

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: P547262

Luminaire Tested: **FMR-24-4-LD4-4HI-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: P547262
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-LD4-4HI-35-UNV-80-97-EDD
Description: 2X4 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

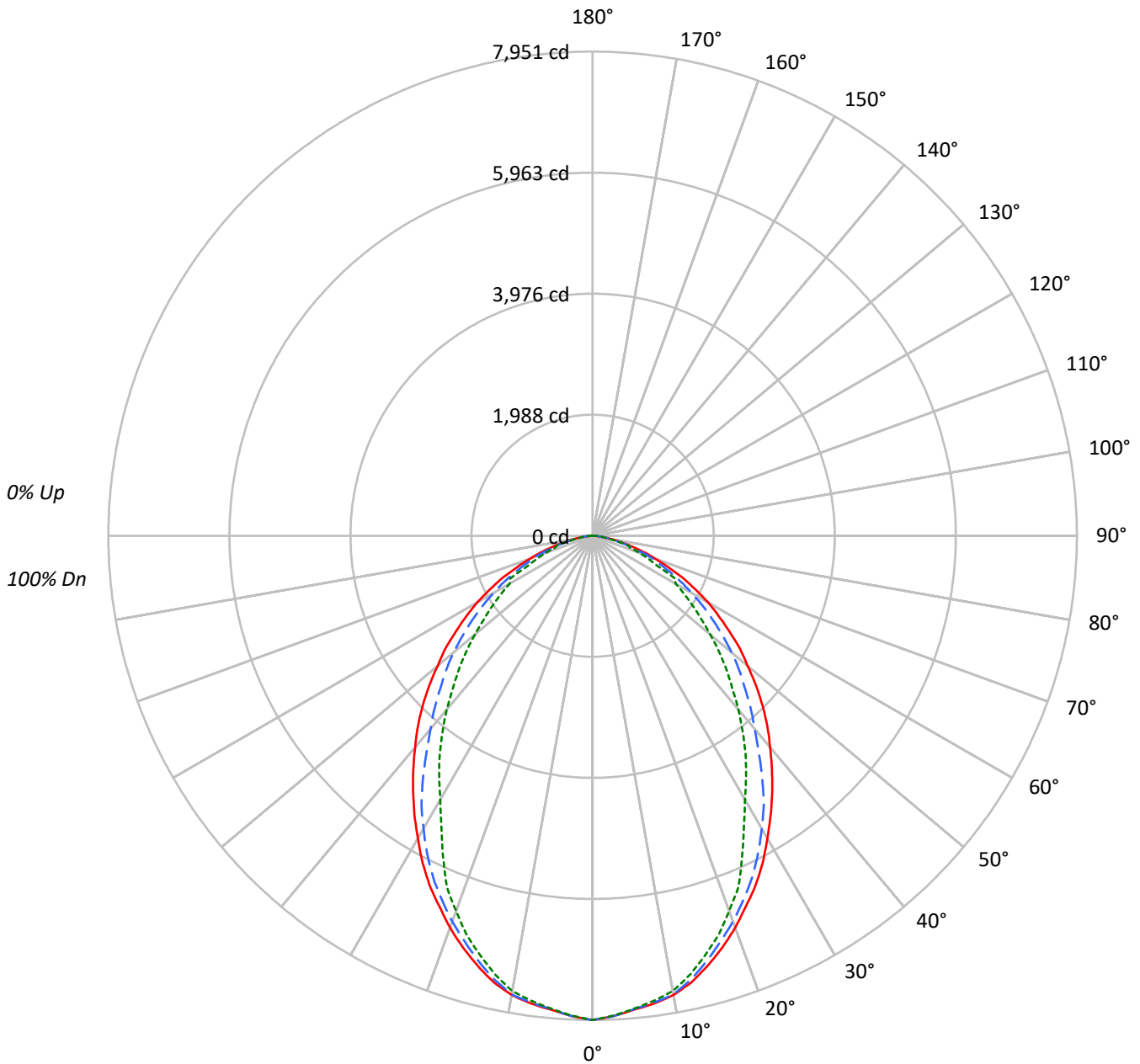
Lumens per Lamp: N/A
Luminaire Lumens: 15609.0 lumens
Efficiency: N/A
Efficacy: 90.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
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°	10698	10698	10698
5°	10553	10540	10528
10°	10461	10449	10373
15°	10179	10077	9936
20°	9805	9647	9384
25°	9402	9198	8624
30°	8911	8626	7769
35°	8440	7972	7187
40°	7959	7265	6539
45°	7503	6716	5912
50°	6946	6234	5272
55°	6426	5649	4722
60°	5887	5046	4230
65°	5180	4419	3746
70°	4267	3869	3182
75°	3393	2963	3106
80°	2279	2137	1994
85°	1419	1703	1987



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	740.1	4.7
10°-20°	2031.2	13.0
20°-30°	2812.1	18.0
30°-40°	2998.5	19.2
40°-50°	2735.5	17.5
50°-60°	2143.1	13.7
60°-70°	1396.8	8.9
70°-80°	618.8	4.0
80°-90°	132.8	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°	5583.5	35.8
0°-40°	8582.0	55.0
0°-60°	13460.6	86.2
0°-90°	15609.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15609.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7951	7951	7951	7951	7951	
5°	7813	7804	7804	7795	7795	742
15°	7308	7308	7234	7160	7133	2054
25°	6333	6296	6195	5975	5809	2908
35°	5138	5102	4853	4486	4375	3212
45°	3943	3861	3530	3236	3107	3038
55°	2739	2656	2408	2123	2013	2457
65°	1627	1535	1388	1416	1177	1603
75°	653	607	570	542	598	699
85°	92	101	110	120	129	127
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7951.0	7951.0	7951.0	7951.0	7951.0
2.5°	7895.9	7895.9	7895.9	7886.7	7886.7
5°	7813.1	7803.9	7803.9	7794.8	7794.8
7.5°	7748.8	7739.6	7730.4	7721.2	7702.8
10°	7656.9	7656.9	7647.7	7601.7	7592.5
12.5°	7509.8	7500.6	7463.8	7399.5	7381.1
15°	7307.6	7307.6	7234.0	7160.5	7132.9
17.5°	7087.0	7077.8	6985.9	6912.3	6875.6
20°	6848.0	6829.6	6737.7	6618.2	6553.8
22.5°	6581.4	6581.4	6471.1	6314.9	6250.5
25°	6333.2	6296.5	6195.4	5974.8	5809.3
27.5°	6048.3	5993.1	5882.8	5570.3	5377.3
30°	5735.8	5708.2	5551.9	5147.5	5000.4
32.5°	5441.6	5395.7	5230.2	4807.4	4687.9
35°	5138.3	5101.5	4853.3	4485.7	4375.4
37.5°	4835.0	4789.0	4476.5	4182.3	4044.4
40°	4531.6	4476.5	4136.4	3869.8	3722.7
42.5°	4246.7	4173.1	3842.2	3557.3	3391.8
45°	3943.3	3860.6	3529.7	3235.6	3106.9
47.5°	3640.0	3566.5	3263.1	2959.8	2812.7
50°	3318.3	3253.9	2978.2	2674.9	2518.6
52.5°	3051.7	2950.6	2684.0	2380.7	2252.0
55°	2739.2	2656.5	2408.3	2123.3	2013.0
57.5°	2454.2	2371.5	2141.7	1875.2	1783.2
60°	2187.7	2068.2	1875.2	1645.4	1571.8
62.5°	1893.5	1801.6	1636.2	1443.1	1535.1
65°	1627.0	1535.1	1388.0	1415.6	1176.6
67.5°	1332.8	1286.9	1158.2	1029.5	992.7
70°	1084.6	1029.5	983.5	845.7	808.9
72.5°	864.0	808.9	744.5	671.0	643.4
75°	652.6	606.7	569.9	542.3	597.5
77.5°	450.4	432.0	404.4	376.9	367.7
80°	294.1	284.9	275.8	266.6	257.4
82.5°	174.6	174.6	174.6	174.6	174.6
85°	91.9	101.1	110.3	119.5	128.7
87.5°	55.2	55.2	64.3	73.5	82.7
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)