

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: P547099

Luminaire Tested: **FMR-24-4-LD4-3LO-40-UNV-80-88-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: P547099
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-80-88-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

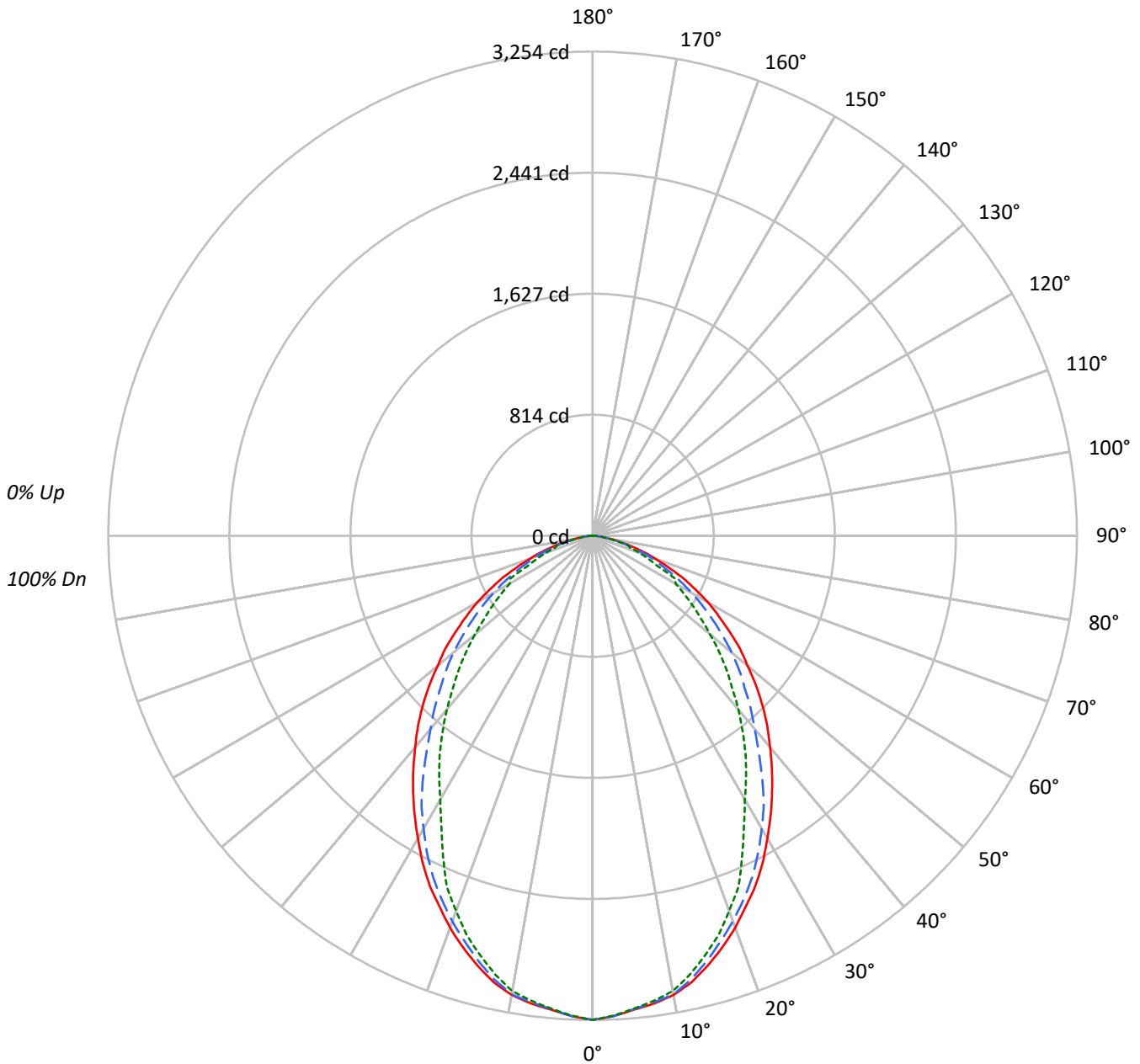
Lumens per Lamp: N/A
Luminaire Lumens: 6387.0 lumens
Efficiency: N/A
Efficacy: 91.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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°	4378	4378	4378
5°	4318	4313	4308
10°	4281	4275	4245
15°	4165	4123	4066
20°	4012	3948	3840
25°	3847	3764	3529
30°	3646	3530	3179
35°	3453	3262	2941
40°	3257	2973	2676
45°	3070	2748	2419
50°	2842	2551	2157
55°	2629	2312	1932
60°	2409	2065	1731
65°	2119	1808	1533
70°	1746	1583	1302
75°	1388	1212	1271
80°	933	874	816
85°	580	696	814



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	302.9	4.7
10°-20°	831.2	13.0
20°-30°	1150.7	18.0
30°-40°	1227.0	19.2
40°-50°	1119.3	17.5
50°-60°	876.9	13.7
60°-70°	571.5	8.9
70°-80°	253.2	4.0
80°-90°	54.4	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°	2284.7	35.8
0°-40°	3511.6	55.0
0°-60°	5507.9	86.2
0°-90°	6387.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6387.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3254	3254	3254	3254	3254	
5°	3197	3193	3193	3190	3190	303
15°	2990	2990	2960	2930	2919	841
25°	2592	2576	2535	2445	2377	1190
35°	2102	2088	1986	1836	1790	1314
45°	1614	1580	1444	1324	1271	1243
55°	1121	1087	985	869	824	1005
65°	666	628	568	579	481	656
75°	267	248	233	222	244	286
85°	38	41	45	49	53	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3253.5	3253.5	3253.5	3253.5	3253.5
2.5°	3230.9	3230.9	3230.9	3227.1	3227.1
5°	3197.0	3193.3	3193.3	3189.5	3189.5
7.5°	3170.7	3166.9	3163.2	3159.4	3151.9
10°	3133.1	3133.1	3129.3	3110.5	3106.8
12.5°	3072.9	3069.2	3054.1	3027.8	3020.3
15°	2990.2	2990.2	2960.1	2930.0	2918.7
17.5°	2899.9	2896.1	2858.5	2828.4	2813.4
20°	2802.1	2794.6	2757.0	2708.1	2681.7
22.5°	2693.0	2693.0	2647.9	2584.0	2557.6
25°	2591.5	2576.4	2535.1	2444.8	2377.1
27.5°	2474.9	2452.3	2407.2	2279.3	2200.3
30°	2347.0	2335.7	2271.8	2106.3	2046.1
32.5°	2226.6	2207.8	2140.1	1967.1	1918.2
35°	2102.5	2087.5	1985.9	1835.5	1790.3
37.5°	1978.4	1959.6	1831.7	1711.4	1654.9
40°	1854.3	1831.7	1692.5	1583.5	1523.3
42.5°	1737.7	1707.6	1572.2	1455.6	1387.9
45°	1613.6	1579.7	1444.3	1323.9	1271.3
47.5°	1489.4	1459.4	1335.2	1211.1	1150.9
50°	1357.8	1331.5	1218.6	1094.5	1030.6
52.5°	1248.7	1207.4	1098.3	974.2	921.5
55°	1120.8	1087.0	985.4	868.8	823.7
57.5°	1004.2	970.4	876.4	767.3	729.7
60°	895.2	846.3	767.3	673.3	643.2
62.5°	774.8	737.2	669.5	590.5	628.1
65°	665.7	628.1	567.9	579.2	481.4
67.5°	545.4	526.6	473.9	421.3	406.2
70°	443.8	421.3	402.5	346.0	331.0
72.5°	353.6	331.0	304.7	274.6	263.3
75°	267.0	248.2	233.2	221.9	244.5
77.5°	184.3	176.8	165.5	154.2	150.4
80°	120.4	116.6	112.8	109.1	105.3
82.5°	71.5	71.5	71.5	71.5	71.5
85°	37.6	41.4	45.1	48.9	52.7
87.5°	22.6	22.6	26.3	30.1	33.9
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)