

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: P545351

Luminaire Tested: **FMR-12-2-LD4-1LO-35-UNV-82-84-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: P545351
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-LD4-1LO-35-UNV-82-84-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

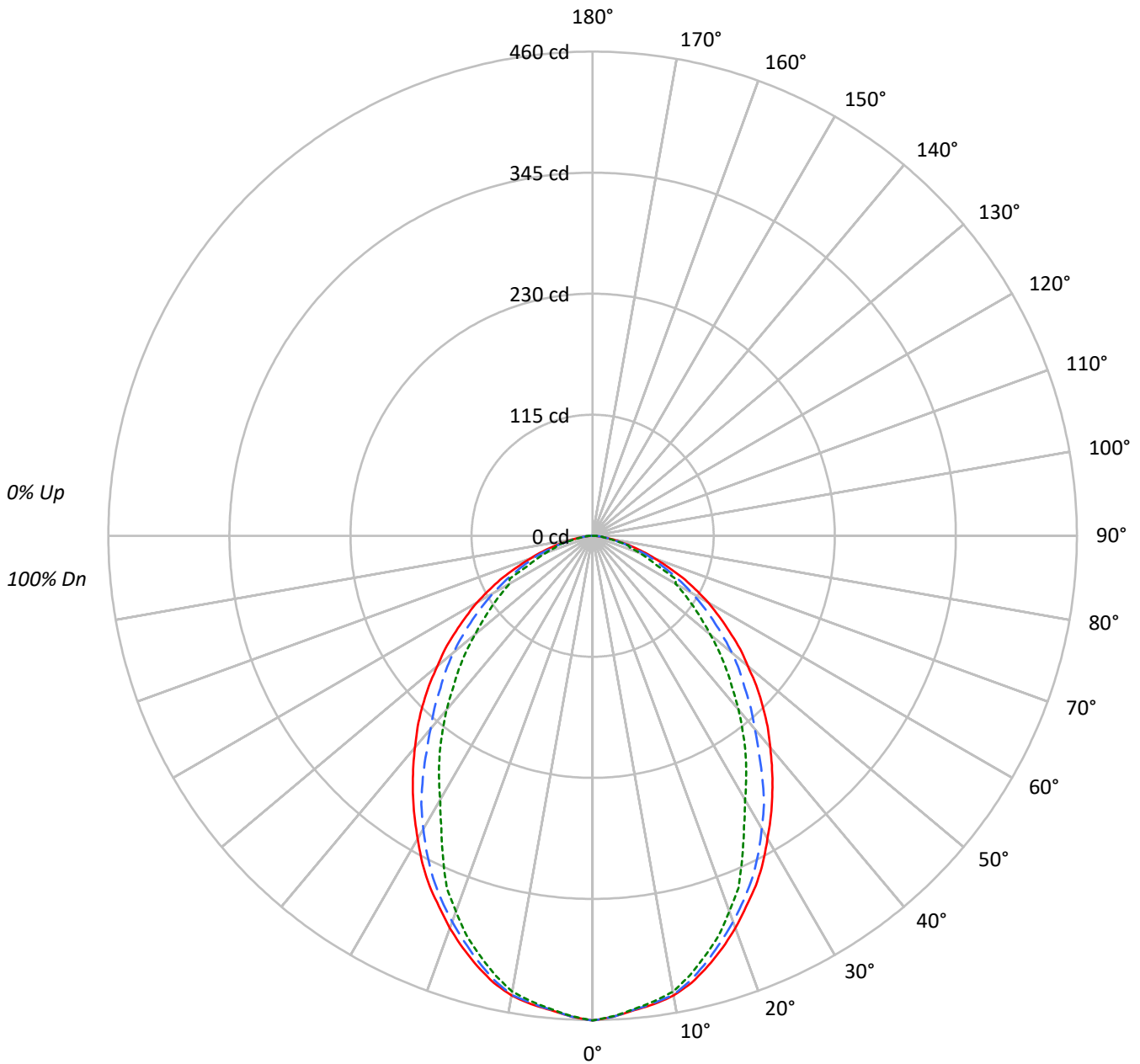
Lumens per Lamp: N/A
Luminaire Lumens: 904.0 lumens
Efficiency: N/A
Efficacy: 77.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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

TEST NUMBER: P545351

CATALOG NUMBER: FMR-12-2-LD4-1LO-35-UNV-82-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545351

CATALOG NUMBER: FMR-12-2-LD4-1LO-35-UNV-82-84-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°	2478	2478	2478
5°	2445	2442	2439
10°	2424	2420	2403
15°	2358	2335	2302
20°	2271	2235	2174
25°	2178	2131	1998
30°	2064	1998	1800
35°	1955	1847	1665
40°	1844	1683	1515
45°	1738	1556	1369
50°	1609	1444	1222
55°	1488	1309	1094
60°	1364	1169	980
65°	1200	1024	867
70°	988	897	736
75°	786	686	719
80°	527	496	462
85°	327	395	463



TEST NUMBER: P545351

CATALOG NUMBER: FMR-12-2-LD4-1LO-35-UNV-82-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.9	4.7
10°-20°	117.6	13.0
20°-30°	162.9	18.0
30°-40°	173.7	19.2
40°-50°	158.4	17.5
50°-60°	124.1	13.7
60°-70°	80.9	8.9
70°-80°	35.8	4.0
80°-90°	7.7	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°	323.4	35.8
0°-40°	497.0	55.0
0°-60°	779.6	86.2
0°-90°	904.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	904.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	460	460	460	460	460	
5°	452	452	452	451	451	43
15°	423	423	419	415	413	119
25°	367	365	359	346	336	168
35°	298	296	281	260	253	186
45°	228	224	204	187	180	176
55°	159	154	140	123	117	142
65°	94	89	80	82	68	93
75°	38	35	33	31	35	40
85°	5	6	6	7	8	7
90°	0	0	0	0	0	



TEST NUMBER: P545351

CATALOG NUMBER: FMR-12-2-LD4-1LO-35-UNV-82-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	460.5	460.5	460.5	460.5	460.5
2.5°	457.3	457.3	457.3	456.8	456.8
5°	452.5	452.0	452.0	451.4	451.4
7.5°	448.8	448.2	447.7	447.2	446.1
10°	443.5	443.5	442.9	440.3	439.7
12.5°	434.9	434.4	432.3	428.5	427.5
15°	423.2	423.2	419.0	414.7	413.1
17.5°	410.4	409.9	404.6	400.3	398.2
20°	396.6	395.5	390.2	383.3	379.6
22.5°	381.2	381.2	374.8	365.7	362.0
25°	366.8	364.7	358.8	346.0	336.4
27.5°	350.3	347.1	340.7	322.6	311.4
30°	332.2	330.6	321.5	298.1	289.6
32.5°	315.2	312.5	302.9	278.4	271.5
35°	297.6	295.5	281.1	259.8	253.4
37.5°	280.0	277.4	259.3	242.2	234.2
40°	262.5	259.3	239.6	224.1	215.6
42.5°	245.9	241.7	222.5	206.0	196.4
45°	228.4	223.6	204.4	187.4	179.9
47.5°	210.8	206.6	189.0	171.4	162.9
50°	192.2	188.5	172.5	154.9	145.9
52.5°	176.7	170.9	155.4	137.9	130.4
55°	158.6	153.9	139.5	123.0	116.6
57.5°	142.1	137.3	124.0	108.6	103.3
60°	126.7	119.8	108.6	95.3	91.0
62.5°	109.7	104.3	94.8	83.6	88.9
65°	94.2	88.9	80.4	82.0	68.1
67.5°	77.2	74.5	67.1	59.6	57.5
70°	62.8	59.6	57.0	49.0	46.8
72.5°	50.0	46.8	43.1	38.9	37.3
75°	37.8	35.1	33.0	31.4	34.6
77.5°	26.1	25.0	23.4	21.8	21.3
80°	17.0	16.5	16.0	15.4	14.9
82.5°	10.1	10.1	10.1	10.1	10.1
85°	5.3	5.9	6.4	6.9	7.5
87.5°	3.2	3.2	3.7	4.3	4.8
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)