

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: P547482

Luminaire Tested: **FMR-24-4-LD4-4STD-40-UNV-80-87-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: P547482
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-LD4-4STD-40-UNV-80-87-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

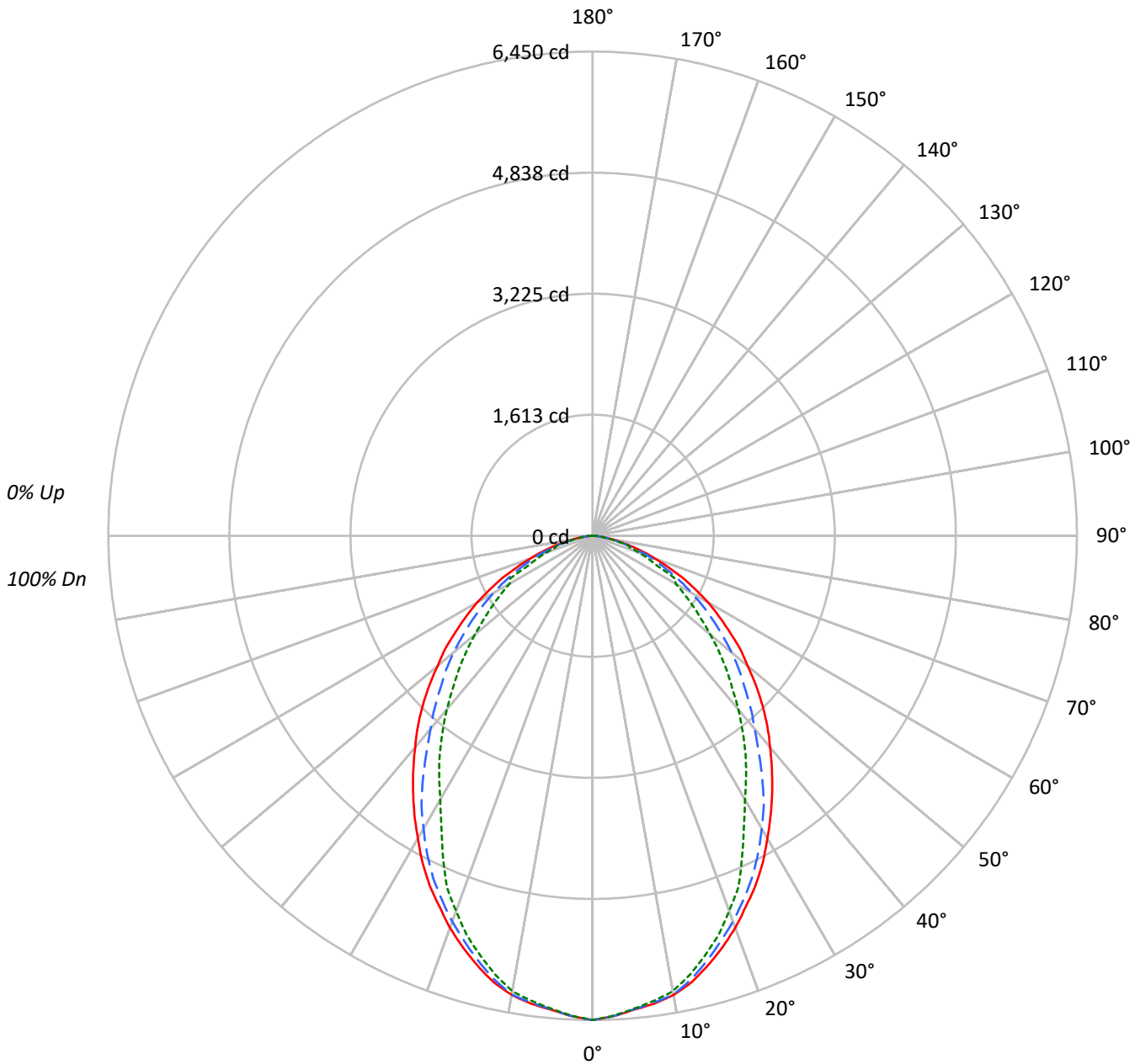
Lumens per Lamp: N/A
Luminaire Lumens: 12663.0 lumens
Efficiency: N/A
Efficacy: 95.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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°	8679	8679	8679
5°	8561	8551	8541
10°	8487	8477	8415
15°	8258	8175	8061
20°	7955	7826	7613
25°	7628	7462	6997
30°	7229	6998	6302
35°	6847	6467	5830
40°	6457	5894	5305
45°	6087	5449	4796
50°	5635	5057	4277
55°	5213	4583	3831
60°	4776	4094	3432
65°	4202	3585	3039
70°	3461	3139	2581
75°	2753	2403	2520
80°	1849	1733	1618
85°	1152	1382	1612



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	600.4	4.7
10°-20°	1647.9	13.0
20°-30°	2281.4	18.0
30°-40°	2432.6	19.2
40°-50°	2219.2	17.5
50°-60°	1738.6	13.7
60°-70°	1133.1	8.9
70°-80°	502.0	4.0
80°-90°	107.8	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°	4529.7	35.8
0°-40°	6962.2	55.0
0°-60°	10920.1	86.2
0°-90°	12663.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12663.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6450	6450	6450	6450	6450	
5°	6338	6331	6331	6324	6324	602
15°	5928	5928	5869	5809	5787	1667
25°	5138	5108	5026	4847	4713	2359
35°	4168	4139	3937	3639	3550	2606
45°	3199	3132	2864	2625	2520	2464
55°	2222	2155	1954	1723	1633	1993
65°	1320	1245	1126	1148	954	1301
75°	530	492	462	440	485	567
85°	75	82	90	97	104	103
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6450.4	6450.4	6450.4	6450.4	6450.4
2.5°	6405.6	6405.6	6405.6	6398.2	6398.2
5°	6338.5	6331.0	6331.0	6323.6	6323.6
7.5°	6286.3	6278.9	6271.4	6263.9	6249.0
10°	6211.7	6211.7	6204.3	6167.0	6159.5
12.5°	6092.4	6085.0	6055.1	6002.9	5988.0
15°	5928.4	5928.4	5868.7	5809.1	5786.7
17.5°	5749.4	5741.9	5667.4	5607.7	5577.9
20°	5555.5	5540.6	5466.0	5369.1	5316.9
22.5°	5339.3	5339.3	5249.8	5123.0	5070.8
25°	5137.9	5108.1	5026.1	4847.1	4712.9
27.5°	4906.8	4862.0	4772.5	4519.0	4362.4
30°	4653.2	4630.8	4504.1	4176.0	4056.6
32.5°	4414.6	4377.3	4243.1	3900.0	3803.1
35°	4168.5	4138.7	3937.3	3639.0	3549.6
37.5°	3922.4	3885.1	3631.6	3393.0	3281.1
40°	3676.3	3631.6	3355.7	3139.4	3020.1
42.5°	3445.2	3385.5	3117.1	2885.9	2751.7
45°	3199.1	3132.0	2863.5	2624.9	2520.5
47.5°	2953.0	2893.3	2647.3	2401.2	2281.9
50°	2692.0	2639.8	2416.1	2170.0	2043.2
52.5°	2475.7	2393.7	2177.5	1931.4	1827.0
55°	2222.2	2155.1	1953.8	1722.6	1633.1
57.5°	1991.0	1923.9	1737.5	1521.2	1446.7
60°	1774.8	1677.8	1521.2	1334.8	1275.2
62.5°	1536.2	1461.6	1327.4	1170.8	1245.3
65°	1319.9	1245.3	1126.0	1148.4	954.5
67.5°	1081.3	1044.0	939.6	835.2	805.4
70°	879.9	835.2	797.9	686.1	656.2
72.5°	701.0	656.2	604.0	544.4	522.0
75°	529.5	492.2	462.3	440.0	484.7
77.5°	365.4	350.5	328.1	305.7	298.3
80°	238.6	231.2	223.7	216.3	208.8
82.5°	141.7	141.7	141.7	141.7	141.7
85°	74.6	82.0	89.5	96.9	104.4
87.5°	44.7	44.7	52.2	59.7	67.1
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)