

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: P547272

Luminaire Tested: **FMR-24-4-LD4-4HI-35-UNV-82-85-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: P547272
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-LD4-4HI-35-UNV-82-85-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

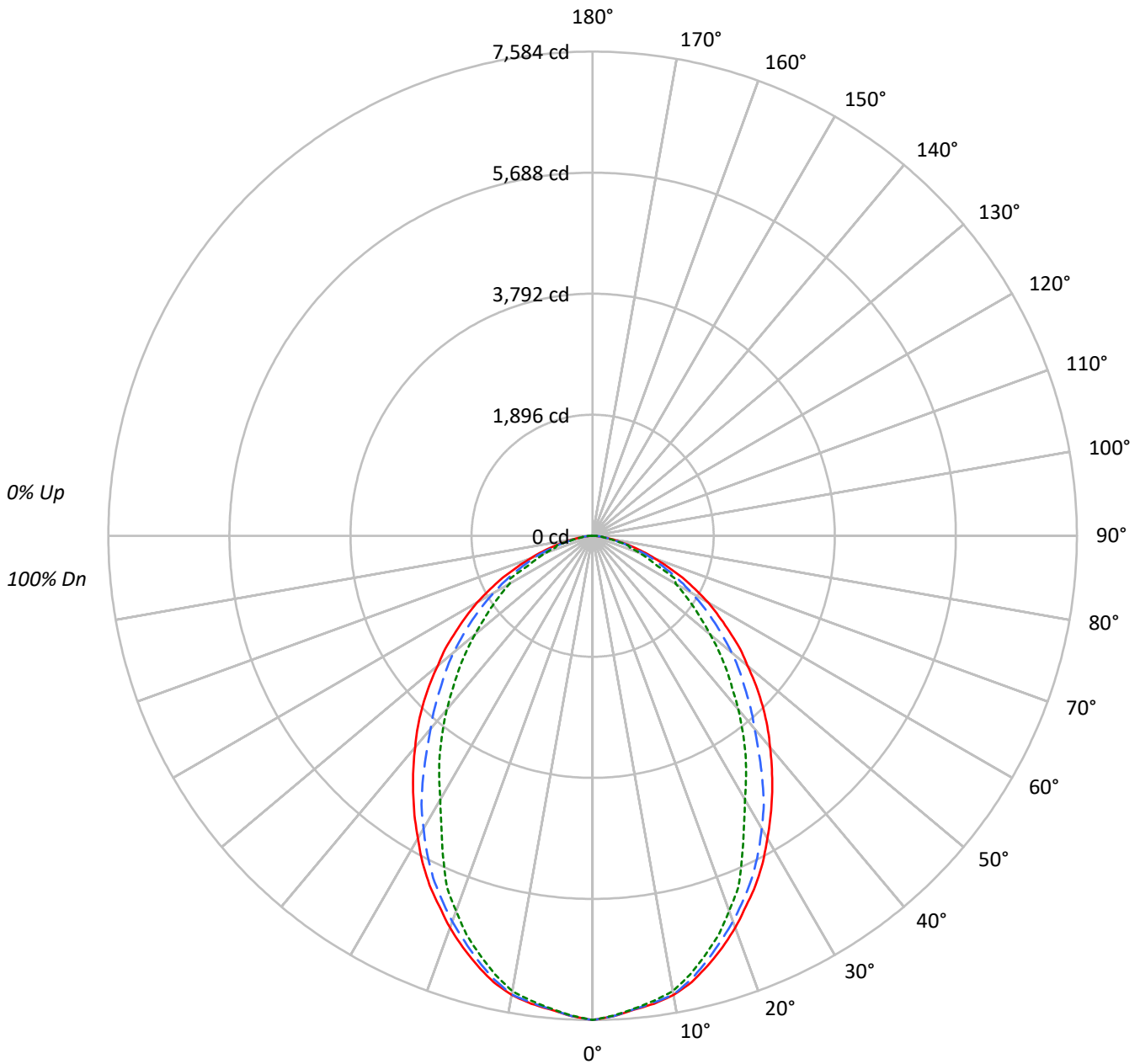
Lumens per Lamp: N/A
Luminaire Lumens: 14889.0 lumens
Efficiency: N/A
Efficacy: 86.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
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°	10205	10205	10205
5°	10066	10054	10042
10°	9979	9967	9895
15°	9710	9612	9478
20°	9353	9202	8951
25°	8969	8773	8227
30°	8500	8228	7411
35°	8051	7604	6855
40°	7592	6930	6237
45°	7157	6407	5639
50°	6625	5946	5029
55°	6129	5389	4504
60°	5616	4813	4035
65°	4941	4215	3573
70°	4070	3691	3035
75°	3236	2826	2963
80°	2174	2038	1902
85°	1354	1624	1896



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	706.0	4.7
10°-20°	1937.5	13.0
20°-30°	2682.4	18.0
30°-40°	2860.2	19.2
40°-50°	2609.3	17.5
50°-60°	2044.2	13.7
60°-70°	1332.3	8.9
70°-80°	590.3	4.0
80°-90°	126.7	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°	5325.9	35.8
0°-40°	8186.1	55.0
0°-60°	12839.7	86.2
0°-90°	14889.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14889.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7584	7584	7584	7584	7584	
5°	7453	7444	7444	7435	7435	707
15°	6970	6970	6900	6830	6804	1960
25°	6041	6006	5910	5699	5541	2773
35°	4901	4866	4630	4279	4174	3064
45°	3761	3682	3367	3086	2964	2897
55°	2613	2534	2297	2025	1920	2344
65°	1552	1464	1324	1350	1122	1529
75°	622	579	544	517	570	667
85°	88	96	105	114	123	122
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7584.3	7584.3	7584.3	7584.3	7584.3
2.5°	7531.7	7531.7	7531.7	7522.9	7522.9
5°	7452.7	7444.0	7444.0	7435.2	7435.2
7.5°	7391.4	7382.6	7373.8	7365.1	7347.5
10°	7303.7	7303.7	7294.9	7251.1	7242.3
12.5°	7163.4	7154.6	7119.6	7058.2	7040.6
15°	6970.5	6970.5	6900.4	6830.2	6803.9
17.5°	6760.1	6751.3	6663.6	6593.5	6558.4
20°	6532.1	6514.6	6426.9	6312.9	6251.5
22.5°	6277.8	6277.8	6172.6	6023.6	5962.2
25°	6041.1	6006.0	5909.6	5699.2	5541.3
27.5°	5769.3	5716.7	5611.5	5313.4	5129.2
30°	5471.2	5444.9	5295.8	4910.0	4769.8
32.5°	5190.6	5146.8	4989.0	4585.6	4471.6
35°	4901.3	4866.2	4629.5	4278.7	4173.5
37.5°	4611.9	4568.1	4270.0	3989.4	3857.9
40°	4322.6	4270.0	3945.6	3691.3	3551.0
42.5°	4050.8	3980.6	3665.0	3393.2	3235.4
45°	3761.4	3682.5	3366.9	3086.3	2963.6
47.5°	3472.1	3402.0	3112.6	2823.3	2683.0
50°	3165.2	3103.8	2840.8	2551.5	2402.4
52.5°	2911.0	2814.5	2560.2	2270.9	2148.1
55°	2612.8	2533.9	2297.2	2025.4	1920.2
57.5°	2341.0	2262.1	2042.9	1788.7	1701.0
60°	2086.8	1972.8	1788.7	1569.5	1499.3
62.5°	1806.2	1718.5	1560.7	1376.6	1464.2
65°	1551.9	1464.2	1324.0	1350.3	1122.3
67.5°	1271.3	1227.5	1104.8	982.0	946.9
70°	1034.6	982.0	938.2	806.6	771.6
72.5°	824.2	771.6	710.2	640.1	613.8
75°	622.5	578.7	543.6	517.3	569.9
77.5°	429.6	412.1	385.8	359.5	350.7
80°	280.6	271.8	263.0	254.3	245.5
82.5°	166.6	166.6	166.6	166.6	166.6
85°	87.7	96.4	105.2	114.0	122.8
87.5°	52.6	52.6	61.4	70.1	78.9
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)