
5°	661	660	660	660	660	63
15°	618	618	612	606	604	174
25°	536	533	524	506	492	246
35°	435	432	411	380	370	272
45°	334	327	299	274	263	257
55°	232	225	204	180	170	208
65°	138	130	118	120	100	136
75°	55	51	48	46	51	59
85°	8	9	9	10	11	11
90°	0	0	0	0	0	



TEST NUMBER: P544963

CATALOG NUMBER: FMR-12-1-LD4-2HI-35-UNV-81-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	672.9	672.9	672.9	672.9	672.9
2.5°	668.2	668.2	668.2	667.5	667.5
5°	661.2	660.5	660.5	659.7	659.7
7.5°	655.8	655.0	654.2	653.5	651.9
10°	648.0	648.0	647.2	643.3	642.6
12.5°	635.6	634.8	631.7	626.2	624.7
15°	618.4	618.4	612.2	606.0	603.7
17.5°	599.8	599.0	591.2	585.0	581.9
20°	579.5	578.0	570.2	560.1	554.7
22.5°	557.0	557.0	547.7	534.4	529.0
25°	536.0	532.9	524.3	505.6	491.6
27.5°	511.9	507.2	497.9	471.4	455.1
30°	485.4	483.1	469.9	435.6	423.2
32.5°	460.5	456.6	442.6	406.9	396.7
35°	434.9	431.7	410.7	379.6	370.3
37.5°	409.2	405.3	378.8	354.0	342.3
40°	383.5	378.8	350.1	327.5	315.1
42.5°	359.4	353.2	325.2	301.1	287.1
45°	333.7	326.7	298.7	273.8	262.9
47.5°	308.1	301.8	276.2	250.5	238.0
50°	280.8	275.4	252.0	226.4	213.1
52.5°	258.3	249.7	227.2	201.5	190.6
55°	231.8	224.8	203.8	179.7	170.4
57.5°	207.7	200.7	181.3	158.7	150.9
60°	185.1	175.0	158.7	139.2	133.0
62.5°	160.3	152.5	138.5	122.1	129.9
65°	137.7	129.9	117.5	119.8	99.6
67.5°	112.8	108.9	98.0	87.1	84.0
70°	91.8	87.1	83.2	71.6	68.5
72.5°	73.1	68.5	63.0	56.8	54.5
75°	55.2	51.3	48.2	45.9	50.6
77.5°	38.1	36.6	34.2	31.9	31.1
80°	24.9	24.1	23.3	22.6	21.8
82.5°	14.8	14.8	14.8	14.8	14.8
85°	7.8	8.6	9.3	10.1	10.9
87.5°	4.7	4.7	5.4	6.2	7.0
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)