

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: P546571

Luminaire Tested: **FMR-24-4-LD4-1LO-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: P546571
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-LD4-1LO-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

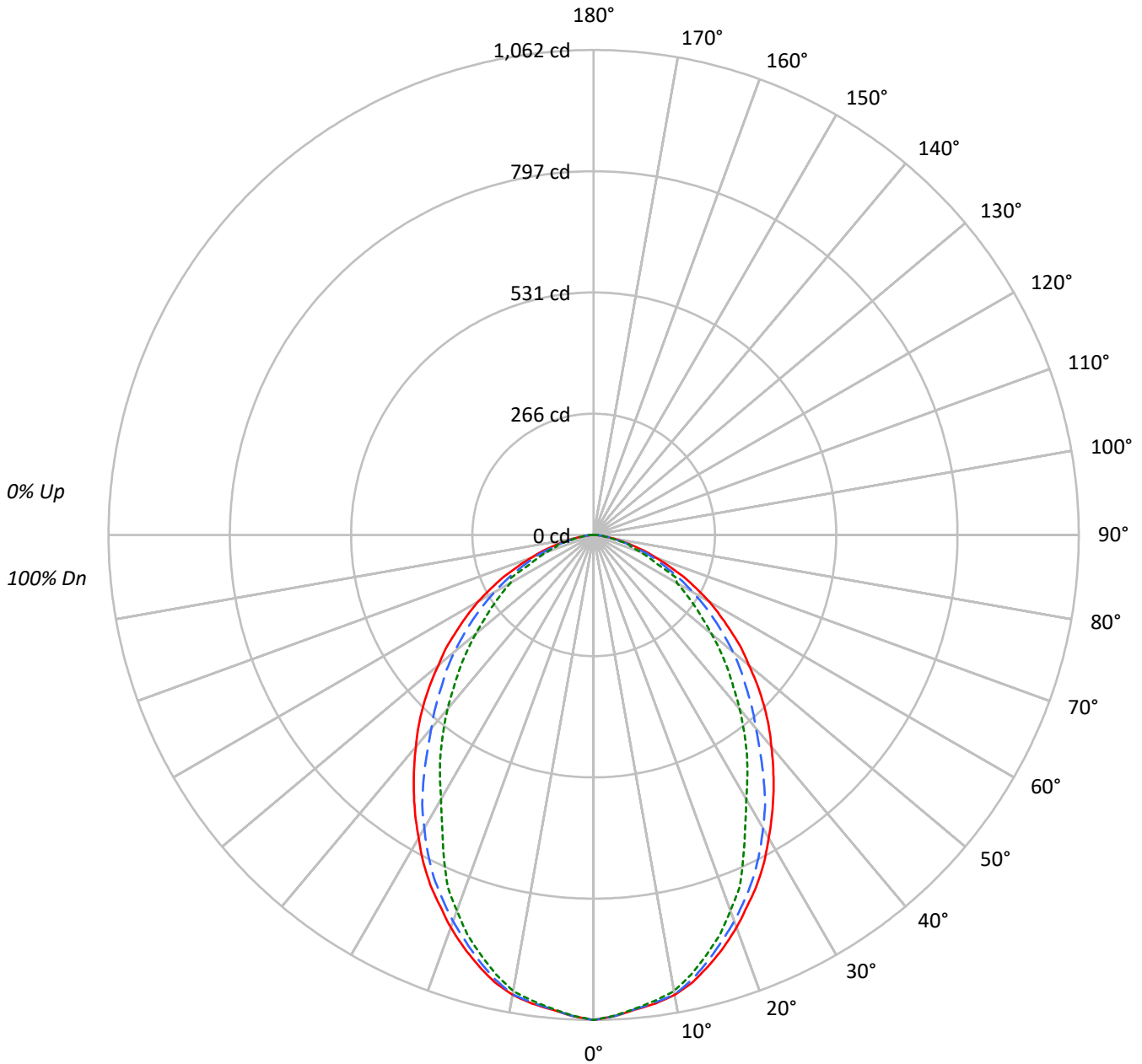
Lumens per Lamp: N/A
Luminaire Lumens: 2085.0 lumens
Efficiency: N/A
Efficacy: 89.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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: P546571

CATALOG NUMBER: FMR-24-4-LD4-1LO-50-UNV-82-88-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°	1429	1429	1429
5°	1410	1408	1406
10°	1397	1396	1386
15°	1360	1346	1327
20°	1310	1289	1253
25°	1256	1229	1152
30°	1190	1152	1038
35°	1127	1065	960
40°	1063	970	873
45°	1002	897	790
50°	928	833	704
55°	858	755	631
60°	786	674	565
65°	692	590	500
70°	570	517	425
75°	453	396	415
80°	305	285	267
85°	190	227	266



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.9	4.7
10°-20°	271.3	13.0
20°-30°	375.6	18.0
30°-40°	400.5	19.2
40°-50°	365.4	17.5
50°-60°	286.3	13.7
60°-70°	186.6	8.9
70°-80°	82.6	4.0
80°-90°	17.7	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°	745.8	35.8
0°-40°	1146.4	55.0
0°-60°	1798.0	86.2
0°-90°	2085.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2085.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1062	1062	1062	1062	1062	
5°	1044	1042	1042	1041	1041	99
15°	976	976	966	956	953	274
25°	846	841	828	798	776	388
35°	686	681	648	599	584	429
45°	527	516	472	432	415	406
55°	366	355	322	284	269	328
65°	217	205	185	189	157	214
75°	87	81	76	72	80	93
85°	12	14	15	16	17	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1062.1	1062.1	1062.1	1062.1	1062.1
2.5°	1054.7	1054.7	1054.7	1053.5	1053.5
5°	1043.7	1042.4	1042.4	1041.2	1041.2
7.5°	1035.1	1033.8	1032.6	1031.4	1028.9
10°	1022.8	1022.8	1021.6	1015.4	1014.2
12.5°	1003.1	1001.9	997.0	988.4	985.9
15°	976.1	976.1	966.3	956.5	952.8
17.5°	946.7	945.4	933.1	923.3	918.4
20°	914.7	912.3	900.0	884.0	875.4
22.5°	879.1	879.1	864.4	843.5	834.9
25°	846.0	841.1	827.6	798.1	776.0
27.5°	807.9	800.5	785.8	744.1	718.3
30°	766.2	762.5	741.6	687.6	667.9
32.5°	726.9	720.7	698.6	642.2	626.2
35°	686.4	681.4	648.3	599.2	584.4
37.5°	645.8	639.7	598.0	558.7	540.2
40°	605.3	598.0	552.5	516.9	497.3
42.5°	567.3	557.4	513.2	475.2	453.1
45°	526.7	515.7	471.5	432.2	415.0
47.5°	486.2	476.4	435.9	395.4	375.7
50°	443.2	434.7	397.8	357.3	336.4
52.5°	407.6	394.1	358.5	318.0	300.8
55°	365.9	354.8	321.7	283.6	268.9
57.5°	327.8	316.8	286.1	250.5	238.2
60°	292.2	276.3	250.5	219.8	210.0
62.5°	252.9	240.7	218.6	192.8	205.0
65°	217.3	205.0	185.4	189.1	157.2
67.5°	178.0	171.9	154.7	137.5	132.6
70°	144.9	137.5	131.4	113.0	108.0
72.5°	115.4	108.0	99.5	89.6	85.9
75°	87.2	81.0	76.1	72.4	79.8
77.5°	60.2	57.7	54.0	50.3	49.1
80°	39.3	38.1	36.8	35.6	34.4
82.5°	23.3	23.3	23.3	23.3	23.3
85°	12.3	13.5	14.7	16.0	17.2
87.5°	7.4	7.4	8.6	9.8	11.1
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)