

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: P546110

Luminaire Tested: **FMR-12-4-LD4-2HI-35-UNV-80-97-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: P546110
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-80-97-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

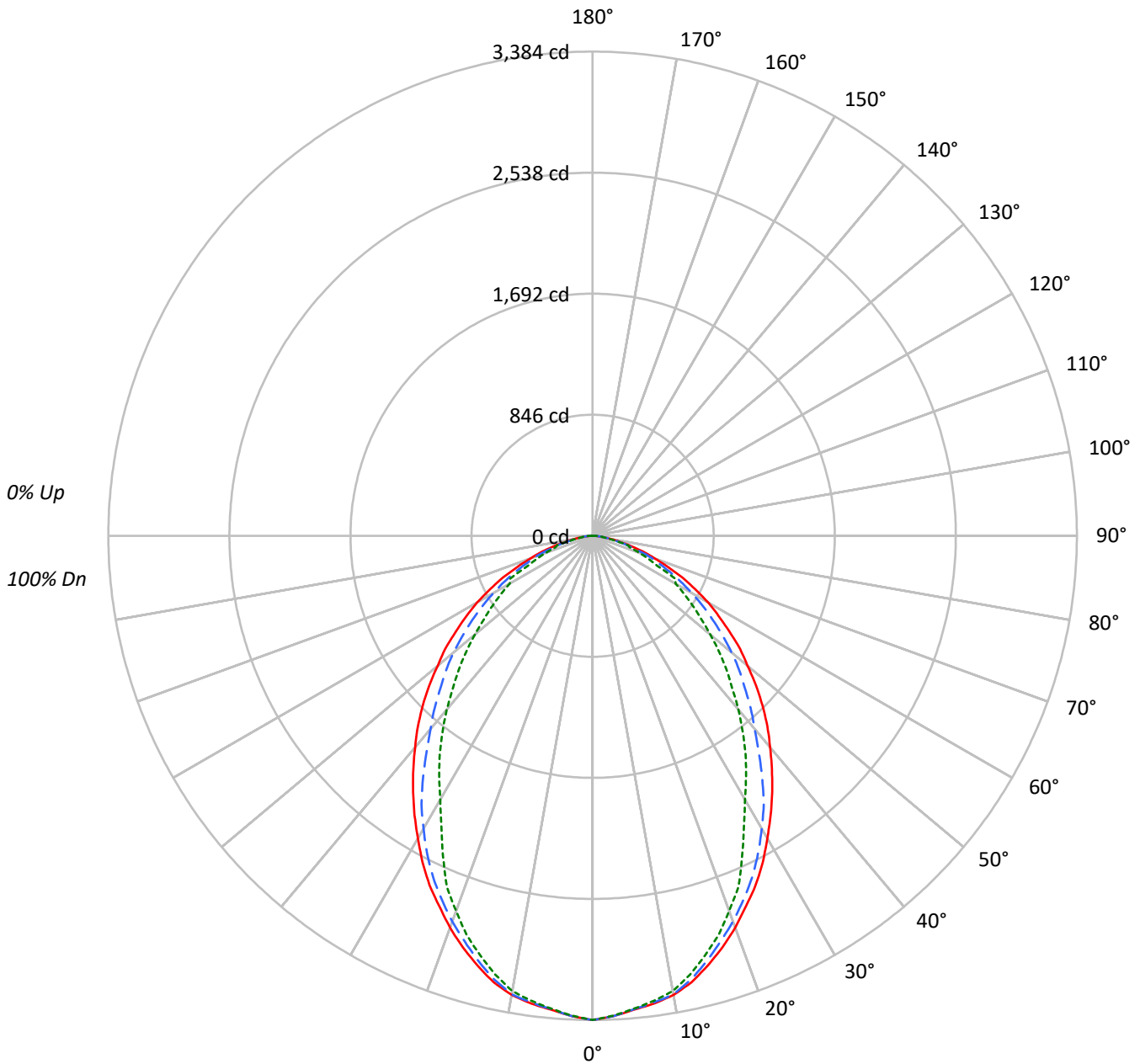
Lumens per Lamp: N/A
Luminaire Lumens: 6643.0 lumens
Efficiency: N/A
Efficacy: 76.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	9106	9106	9106
5°	8982	8972	8961
10°	8904	8894	8829
15°	8664	8577	8457
20°	8346	8212	7987
25°	8003	7829	7341
30°	7585	7342	6613
35°	7184	6785	6117
40°	6775	6184	5565
45°	6387	5717	5032
50°	5912	5306	4487
55°	5469	4808	4019
60°	5011	4295	3600
65°	4409	3761	3188
70°	3632	3294	2709
75°	2887	2521	2644
80°	1940	1819	1697
85°	1207	1448	1692



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	315.0	4.7
10°-20°	864.5	13.0
20°-30°	1196.8	18.0
30°-40°	1276.1	19.2
40°-50°	1164.2	17.5
50°-60°	912.1	13.7
60°-70°	594.4	8.9
70°-80°	263.4	4.0
80°-90°	56.5	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°	2376.3	35.8
0°-40°	3652.4	55.0
0°-60°	5728.6	86.2
0°-90°	6643.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6643.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3384	3384	3384	3384	3384	
5°	3325	3321	3321	3317	3317	316
15°	3110	3110	3079	3047	3036	874
25°	2695	2680	2637	2543	2472	1237
35°	2187	2171	2066	1909	1862	1367
45°	1678	1643	1502	1377	1322	1293
55°	1166	1131	1025	904	857	1046
65°	692	653	591	602	501	682
75°	278	258	242	231	254	298
85°	39	43	47	51	55	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3383.9	3383.9	3383.9	3383.9	3383.9
2.5°	3360.4	3360.4	3360.4	3356.5	3356.5
5°	3325.2	3321.3	3321.3	3317.4	3317.4
7.5°	3297.8	3293.9	3290.0	3286.1	3278.2
10°	3258.7	3258.7	3254.8	3235.2	3231.3
12.5°	3196.1	3192.2	3176.5	3149.1	3141.3
15°	3110.0	3110.0	3078.7	3047.4	3035.7
17.5°	3016.1	3012.2	2973.1	2941.8	2926.2
20°	2914.4	2906.6	2867.5	2816.6	2789.2
22.5°	2801.0	2801.0	2754.0	2687.5	2660.1
25°	2695.3	2679.7	2636.7	2542.8	2472.4
27.5°	2574.1	2550.6	2503.7	2370.7	2288.5
30°	2441.1	2429.3	2362.8	2190.7	2128.1
32.5°	2315.9	2296.3	2225.9	2046.0	1995.1
35°	2186.8	2171.1	2065.5	1909.0	1862.1
37.5°	2057.7	2038.1	1905.1	1779.9	1721.3
40°	1928.6	1905.1	1760.4	1646.9	1584.3
42.5°	1807.3	1776.0	1635.2	1513.9	1443.5
45°	1678.2	1643.0	1502.2	1377.0	1322.2
47.5°	1549.1	1517.8	1388.7	1259.7	1197.1
50°	1412.2	1384.8	1267.5	1138.4	1071.9
52.5°	1298.8	1255.7	1142.3	1013.2	958.4
55°	1165.8	1130.6	1024.9	903.7	856.7
57.5°	1044.5	1009.3	911.5	798.0	758.9
60°	931.0	880.2	798.0	700.2	668.9
62.5°	805.9	766.7	696.3	614.2	653.3
65°	692.4	653.3	590.7	602.4	500.7
67.5°	567.2	547.7	492.9	438.1	422.5
70°	461.6	438.1	418.6	359.9	344.3
72.5°	367.7	344.3	316.9	285.6	273.8
75°	277.7	258.2	242.5	230.8	254.3
77.5°	191.7	183.9	172.1	160.4	156.5
80°	125.2	121.3	117.4	113.4	109.5
82.5°	74.3	74.3	74.3	74.3	74.3
85°	39.1	43.0	46.9	50.9	54.8
87.5°	23.5	23.5	27.4	31.3	35.2
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)