

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: P545357

Luminaire Tested: **FMR-12-2-LD4-1LO-35-UNV-82-96-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: P545357
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-82-96-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

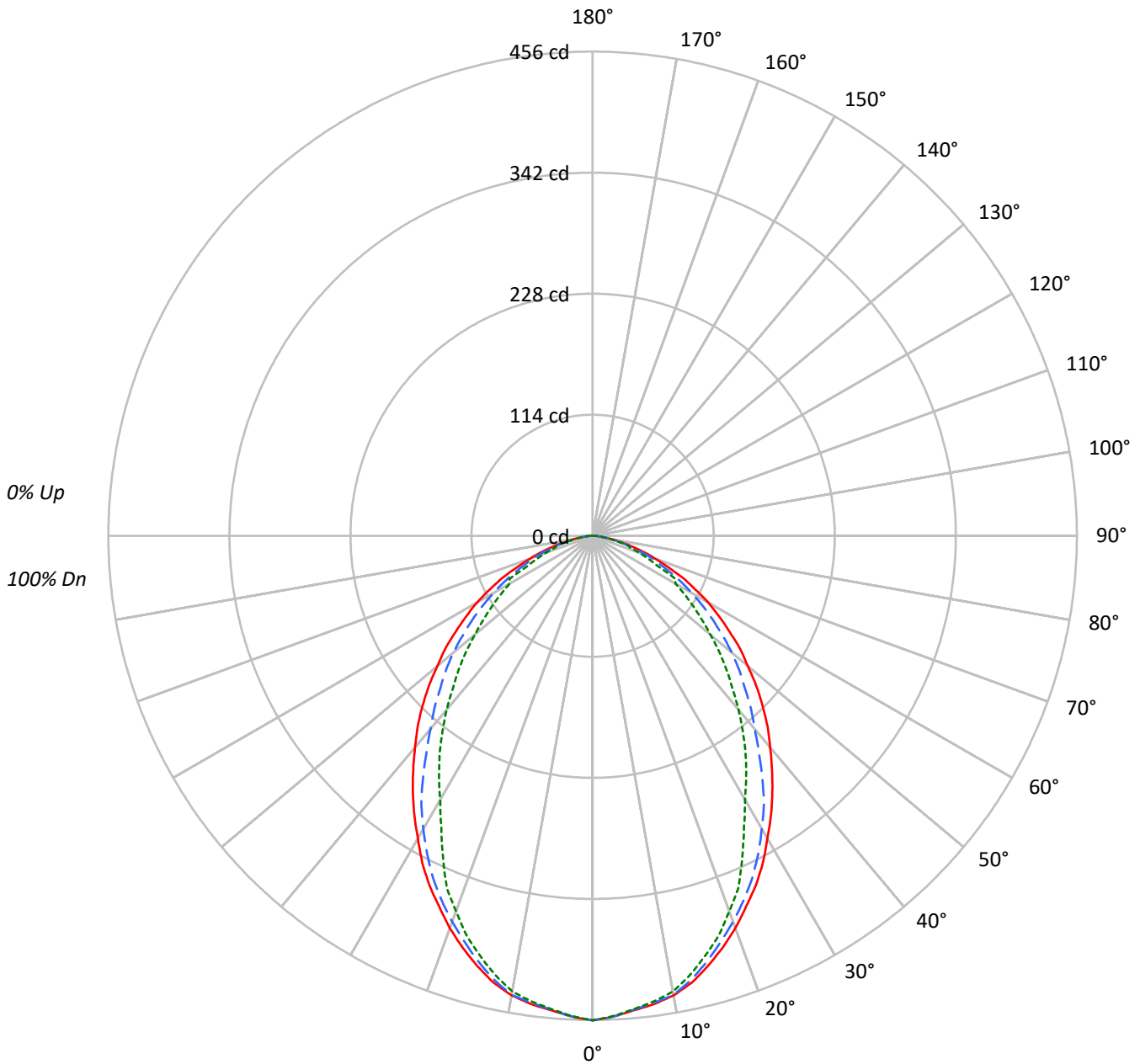
Lumens per Lamp: N/A
Luminaire Lumens: 896.0 lumens
Efficiency: N/A
Efficacy: 76.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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: P545357

CATALOG NUMBER: FMR-12-2-LD4-1LO-35-UNV-82-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545357

CATALOG NUMBER: FMR-12-2-LD4-1LO-35-UNV-82-96-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°	2456	2456	2456
5°	2423	2420	2417
10°	2402	2399	2382
15°	2337	2314	2282
20°	2251	2215	2155
25°	2159	2112	1980
30°	2046	1981	1784
35°	1938	1830	1650
40°	1827	1668	1501
45°	1723	1542	1357
50°	1595	1432	1211
55°	1475	1297	1085
60°	1352	1158	971
65°	1189	1015	860
70°	980	889	730
75°	780	680	713
80°	524	490	459
85°	327	389	457



TEST NUMBER: P545357

CATALOG NUMBER: FMR-12-2-LD4-1LO-35-UNV-82-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.5	4.7
10°-20°	116.6	13.0
20°-30°	161.4	18.0
30°-40°	172.1	19.2
40°-50°	157.0	17.5
50°-60°	123.0	13.7
60°-70°	80.2	8.9
70°-80°	35.5	4.0
80°-90°	7.6	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°	320.5	35.8
0°-40°	492.6	55.0
0°-60°	772.7	86.2
0°-90°	896.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	896.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	456	456	456	456	456	
5°	448	448	448	447	447	43
15°	420	420	415	411	410	118
25°	364	361	356	343	334	167
35°	295	293	279	258	251	184
45°	226	222	203	186	178	174
55°	157	152	138	122	116	141
65°	93	88	80	81	68	92
75°	38	35	33	31	34	40
85°	5	6	6	7	7	7
90°	0	0	0	0	0	



TEST NUMBER: P545357

CATALOG NUMBER: FMR-12-2-LD4-1LO-35-UNV-82-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	456.4	456.4	456.4	456.4	456.4
2.5°	453.2	453.2	453.2	452.7	452.7
5°	448.5	448.0	448.0	447.4	447.4
7.5°	444.8	444.3	443.7	443.2	442.2
10°	439.5	439.5	439.0	436.4	435.8
12.5°	431.1	430.6	428.4	424.8	423.7
15°	419.5	419.5	415.3	411.0	409.5
17.5°	406.8	406.3	401.0	396.8	394.7
20°	393.1	392.0	386.8	379.9	376.2
22.5°	377.8	377.8	371.5	362.5	358.8
25°	363.5	361.4	355.6	343.0	333.5
27.5°	347.2	344.0	337.7	319.8	308.7
30°	329.2	327.7	318.7	295.5	287.0
32.5°	312.4	309.7	300.2	276.0	269.1
35°	295.0	292.8	278.6	257.5	251.2
37.5°	277.5	274.9	257.0	240.1	232.2
40°	260.1	257.0	237.4	222.1	213.7
42.5°	243.8	239.5	220.6	204.2	194.7
45°	226.4	221.6	202.6	185.7	178.3
47.5°	208.9	204.7	187.3	169.9	161.5
50°	190.5	186.8	171.0	153.5	144.6
52.5°	175.2	169.4	154.1	136.7	129.3
55°	157.2	152.5	138.2	121.9	115.6
57.5°	140.9	136.1	122.9	107.6	102.4
60°	125.6	118.7	107.6	94.4	90.2
62.5°	108.7	103.4	93.9	82.8	88.1
65°	93.4	88.1	79.7	81.3	67.5
67.5°	76.5	73.9	66.5	59.1	57.0
70°	62.3	59.1	56.5	48.5	46.4
72.5°	49.6	46.4	42.7	38.5	36.9
75°	37.5	34.8	32.7	31.1	34.3
77.5°	25.9	24.8	23.2	21.6	21.1
80°	16.9	16.4	15.8	15.3	14.8
82.5°	10.0	10.0	10.0	10.0	10.0
85°	5.3	5.8	6.3	6.9	7.4
87.5°	3.2	3.2	3.7	4.2	4.7
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)