

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: P547435

Luminaire Tested: **FMR-24-4-LD4-4LO-50-UNV-82-88-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: P547435
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-LD4-4LO-50-UNV-82-88-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

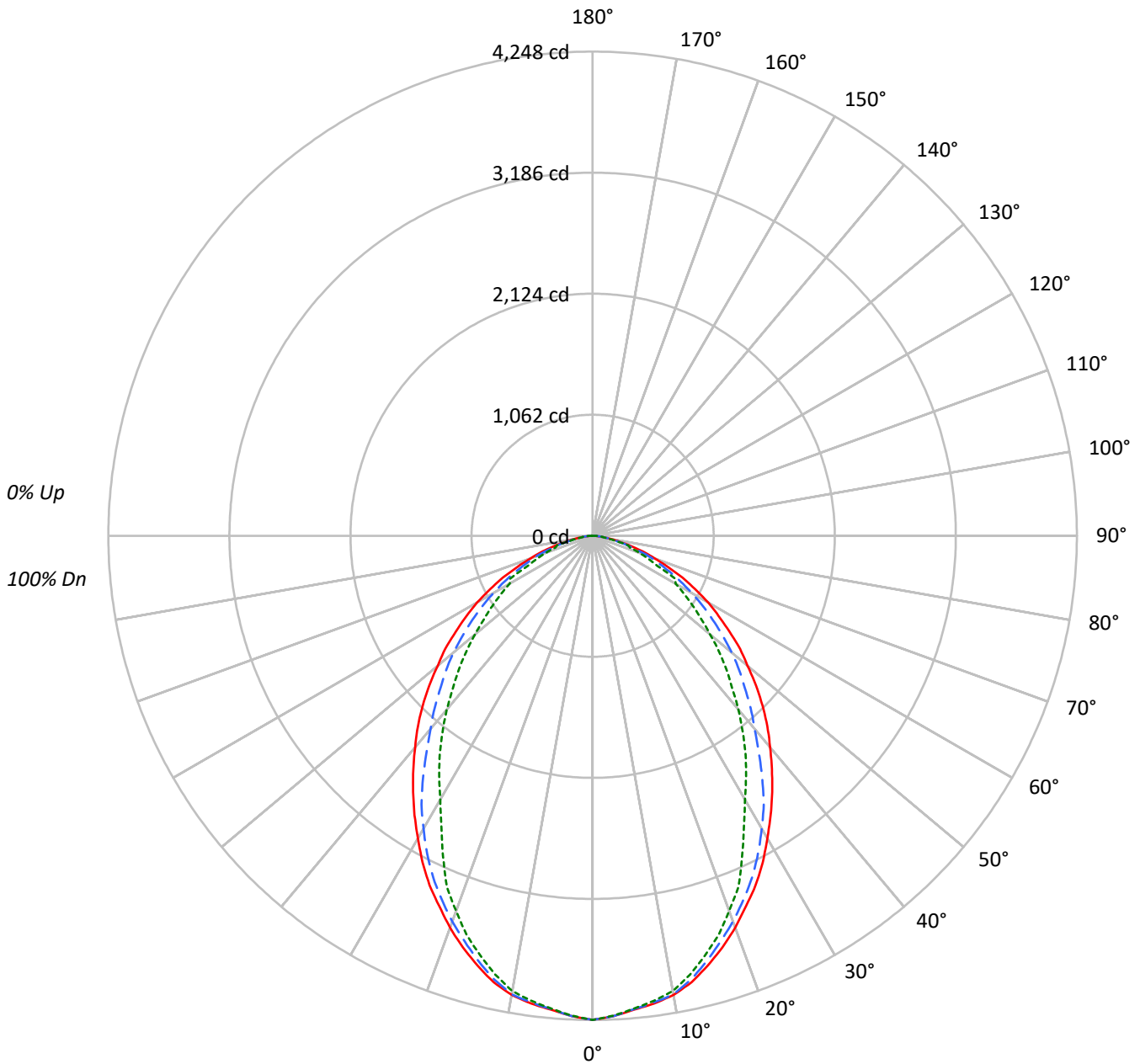
Lumens per Lamp: N/A
Luminaire Lumens: 8339.0 lumens
Efficiency: N/A
Efficacy: 89.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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°	5715	5715	5715
5°	5638	5631	5624
10°	5589	5582	5542
15°	5438	5383	5308
20°	5238	5154	5013
25°	5023	4914	4608
30°	4761	4608	4150
35°	4509	4259	3839
40°	4252	3881	3493
45°	4009	3588	3158
50°	3711	3331	2816
55°	3433	3018	2523
60°	3145	2696	2260
65°	2767	2361	2001
70°	2280	2067	1700
75°	1813	1583	1659
80°	1217	1141	1065
85°	758	909	1062



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	395.4	4.7
10°-20°	1085.2	13.0
20°-30°	1502.4	18.0
30°-40°	1601.9	19.2
40°-50°	1461.4	17.5
50°-60°	1144.9	13.7
60°-70°	746.2	8.9
70°-80°	330.6	4.0
80°-90°	71.0	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°	2982.9	35.8
0°-40°	4584.9	55.0
0°-60°	7191.2	86.2
0°-90°	8339.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8339.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4248	4248	4248	4248	4248	
5°	4174	4169	4169	4164	4164	396
15°	3904	3904	3865	3826	3811	1098
25°	3384	3364	3310	3192	3104	1553
35°	2745	2726	2593	2396	2338	1716
45°	2107	2062	1886	1729	1660	1623
55°	1463	1419	1287	1134	1075	1313
65°	869	820	742	756	629	857
75°	349	324	304	290	319	374
85°	49	54	59	64	69	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4247.8	4247.8	4247.8	4247.8	4247.8
2.5°	4218.3	4218.3	4218.3	4213.4	4213.4
5°	4174.1	4169.2	4169.2	4164.3	4164.3
7.5°	4139.7	4134.8	4129.9	4125.0	4115.2
10°	4090.6	4090.6	4085.7	4061.2	4056.3
12.5°	4012.1	4007.1	3987.5	3953.1	3943.3
15°	3904.0	3904.0	3864.7	3825.5	3810.7
17.5°	3786.2	3781.3	3732.1	3692.9	3673.2
20°	3658.5	3648.7	3599.6	3535.7	3501.3
22.5°	3516.1	3516.1	3457.1	3373.7	3339.3
25°	3383.5	3363.8	3309.8	3192.0	3103.6
27.5°	3231.3	3201.8	3142.9	2975.9	2872.8
30°	3064.3	3049.6	2966.1	2750.0	2671.4
32.5°	2907.1	2882.6	2794.2	2568.3	2504.5
35°	2745.1	2725.5	2592.9	2396.4	2337.5
37.5°	2583.0	2558.5	2391.5	2234.4	2160.7
40°	2421.0	2391.5	2209.8	2067.4	1988.8
42.5°	2268.8	2229.5	2052.7	1900.4	1812.1
45°	2106.7	2062.5	1885.7	1728.6	1659.8
47.5°	1944.6	1905.4	1743.3	1581.3	1502.7
50°	1772.8	1738.4	1591.1	1429.0	1345.5
52.5°	1630.4	1576.3	1433.9	1271.9	1203.1
55°	1463.4	1419.2	1286.6	1134.4	1075.4
57.5°	1311.2	1267.0	1144.2	1001.8	952.7
60°	1168.8	1104.9	1001.8	879.0	839.7
62.5°	1011.6	962.5	874.1	771.0	820.1
65°	869.2	820.1	741.5	756.3	628.6
67.5°	712.1	687.5	618.8	550.0	530.4
70°	579.5	550.0	525.4	451.8	432.1
72.5°	461.6	432.1	397.8	358.5	343.8
75°	348.7	324.1	304.5	289.7	319.2
77.5°	240.6	230.8	216.1	201.3	196.4
80°	157.1	152.2	147.3	142.4	137.5
82.5°	93.3	93.3	93.3	93.3	93.3
85°	49.1	54.0	58.9	63.8	68.8
87.5°	29.5	29.5	34.4	39.3	44.2
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)