

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: P547092

Luminaire Tested: **FMR-24-4-LD4-3LO-35-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: P547092
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-35-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 3500K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

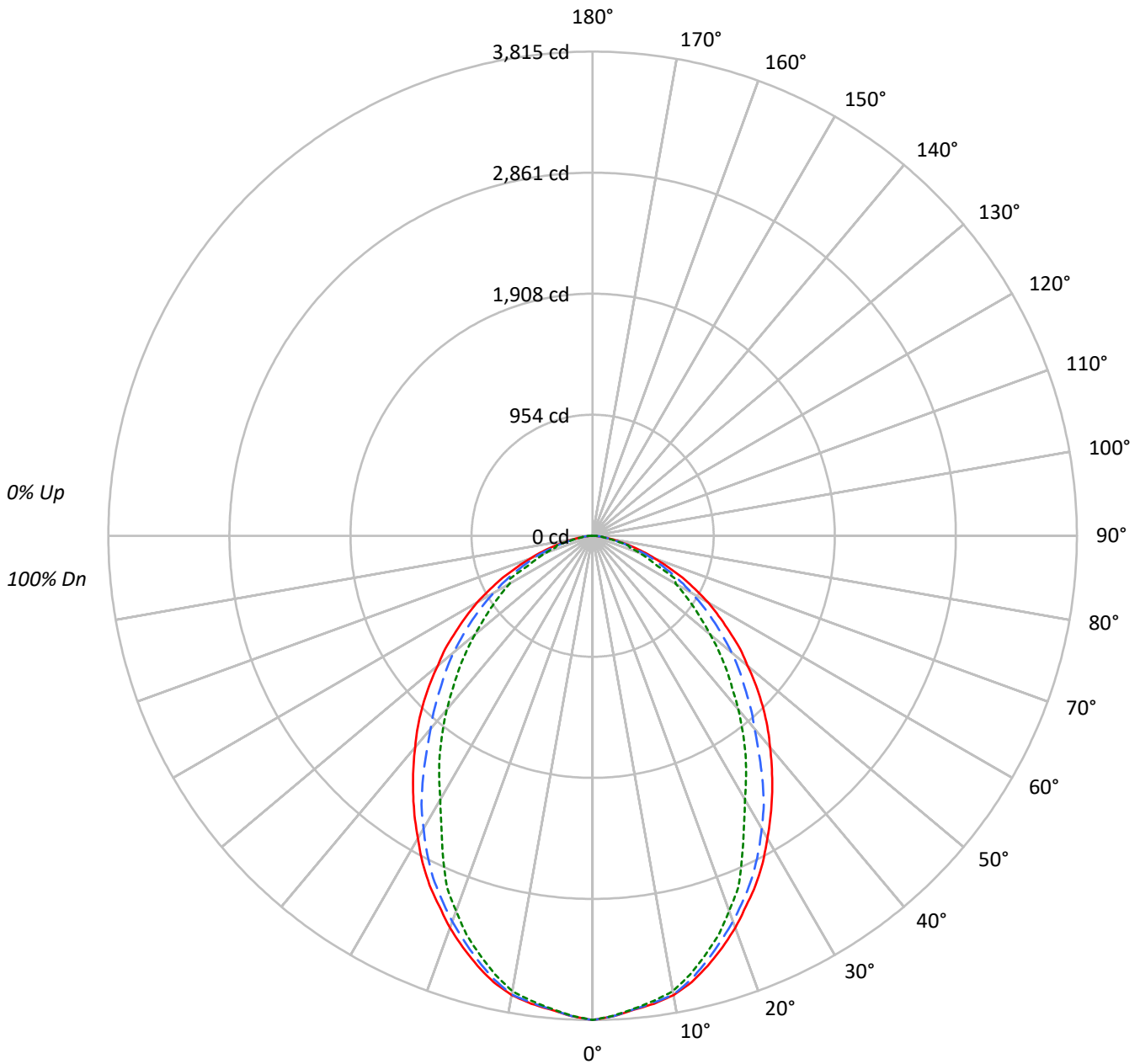
Lumens per Lamp: N/A
Luminaire Lumens: 7490.0 lumens
Efficiency: N/A
Efficacy: 106.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	5133	5133	5133
5°	5064	5058	5052
10°	5020	5014	4978
15°	4885	4835	4768
20°	4705	4629	4503
25°	4512	4414	4138
30°	4276	4139	3728
35°	4050	3825	3449
40°	3819	3486	3138
45°	3600	3223	2837
50°	3333	2991	2530
55°	3083	2711	2266
60°	2825	2421	2030
65°	2486	2120	1798
70°	2048	1857	1527
75°	1628	1422	1490
80°	1093	1025	957
85°	681	817	954



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	355.2	4.7
10°-20°	974.7	13.0
20°-30°	1349.4	18.0
30°-40°	1438.8	19.2
40°-50°	1312.6	17.5
50°-60°	1028.4	13.7
60°-70°	670.2	8.9
70°-80°	296.9	4.0
80°-90°	63.8	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°	2679.2	35.8
0°-40°	4118.1	55.0
0°-60°	6459.1	86.2
0°-90°	7490.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7490.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3815	3815	3815	3815	3815	
5°	3749	3745	3745	3740	3740	356
15°	3507	3507	3471	3436	3423	986
25°	3039	3021	2973	2867	2788	1395
35°	2466	2448	2329	2152	2100	1541
45°	1892	1852	1694	1553	1491	1458
55°	1314	1275	1156	1019	966	1179
65°	781	737	666	679	565	769
75°	313	291	274	260	287	336
85°	44	48	53	57	62	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3815.3	3815.3	3815.3	3815.3	3815.3
2.5°	3788.8	3788.8	3788.8	3784.4	3784.4
5°	3749.1	3744.7	3744.7	3740.3	3740.3
7.5°	3718.3	3713.9	3709.4	3705.0	3696.2
10°	3674.2	3674.2	3669.8	3647.7	3643.3
12.5°	3603.6	3599.2	3581.5	3550.7	3541.8
15°	3506.6	3506.6	3471.3	3436.0	3422.7
17.5°	3400.7	3396.3	3352.2	3316.9	3299.2
20°	3286.0	3277.2	3233.1	3175.7	3144.9
22.5°	3158.1	3158.1	3105.2	3030.2	2999.3
25°	3039.0	3021.4	2972.9	2867.0	2787.6
27.5°	2902.3	2875.8	2822.9	2672.9	2580.3
30°	2752.3	2739.1	2664.1	2470.0	2399.5
32.5°	2611.2	2589.1	2509.7	2306.8	2249.5
35°	2465.6	2448.0	2328.9	2152.5	2099.5
37.5°	2320.1	2298.0	2148.0	2006.9	1940.7
40°	2174.5	2148.0	1984.8	1856.9	1786.4
42.5°	2037.8	2002.5	1843.7	1707.0	1627.6
45°	1892.2	1852.5	1693.7	1552.6	1490.8
47.5°	1746.7	1711.4	1565.8	1420.3	1349.7
50°	1592.3	1561.4	1429.1	1283.5	1208.5
52.5°	1464.4	1415.9	1287.9	1142.4	1080.6
55°	1314.4	1274.7	1155.6	1018.9	966.0
57.5°	1177.7	1138.0	1027.7	899.8	855.7
60°	1049.8	992.4	899.8	789.5	754.2
62.5°	908.6	864.5	785.1	692.5	736.6
65°	780.7	736.6	666.0	679.3	564.6
67.5°	639.6	617.5	555.8	494.0	476.4
70°	520.5	494.0	472.0	405.8	388.1
72.5°	414.6	388.1	357.3	322.0	308.8
75°	313.2	291.1	273.5	260.2	286.7
77.5°	216.1	207.3	194.1	180.8	176.4
80°	141.1	136.7	132.3	127.9	123.5
82.5°	83.8	83.8	83.8	83.8	83.8
85°	44.1	48.5	52.9	57.3	61.8
87.5°	26.5	26.5	30.9	35.3	39.7
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)