

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: P547140

Luminaire Tested: **FMR-24-4-LD4-3LO-50-UNV-81-94-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: P547140
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-LD4-3LO-50-UNV-81-94-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

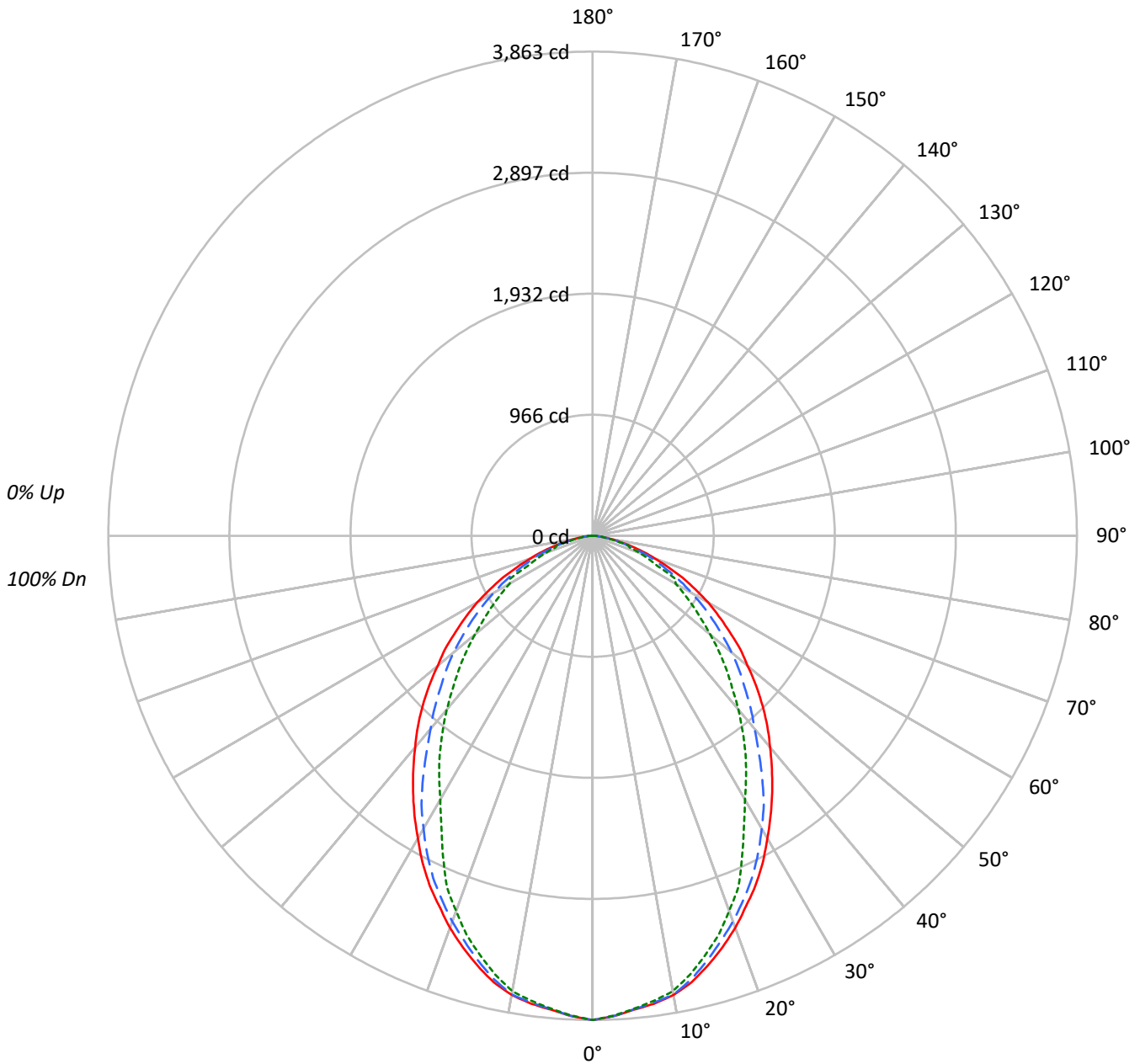
Lumens per Lamp: N/A
Luminaire Lumens: 7584.0 lumens
Efficiency: N/A
Efficacy: 108.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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°	5198	5198	5198
5°	5127	5121	5115
10°	5083	5077	5040
15°	4946	4896	4828
20°	4764	4687	4559
25°	4568	4469	4190
30°	4330	4191	3775
35°	4101	3873	3492
40°	3867	3530	3177
45°	3646	3263	2872
50°	3375	3029	2561
55°	3122	2745	2294
60°	2860	2452	2055
65°	2517	2147	1820
70°	2073	1880	1546
75°	1648	1439	1509
80°	1107	1038	969
85°	690	827	965



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	359.6	4.7
10°-20°	986.9	13.0
20°-30°	1366.3	18.0
30°-40°	1456.9	19.2
40°-50°	1329.1	17.5
50°-60°	1041.3	13.7
60°-70°	678.6	8.9
70°-80°	300.7	4.0
80°-90°	64.6	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°	2712.9	35.8
0°-40°	4169.8	55.0
0°-60°	6540.1	86.2
0°-90°	7584.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7584.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3863	3863	3863	3863	3863	
5°	3796	3792	3792	3787	3787	360
15°	3551	3551	3515	3479	3466	998
25°	3077	3059	3010	2903	2823	1413
35°	2497	2479	2358	2180	2126	1561
45°	1916	1876	1715	1572	1510	1476
55°	1331	1291	1170	1032	978	1194
65°	790	746	674	688	572	779
75°	317	295	277	264	290	340
85°	45	49	54	58	62	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3863.2	3863.2	3863.2	3863.2	3863.2
2.5°	3836.4	3836.4	3836.4	3831.9	3831.9
5°	3796.2	3791.7	3791.7	3787.3	3787.3
7.5°	3764.9	3760.5	3756.0	3751.5	3742.6
10°	3720.3	3720.3	3715.8	3693.5	3689.0
12.5°	3648.8	3644.3	3626.5	3595.2	3586.3
15°	3550.6	3550.6	3514.8	3479.1	3465.7
17.5°	3443.4	3438.9	3394.2	3358.5	3340.7
20°	3327.3	3318.3	3273.7	3215.6	3184.3
22.5°	3197.7	3197.7	3144.1	3068.2	3037.0
25°	3077.2	3059.3	3010.2	2903.0	2822.6
27.5°	2938.7	2911.9	2858.3	2706.5	2612.7
30°	2786.9	2773.5	2697.5	2501.0	2429.6
32.5°	2643.9	2621.6	2541.2	2335.8	2277.7
35°	2496.6	2478.7	2358.1	2179.5	2125.9
37.5°	2349.2	2326.8	2175.0	2032.1	1965.1
40°	2201.8	2175.0	2009.8	1880.2	1808.8
42.5°	2063.3	2027.6	1866.8	1728.4	1648.0
45°	1916.0	1875.8	1715.0	1572.1	1509.5
47.5°	1768.6	1732.9	1585.5	1438.1	1366.6
50°	1612.3	1581.0	1447.0	1299.6	1223.7
52.5°	1482.7	1433.6	1304.1	1156.7	1094.2
55°	1330.9	1290.7	1170.1	1031.7	978.1
57.5°	1192.5	1152.3	1040.6	911.1	866.4
60°	1062.9	1004.9	911.1	799.4	763.7
62.5°	920.0	875.4	795.0	701.2	745.8
65°	790.5	745.8	674.4	687.8	571.7
67.5°	647.6	625.3	562.7	500.2	482.3
70°	527.0	500.2	477.9	410.9	393.0
72.5°	419.8	393.0	361.8	326.0	312.6
75°	317.1	294.8	276.9	263.5	290.3
77.5°	218.8	209.9	196.5	183.1	178.6
80°	142.9	138.4	134.0	129.5	125.1
82.5°	84.9	84.9	84.9	84.9	84.9
85°	44.7	49.1	53.6	58.1	62.5
87.5°	26.8	26.8	31.3	35.7	40.2
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)