

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: P547124

Luminaire Tested: **FMR-24-4-LD4-3LO-40-UNV-93-94-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: P547124
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-24-4-LD4-3LO-40-UNV-93-94-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

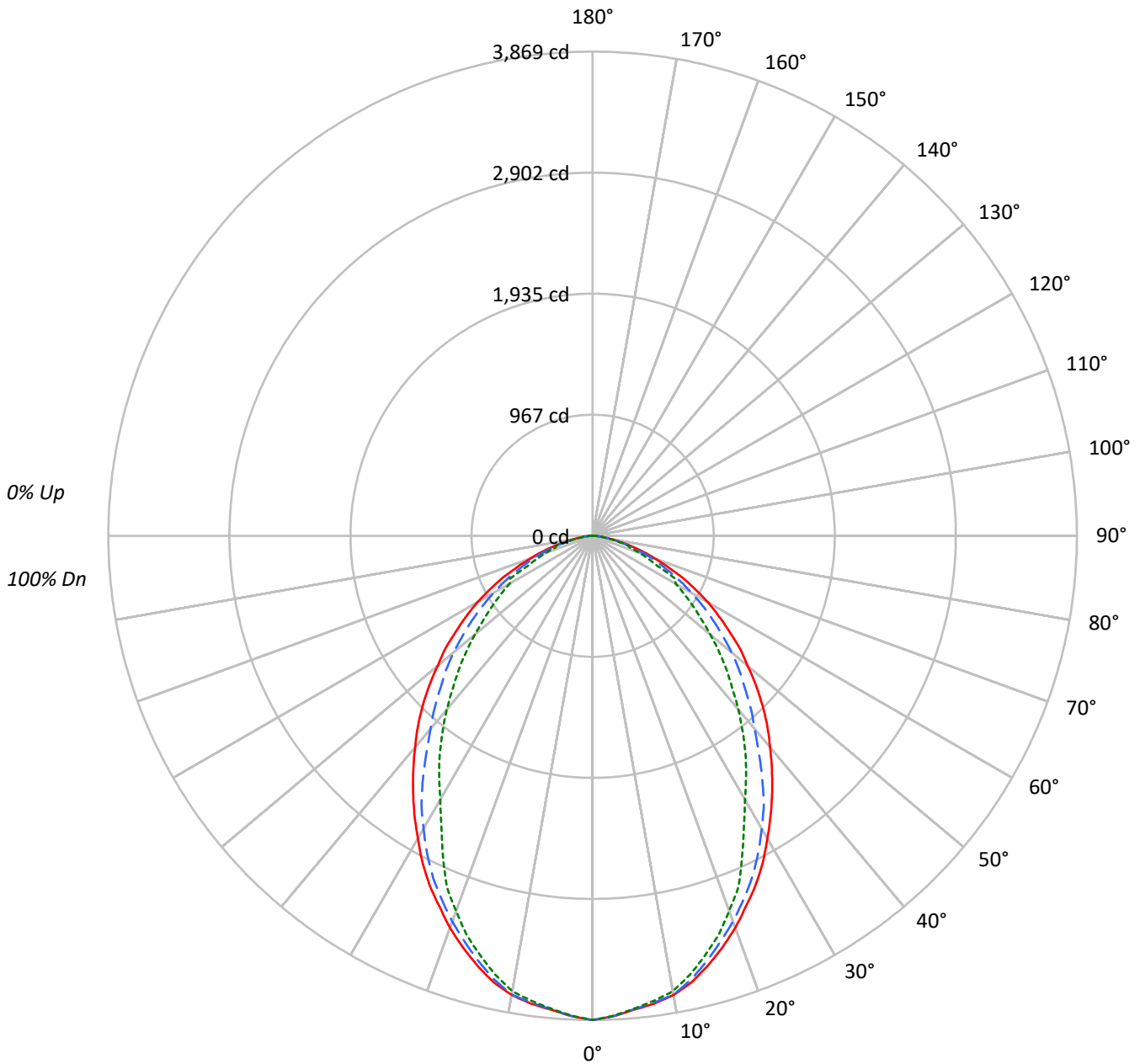
Lumens per Lamp: N/A
Luminaire Lumens: 7596.0 lumens
Efficiency: N/A
Efficacy: 108.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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

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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°	5206	5206	5206
5°	5135	5129	5123
10°	5091	5085	5048
15°	4954	4904	4835
20°	4772	4695	4567
25°	4575	4476	4197
30°	4337	4198	3781
35°	4107	3879	3497
40°	3873	3535	3182
45°	3651	3268	2877
50°	3380	3034	2566
55°	3127	2749	2298
60°	2865	2456	2058
65°	2521	2151	1823
70°	2076	1883	1548
75°	1651	1442	1512
80°	1109	1040	970
85°	690	829	966



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	360.2	4.7
10°-20°	988.5	13.0
20°-30°	1368.5	18.0
30°-40°	1459.2	19.2
40°-50°	1331.2	17.5
50°-60°	1042.9	13.7
60°-70°	679.7	8.9
70°-80°	301.1	4.0
80°-90°	64.7	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°	2717.1	35.8
0°-40°	4176.3	55.0
0°-60°	6550.5	86.2
0°-90°	7596.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7596.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3869	3869	3869	3869	3869	
5°	3802	3798	3798	3793	3793	361
15°	3556	3556	3520	3485	3471	1000
25°	3082	3064	3015	2908	2827	1415
35°	2500	2483	2362	2183	2129	1563
45°	1919	1879	1718	1575	1512	1478
55°	1333	1293	1172	1033	980	1196
65°	792	747	676	689	573	780
75°	318	295	277	264	291	340
85°	45	49	54	58	63	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3869.3	3869.3	3869.3	3869.3	3869.3
2.5°	3842.5	3842.5	3842.5	3838.0	3838.0
5°	3802.2	3797.7	3797.7	3793.3	3793.3
7.5°	3770.9	3766.4	3761.9	3757.5	3748.5
10°	3726.2	3726.2	3721.7	3699.3	3694.8
12.5°	3654.6	3650.1	3632.2	3600.9	3592.0
15°	3556.2	3556.2	3520.4	3484.6	3471.2
17.5°	3448.8	3444.3	3399.6	3363.8	3345.9
20°	3332.5	3323.6	3278.8	3220.7	3189.4
22.5°	3202.8	3202.8	3149.1	3073.1	3041.8
25°	3082.0	3064.1	3014.9	2907.6	2827.0
27.5°	2943.4	2916.5	2862.8	2710.7	2616.8
30°	2791.3	2777.8	2701.8	2505.0	2433.4
32.5°	2648.1	2625.8	2545.2	2339.5	2281.3
35°	2500.5	2482.6	2361.8	2182.9	2129.2
37.5°	2352.9	2330.5	2178.4	2035.3	1968.2
40°	2205.3	2178.4	2012.9	1883.2	1811.6
42.5°	2066.6	2030.8	1869.8	1731.1	1650.6
45°	1919.0	1878.7	1717.7	1574.6	1511.9
47.5°	1771.4	1735.6	1588.0	1440.4	1368.8
50°	1614.8	1583.5	1449.3	1301.7	1225.7
52.5°	1485.1	1435.9	1306.2	1158.6	1095.9
55°	1333.0	1292.7	1172.0	1033.3	979.6
57.5°	1194.3	1154.1	1042.3	912.5	867.8
60°	1064.6	1006.5	912.5	800.7	764.9
62.5°	921.5	876.7	796.2	702.3	747.0
65°	791.8	747.0	675.5	688.9	572.6
67.5°	648.6	626.2	563.6	501.0	483.1
70°	527.8	501.0	478.6	411.5	393.6
72.5°	420.5	393.6	362.3	326.5	313.1
75°	317.6	295.2	277.3	263.9	290.8
77.5°	219.2	210.2	196.8	183.4	178.9
80°	143.1	138.7	134.2	129.7	125.2
82.5°	85.0	85.0	85.0	85.0	85.0
85°	44.7	49.2	53.7	58.2	62.6
87.5°	26.8	26.8	31.3	35.8	40.3
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)