

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: P547242

Luminaire Tested: **FMR-24-4-LD4-3STD-50-UNV-82-87-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: P547242
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-LD4-3STD-50-UNV-82-87-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

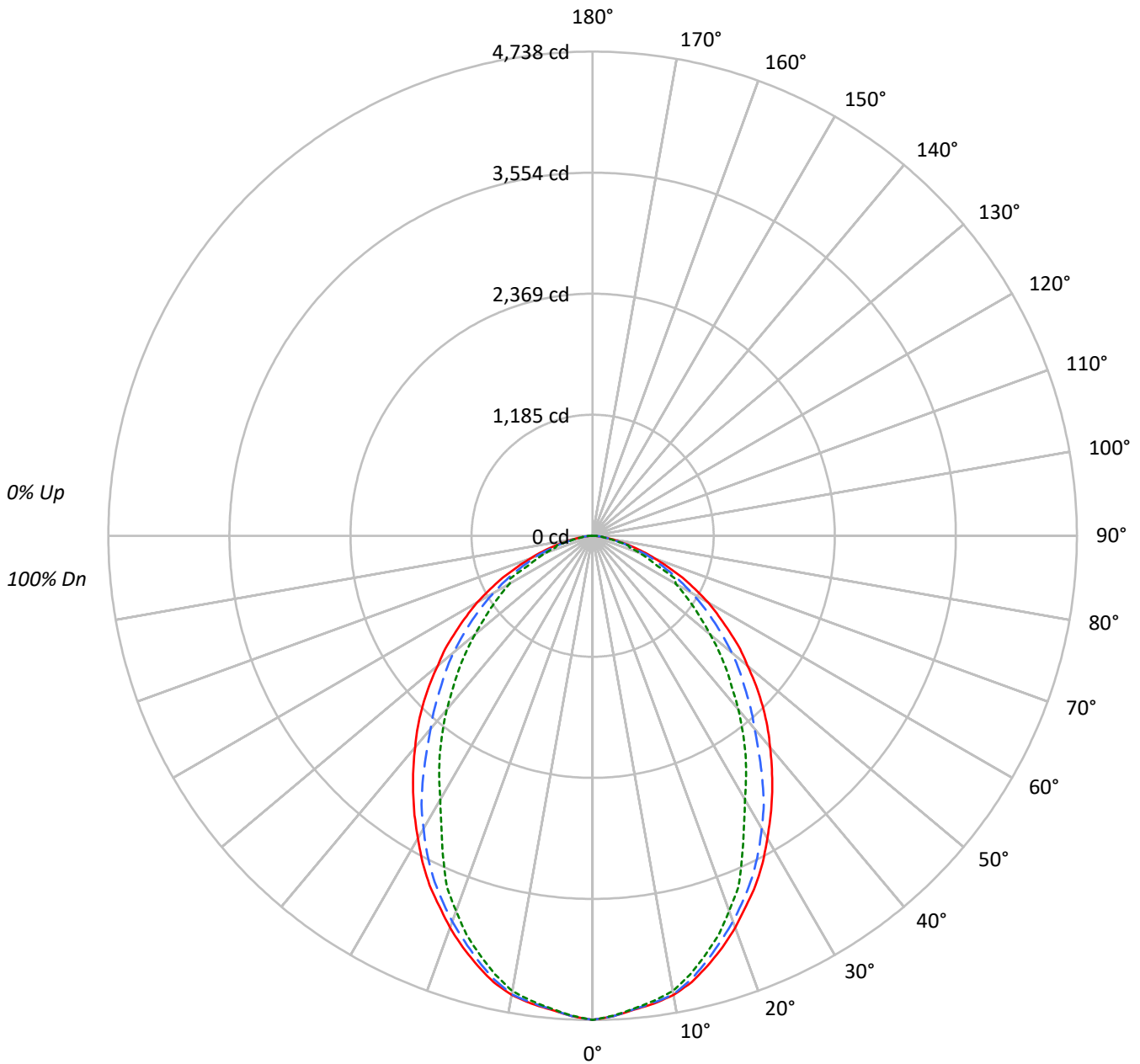
Lumens per Lamp: N/A
Luminaire Lumens: 9301.0 lumens
Efficiency: N/A
Efficacy: 93.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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

TEST NUMBER: P547242

CATALOG NUMBER: FMR-24-4-LD4-3STD-50-UNV-82-87-EDD

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°	6375	6375	6375
5°	6288	6281	6273
10°	6233	6226	6181
15°	6065	6004	5920
20°	5843	5749	5592
25°	5603	5481	5139
30°	5310	5140	4629
35°	5029	4750	4282
40°	4743	4329	3896
45°	4471	4002	3523
50°	4139	3715	3141
55°	3829	3366	2814
60°	3508	3007	2520
65°	3087	2633	2232
70°	2543	2306	1896
75°	2022	1765	1851
80°	1358	1273	1189
85°	846	1014	1184



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	441.0	4.7
10°-20°	1210.4	13.0
20°-30°	1675.7	18.0
30°-40°	1786.7	19.2
40°-50°	1630.0	17.5
50°-60°	1277.0	13.7
60°-70°	832.3	8.9
70°-80°	368.7	4.0
80°-90°	79.2	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°	3327.0	35.8
0°-40°	5113.8	55.0
0°-60°	8020.8	86.2
0°-90°	9301.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9301.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4738	4738	4738	4738	4738	
5°	4656	4650	4650	4645	4645	442
15°	4354	4354	4311	4267	4250	1224
25°	3774	3752	3692	3560	3462	1733
35°	3062	3040	2892	2673	2607	1914
45°	2350	2300	2103	1928	1851	1810
55°	1632	1583	1435	1265	1200	1464
65°	970	915	827	844	701	955
75°	389	362	340	323	356	417
85°	55	60	66	71	77	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4737.8	4737.8	4737.8	4737.8	4737.8
2.5°	4704.9	4704.9	4704.9	4699.5	4699.5
5°	4655.6	4650.2	4650.2	4644.7	4644.7
7.5°	4617.3	4611.8	4606.4	4600.9	4589.9
10°	4562.5	4562.5	4557.1	4529.7	4524.2
12.5°	4474.9	4469.4	4447.5	4409.2	4398.2
15°	4354.4	4354.4	4310.6	4266.8	4250.3
17.5°	4222.9	4217.5	4162.7	4118.9	4097.0
20°	4080.5	4069.6	4014.8	3943.6	3905.3
22.5°	3921.7	3921.7	3856.0	3762.9	3724.5
25°	3773.8	3751.9	3691.7	3560.2	3461.6
27.5°	3604.0	3571.2	3505.4	3319.2	3204.2
30°	3417.8	3401.4	3308.2	3067.2	2979.6
32.5°	3242.5	3215.1	3116.5	2864.6	2793.4
35°	3061.8	3039.9	2892.0	2672.9	2607.2
37.5°	2881.0	2853.6	2667.4	2492.1	2410.0
40°	2700.3	2667.4	2464.8	2305.9	2218.3
42.5°	2530.5	2486.7	2289.5	2119.7	2021.1
45°	2349.7	2300.4	2103.3	1928.0	1851.3
47.5°	2169.0	2125.2	1944.4	1763.7	1676.0
50°	1977.3	1938.9	1774.6	1593.9	1500.8
52.5°	1818.4	1758.2	1599.4	1418.6	1341.9
55°	1632.2	1582.9	1435.0	1265.2	1199.5
57.5°	1462.4	1413.1	1276.2	1117.4	1062.6
60°	1303.6	1232.4	1117.4	980.4	936.6
62.5°	1128.3	1073.5	974.9	859.9	914.7
65°	969.5	914.7	827.1	843.5	701.1
67.5°	794.2	766.8	690.1	613.4	591.5
70°	646.3	613.4	586.1	503.9	482.0
72.5°	514.9	482.0	443.7	399.8	383.4
75°	388.9	361.5	339.6	323.2	356.0
77.5°	268.4	257.4	241.0	224.6	219.1
80°	175.3	169.8	164.3	158.8	153.4
82.5°	104.1	104.1	104.1	104.1	104.1
85°	54.8	60.2	65.7	71.2	76.7
87.5°	32.9	32.9	38.3	43.8	49.3
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)