

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: P547005

Luminaire Tested: **FMR-24-4-LD4-3HI-40-UNV-80-96-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: P547005
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-LD4-3HI-40-UNV-80-96-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

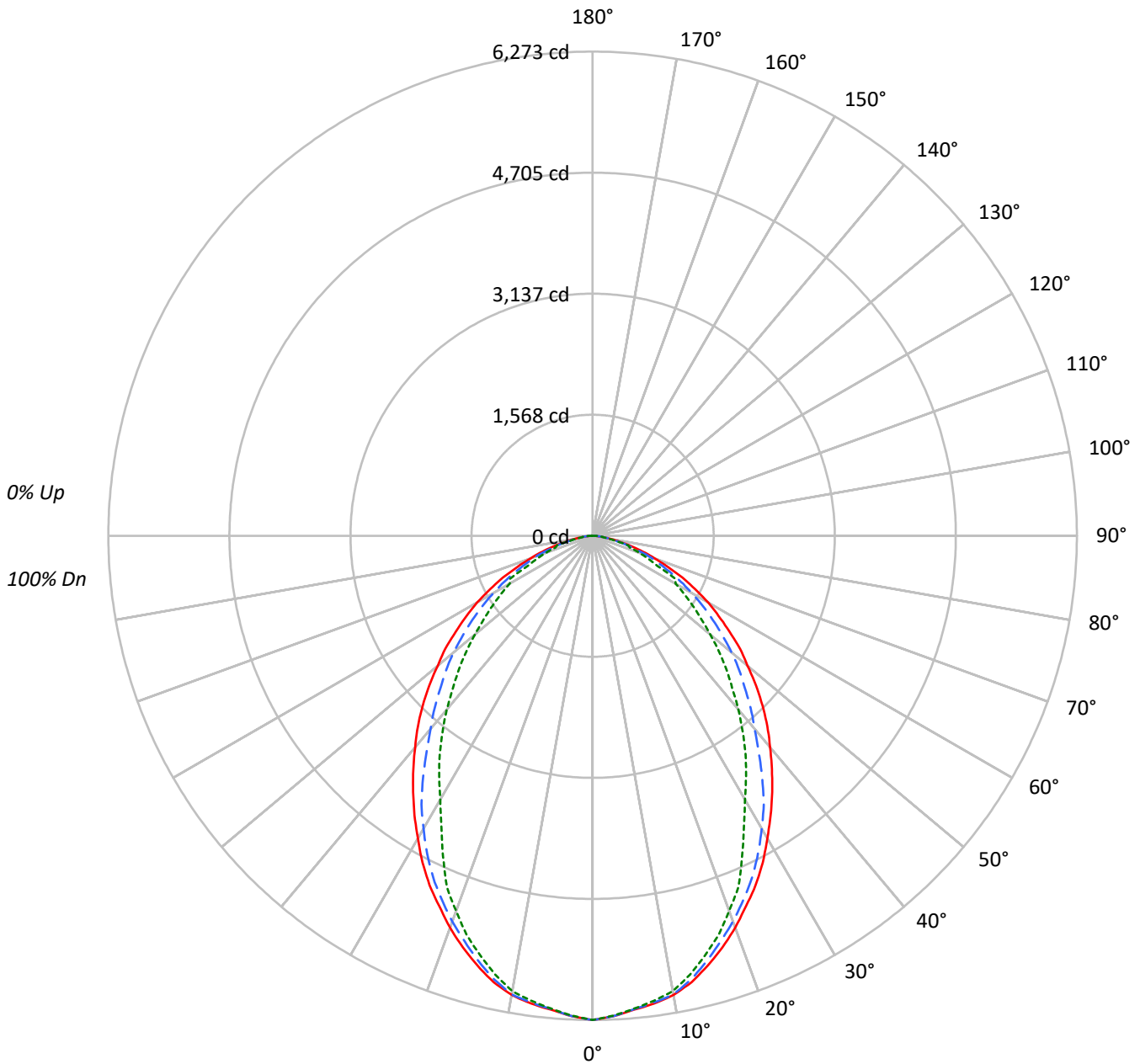
Lumens per Lamp: N/A
Luminaire Lumens: 12315.0 lumens
Efficiency: N/A
Efficacy: 95.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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°	8440	8440	8440
5°	8326	8316	8306
10°	8253	8244	8184
15°	8031	7950	7839
20°	7736	7611	7404
25°	7418	7256	6804
30°	7031	6805	6129
35°	6659	6289	5670
40°	6280	5732	5159
45°	5920	5299	4664
50°	5480	4918	4159
55°	5069	4457	3726
60°	4645	3981	3337
65°	4087	3486	2955
70°	3367	3053	2511
75°	2677	2337	2451
80°	1798	1686	1574
85°	1119	1343	1567



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	583.9	4.7
10°-20°	1602.6	13.0
20°-30°	2218.7	18.0
30°-40°	2365.7	19.2
40°-50°	2158.2	17.5
50°-60°	1690.8	13.7
60°-70°	1102.0	8.9
70°-80°	488.2	4.0
80°-90°	104.8	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°	4405.2	35.8
0°-40°	6770.9	55.0
0°-60°	10620.0	86.2
0°-90°	12315.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12315.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6273	6273	6273	6273	6273	
5°	6164	6157	6157	6150	6150	585
15°	5765	5765	5707	5649	5628	1621
25°	4997	4968	4888	4714	4583	2294
35°	4054	4025	3829	3539	3452	2534
45°	3111	3046	2785	2553	2451	2397
55°	2161	2096	1900	1675	1588	1938
65°	1284	1211	1095	1117	928	1265
75°	515	479	450	428	471	552
85°	72	80	87	94	102	101
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6273.1	6273.1	6273.1	6273.1	6273.1
2.5°	6229.6	6229.6	6229.6	6222.3	6222.3
5°	6164.3	6157.1	6157.1	6149.8	6149.8
7.5°	6113.5	6106.3	6099.0	6091.8	6077.3
10°	6041.0	6041.0	6033.8	5997.5	5990.3
12.5°	5925.0	5917.7	5888.7	5838.0	5823.5
15°	5765.4	5765.4	5707.4	5649.4	5627.7
17.5°	5591.4	5584.1	5511.6	5453.6	5424.6
20°	5402.8	5388.3	5315.8	5221.5	5170.8
22.5°	5192.5	5192.5	5105.5	4982.2	4931.5
25°	4996.7	4967.7	4887.9	4713.9	4583.3
27.5°	4771.9	4728.4	4641.4	4394.8	4242.5
30°	4525.3	4503.6	4380.3	4061.2	3945.2
32.5°	4293.3	4257.0	4126.5	3792.9	3698.6
35°	4053.9	4024.9	3829.1	3539.0	3452.0
37.5°	3814.6	3778.4	3531.8	3299.7	3190.9
40°	3575.3	3531.8	3263.5	3053.1	2937.1
42.5°	3350.5	3292.5	3031.4	2806.6	2676.0
45°	3111.2	3045.9	2784.8	2552.8	2451.2
47.5°	2871.8	2813.8	2574.5	2335.2	2219.2
50°	2618.0	2567.3	2349.7	2110.4	1987.1
52.5°	2407.7	2327.9	2117.6	1878.3	1776.8
55°	2161.1	2095.9	1900.1	1675.2	1588.2
57.5°	1936.3	1871.1	1689.7	1479.4	1406.9
60°	1726.0	1631.7	1479.4	1298.1	1240.1
62.5°	1493.9	1421.4	1290.9	1138.6	1211.1
65°	1283.6	1211.1	1095.1	1116.8	928.3
67.5°	1051.6	1015.3	913.8	812.2	783.2
70°	855.8	812.2	776.0	667.2	638.2
72.5°	681.7	638.2	587.4	529.4	507.6
75°	514.9	478.6	449.6	427.9	471.4
77.5°	355.4	340.9	319.1	297.3	290.1
80°	232.1	224.8	217.6	210.3	203.1
82.5°	137.8	137.8	137.8	137.8	137.8
85°	72.5	79.8	87.0	94.3	101.5
87.5°	43.5	43.5	50.8	58.0	65.3
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)