

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: P547248

Luminaire Tested: **FMR-24-4-LD4-3STD-50-UNV-93-85-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: P547248
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-93-85-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

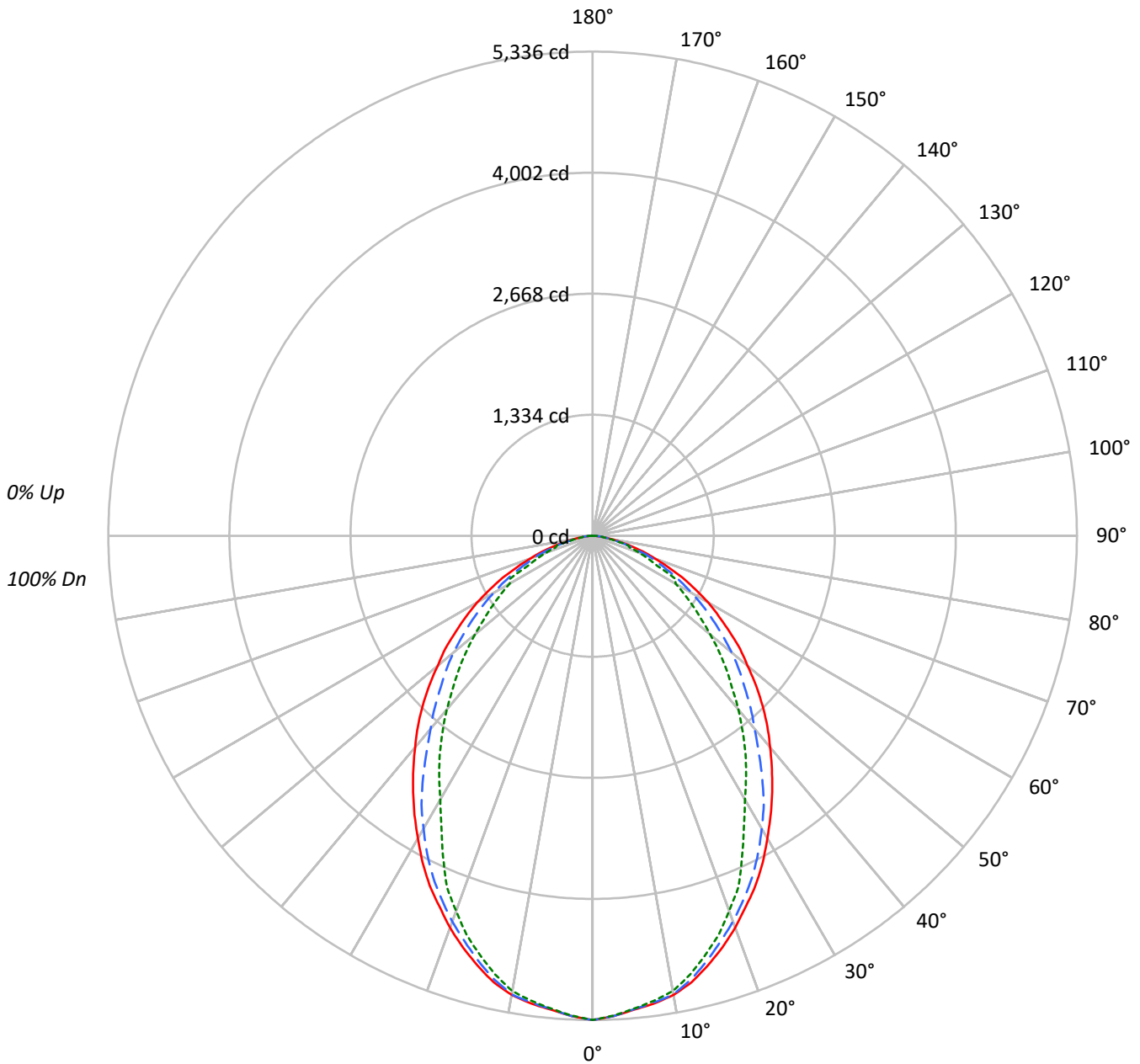
Lumens per Lamp: N/A
Luminaire Lumens: 10475.0 lumens
Efficiency: N/A
Efficacy: 104.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	7179	7179	7179
5°	7082	7073	7065
10°	7020	7012	6961
15°	6831	6762	6668
20°	6580	6474	6298
25°	6310	6172	5788
30°	5980	5789	5214
35°	5664	5350	4823
40°	5341	4876	4388
45°	5035	4507	3967
50°	4661	4183	3538
55°	4312	3791	3169
60°	3951	3386	2838
65°	3476	2966	2514
70°	2864	2596	2135
75°	2277	1988	2085
80°	1530	1434	1338
85°	953	1142	1334



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	496.7	4.7
10°-20°	1363.1	13.0
20°-30°	1887.2	18.0
30°-40°	2012.3	19.2
40°-50°	1835.8	17.5
50°-60°	1438.2	13.7
60°-70°	937.3	8.9
70°-80°	415.3	4.0
80°-90°	89.2	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°	3747.0	35.8
0°-40°	5759.3	55.0
0°-60°	9033.2	86.2
0°-90°	10475.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10475.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5336	5336	5336	5336	5336	
5°	5243	5237	5237	5231	5231	498
15°	4904	4904	4855	4805	4787	1379
25°	4250	4226	4158	4010	3898	1951
35°	3448	3424	3257	3010	2936	2156
45°	2646	2591	2369	2171	2085	2038
55°	1838	1783	1616	1425	1351	1649
65°	1092	1030	932	950	790	1076
75°	438	407	382	364	401	469
85°	62	68	74	80	86	86
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5335.8	5335.8	5335.8	5335.8	5335.8
2.5°	5298.8	5298.8	5298.8	5292.6	5292.6
5°	5243.3	5237.1	5237.1	5231.0	5231.0
7.5°	5200.1	5193.9	5187.8	5181.6	5169.3
10°	5138.4	5138.4	5132.3	5101.4	5095.3
12.5°	5039.7	5033.6	5008.9	4965.7	4953.4
15°	4904.0	4904.0	4854.7	4805.3	4786.8
17.5°	4756.0	4749.8	4688.1	4638.8	4614.1
20°	4595.6	4583.3	4521.6	4441.4	4398.2
22.5°	4416.7	4416.7	4342.7	4237.8	4194.6
25°	4250.2	4225.5	4157.6	4009.6	3898.5
27.5°	4058.9	4021.9	3947.9	3738.2	3608.6
30°	3849.2	3830.7	3725.8	3454.4	3355.7
32.5°	3651.8	3621.0	3509.9	3226.2	3146.0
35°	3448.2	3423.6	3257.0	3010.3	2936.2
37.5°	3244.7	3213.8	3004.1	2806.7	2714.2
40°	3041.1	3004.1	2775.9	2597.0	2498.3
42.5°	2849.9	2800.5	2578.5	2387.2	2276.2
45°	2646.3	2590.8	2368.7	2171.3	2085.0
47.5°	2442.8	2393.4	2189.8	1986.3	1887.6
50°	2226.9	2183.7	1998.6	1795.1	1690.2
52.5°	2048.0	1980.1	1801.2	1597.7	1511.3
55°	1838.2	1782.7	1616.2	1424.9	1350.9
57.5°	1647.0	1591.5	1437.3	1258.4	1196.7
60°	1468.1	1387.9	1258.4	1104.2	1054.8
62.5°	1270.7	1209.0	1098.0	968.5	1030.2
65°	1091.8	1030.2	931.5	950.0	789.6
67.5°	894.4	863.6	777.2	690.9	666.2
70°	727.9	690.9	660.0	567.5	542.8
72.5°	579.8	542.8	499.7	450.3	431.8
75°	438.0	407.1	382.5	363.9	401.0
77.5°	302.3	289.9	271.4	252.9	246.7
80°	197.4	191.2	185.1	178.9	172.7
82.5°	117.2	117.2	117.2	117.2	117.2
85°	61.7	67.9	74.0	80.2	86.4
87.5°	37.0	37.0	43.2	49.3	55.5
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)