

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: P546108

Luminaire Tested: **FMR-12-4-LD4-2HI-35-UNV-80-94-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: P546108
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-12-4-LD4-2HI-35-UNV-80-94-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

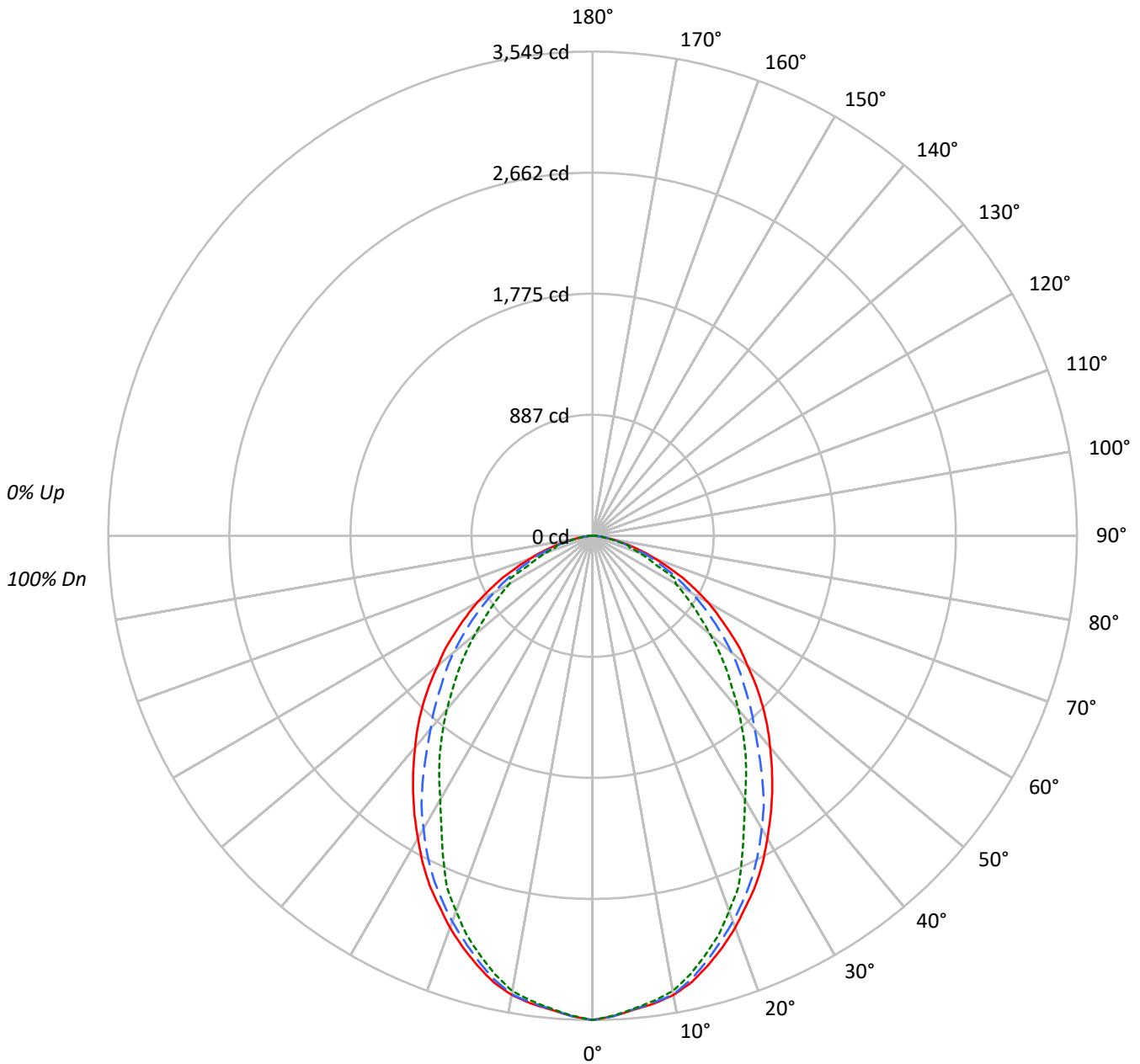
Lumens per Lamp: N/A
Luminaire Lumens: 6967.0 lumens
Efficiency: N/A
Efficacy: 80.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	9550	9550	9550
5°	9420	9409	9398
10°	9339	9327	9260
15°	9087	8995	8870
20°	8753	8612	8377
25°	8393	8211	7699
30°	7955	7700	6935
35°	7534	7116	6415
40°	7105	6485	5837
45°	6698	5996	5277
50°	6201	5565	4706
55°	5736	5043	4215
60°	5255	4505	3776
65°	4624	3945	3344
70°	3809	3454	2840
75°	3029	2645	2773
80°	2035	1908	1781
85°	1266	1519	1772



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	330.4	4.7
10°-20°	906.6	13.0
20°-30°	1255.2	18.0
30°-40°	1338.4	19.2
40°-50°	1221.0	17.5
50°-60°	956.5	13.7
60°-70°	623.4	8.9
70°-80°	276.2	4.0
80°-90°	59.3	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°	2492.2	35.8
0°-40°	3830.5	55.0
0°-60°	6008.1	86.2
0°-90°	6967.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6967.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3549	3549	3549	3549	3549	
5°	3487	3483	3483	3479	3479	331
15°	3262	3262	3229	3196	3184	917
25°	2827	2810	2765	2667	2593	1298
35°	2293	2277	2166	2002	1953	1434
45°	1760	1723	1576	1444	1387	1356
55°	1223	1186	1075	948	898	1097
65°	726	685	620	632	525	716
75°	291	271	254	242	267	312
85°	41	45	49	53	57	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3548.9	3548.9	3548.9	3548.9	3548.9
2.5°	3524.3	3524.3	3524.3	3520.2	3520.2
5°	3487.4	3483.3	3483.3	3479.1	3479.1
7.5°	3458.6	3454.5	3450.4	3446.3	3438.1
10°	3417.6	3417.6	3413.5	3393.0	3388.9
12.5°	3352.0	3347.9	3331.4	3302.7	3294.5
15°	3261.7	3261.7	3228.9	3196.1	3183.8
17.5°	3163.2	3159.1	3118.1	3085.3	3068.9
20°	3056.6	3048.4	3007.3	2954.0	2925.3
22.5°	2937.6	2937.6	2888.4	2818.6	2789.9
25°	2826.8	2810.4	2765.3	2666.8	2593.0
27.5°	2699.6	2675.0	2625.8	2486.3	2400.1
30°	2560.1	2547.8	2478.1	2297.6	2231.9
32.5°	2428.8	2408.3	2334.5	2145.7	2092.4
35°	2293.4	2277.0	2166.3	2002.2	1952.9
37.5°	2158.1	2137.5	1998.0	1866.8	1805.2
40°	2022.7	1998.0	1846.2	1727.3	1661.6
42.5°	1895.5	1862.7	1715.0	1587.8	1513.9
45°	1760.1	1723.2	1575.5	1444.2	1386.7
47.5°	1624.7	1591.9	1456.5	1321.1	1255.4
50°	1481.1	1452.4	1329.3	1193.9	1124.2
52.5°	1362.1	1317.0	1198.0	1062.6	1005.2
55°	1222.6	1185.7	1074.9	947.7	898.5
57.5°	1095.4	1058.5	955.9	837.0	795.9
60°	976.5	923.1	837.0	734.4	701.6
62.5°	845.2	804.1	730.3	644.1	685.2
65°	726.2	685.2	619.5	631.8	525.2
67.5°	594.9	574.4	516.9	459.5	443.1
70°	484.1	459.5	439.0	377.5	361.0
72.5°	385.7	361.0	332.3	299.5	287.2
75°	291.3	270.8	254.4	242.1	266.7
77.5°	201.0	192.8	180.5	168.2	164.1
80°	131.3	127.2	123.1	119.0	114.9
82.5°	78.0	78.0	78.0	78.0	78.0
85°	41.0	45.1	49.2	53.3	57.4
87.5°	24.6	24.6	28.7	32.8	36.9
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)