

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: P546943

Luminaire Tested: **FMR-24-4-LD4-2STD-50-UNV-81-84-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: P546943
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-LD4-2STD-50-UNV-81-84-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

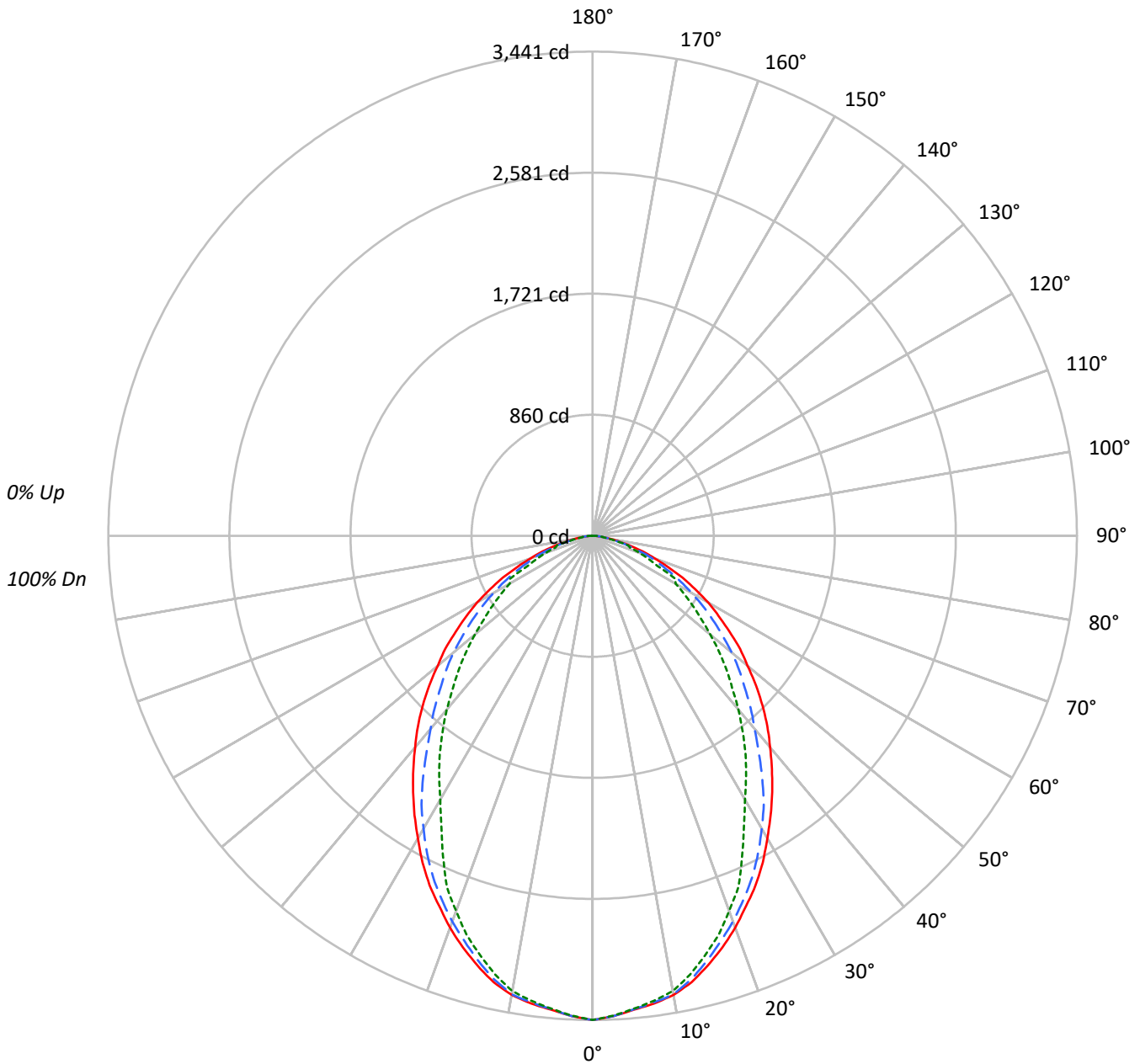
Lumens per Lamp: N/A
Luminaire Lumens: 6755.0 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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					20					
RC	80					70					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				100				
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75				
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65				
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50				
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44				
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40				
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36				
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33				
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4630	4630	4630
5°	4567	4561	4556
10°	4527	4522	4489
15°	4405	4361	4300
20°	4243	4175	4061
25°	4069	3980	3732
30°	3856	3733	3362
35°	3653	3450	3110
40°	3444	3144	2830
45°	3247	2907	2558
50°	3006	2698	2282
55°	2781	2445	2044
60°	2548	2184	1830
65°	2242	1912	1621
70°	1847	1674	1377
75°	1468	1282	1344
80°	986	924	863
85°	614	736	860



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	320.3	4.7
10°-20°	879.0	13.0
20°-30°	1217.0	18.0
30°-40°	1297.6	19.2
40°-50°	1183.8	17.5
50°-60°	927.4	13.7
60°-70°	604.5	8.9
70°-80°	267.8	4.0
80°-90°	57.5	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°	2416.3	35.8
0°-40°	3714.0	55.0
0°-60°	5825.2	86.2
0°-90°	6755.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6755.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3441	3441	3441	3441	3441	
5°	3381	3377	3377	3373	3373	321
15°	3162	3162	3131	3099	3087	889
25°	2741	2725	2681	2586	2514	1258
35°	2224	2208	2100	1941	1894	1390
45°	1706	1671	1528	1400	1344	1315
55°	1185	1150	1042	919	871	1063
65°	704	664	601	613	509	694
75°	282	262	247	235	259	303
85°	40	44	48	52	56	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3440.9	3440.9	3440.9	3440.9	3440.9
2.5°	3417.0	3417.0	3417.0	3413.1	3413.1
5°	3381.2	3377.3	3377.3	3373.3	3373.3
7.5°	3353.4	3349.4	3345.4	3341.5	3333.5
10°	3313.6	3313.6	3309.6	3289.7	3285.8
12.5°	3250.0	3246.0	3230.1	3202.2	3194.3
15°	3162.5	3162.5	3130.6	3098.8	3086.9
17.5°	3067.0	3063.0	3023.2	2991.4	2975.5
20°	2963.6	2955.6	2915.8	2864.1	2836.3
22.5°	2848.2	2848.2	2800.5	2732.8	2705.0
25°	2740.8	2724.9	2681.1	2585.7	2514.0
27.5°	2617.5	2593.6	2545.9	2410.6	2327.1
30°	2482.2	2470.3	2402.7	2227.6	2164.0
32.5°	2354.9	2335.0	2263.4	2080.5	2028.7
35°	2223.7	2207.7	2100.3	1941.2	1893.5
37.5°	2092.4	2072.5	1937.3	1810.0	1750.3
40°	1961.1	1937.3	1790.1	1674.7	1611.1
42.5°	1837.8	1806.0	1662.8	1539.5	1467.9
45°	1706.5	1670.7	1527.5	1400.2	1344.5
47.5°	1575.3	1543.4	1412.2	1280.9	1217.2
50°	1436.0	1408.2	1288.8	1157.6	1090.0
52.5°	1320.7	1276.9	1161.6	1030.3	974.6
55°	1185.4	1149.6	1042.2	918.9	871.2
57.5°	1062.1	1026.3	926.9	811.5	771.7
60°	946.7	895.0	811.5	712.0	680.2
62.5°	819.5	779.7	708.1	624.5	664.3
65°	704.1	664.3	600.7	612.6	509.2
67.5°	576.8	556.9	501.2	445.5	429.6
70°	469.4	445.5	425.6	366.0	350.1
72.5°	373.9	350.1	322.2	290.4	278.5
75°	282.4	262.5	246.6	234.7	258.6
77.5°	194.9	187.0	175.0	163.1	159.1
80°	127.3	123.3	119.3	115.4	111.4
82.5°	75.6	75.6	75.6	75.6	75.6
85°	39.8	43.8	47.7	51.7	55.7
87.5°	23.9	23.9	27.8	31.8	35.8
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)