

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: P547444

Luminaire Tested: **FMR-24-4-LD4-4LO-50-UNV-93-94-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: P547444
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-93-94-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

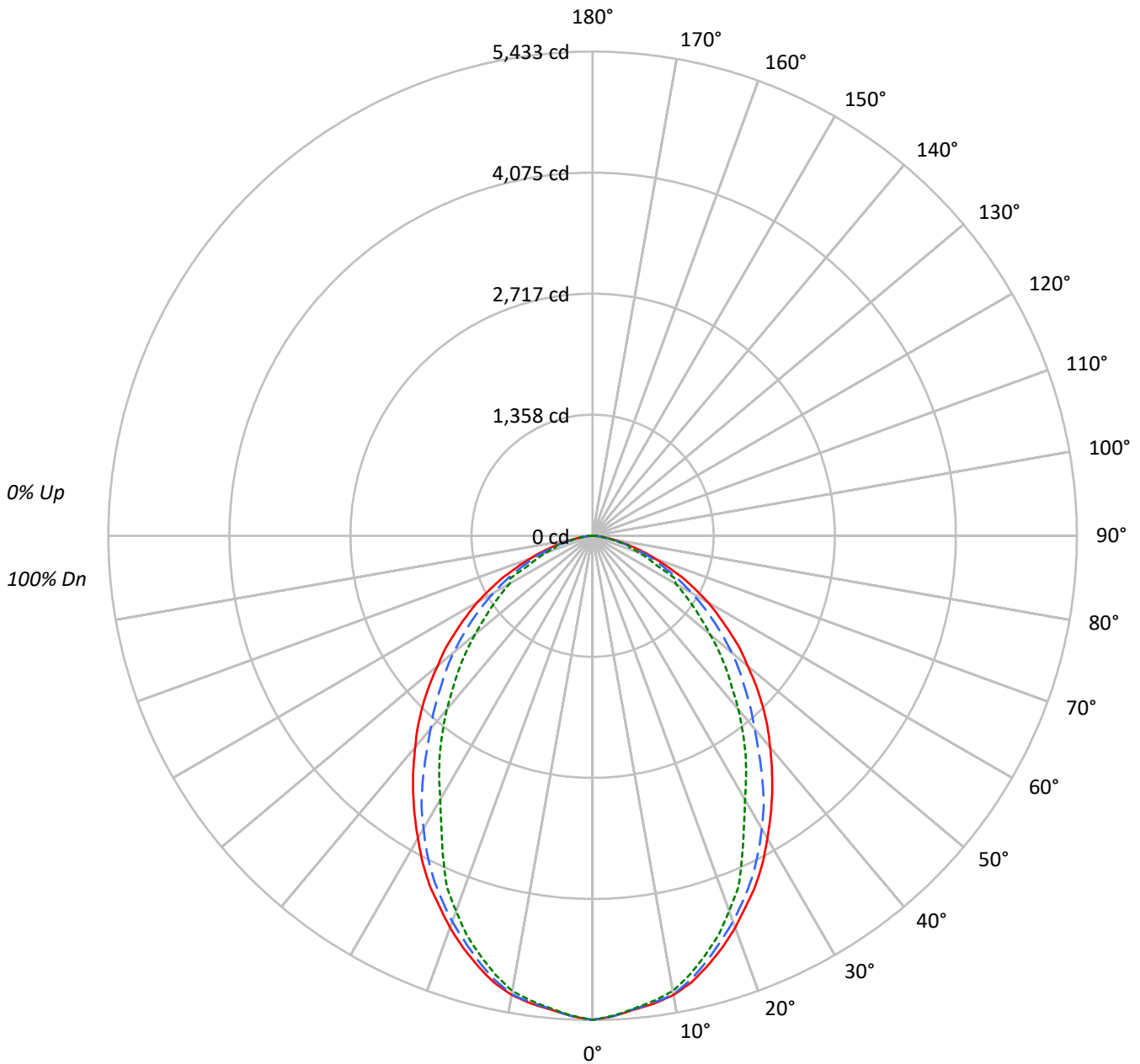
Lumens per Lamp: N/A
Luminaire Lumens: 10665.0 lumens
Efficiency: N/A
Efficacy: 113.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
Input Voltage (V): NR
Input Current (A_{in}): 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°	7310	7310	7310
5°	7210	7202	7193
10°	7148	7139	7088
15°	6955	6885	6789
20°	6700	6592	6412
25°	6424	6284	5893
30°	6089	5894	5308
35°	5767	5447	4910
40°	5438	4964	4468
45°	5127	4589	4039
50°	4746	4259	3602
55°	4390	3860	3226
60°	4022	3448	2890
65°	3539	3019	2559
70°	2915	2644	2174
75°	2318	2024	2122
80°	1557	1460	1363
85°	969	1164	1357



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	505.7	4.7
10°-20°	1387.9	13.0
20°-30°	1921.4	18.0
30°-40°	2048.8	19.2
40°-50°	1869.1	17.5
50°-60°	1464.3	13.7
60°-70°	954.3	8.9
70°-80°	422.8	4.0
80°-90°	90.8	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°	3815.0	35.8
0°-40°	5863.7	55.0
0°-60°	9197.1	86.2
0°-90°	10665.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10665.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5433	5433	5433	5433	5433	
5°	5338	5332	5332	5326	5326	507
15°	4993	4993	4943	4892	4874	1404
25°	4327	4302	4233	4082	3969	1987
35°	3511	3486	3316	3065	2990	2195
45°	2694	2638	2412	2211	2123	2075
55°	1872	1815	1646	1451	1375	1679
65°	1112	1049	948	967	804	1096
75°	446	414	389	370	408	478
85°	63	69	75	82	88	87
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5432.6	5432.6	5432.6	5432.6	5432.6
2.5°	5394.9	5394.9	5394.9	5388.6	5388.6
5°	5338.4	5332.1	5332.1	5325.8	5325.8
7.5°	5294.4	5288.2	5281.9	5275.6	5263.0
10°	5231.6	5231.6	5225.4	5194.0	5187.7
12.5°	5131.1	5124.9	5099.7	5055.8	5043.2
15°	4993.0	4993.0	4942.7	4892.5	4873.6
17.5°	4842.2	4836.0	4773.2	4722.9	4697.8
20°	4679.0	4666.4	4603.6	4521.9	4478.0
22.5°	4496.8	4496.8	4421.5	4314.7	4270.7
25°	4327.2	4302.1	4233.0	4082.3	3969.3
27.5°	4132.6	4094.9	4019.5	3806.0	3674.1
30°	3919.0	3900.2	3793.4	3517.1	3416.6
32.5°	3718.0	3686.6	3573.6	3284.7	3203.0
35°	3510.8	3485.7	3316.1	3064.9	2989.5
37.5°	3303.5	3272.1	3058.6	2857.6	2763.4
40°	3096.3	3058.6	2826.2	2644.1	2543.6
42.5°	2901.6	2851.3	2625.2	2430.5	2317.5
45°	2694.3	2637.8	2411.7	2210.7	2122.8
47.5°	2487.1	2436.8	2229.6	2022.3	1921.8
50°	2267.3	2223.3	2034.9	1827.6	1720.8
52.5°	2085.1	2016.0	1833.9	1626.6	1538.7
55°	1871.6	1815.1	1645.5	1450.8	1375.4
57.5°	1676.9	1620.4	1463.4	1281.2	1218.4
60°	1494.8	1413.1	1281.2	1124.2	1074.0
62.5°	1293.8	1231.0	1117.9	986.0	1048.8
65°	1111.6	1048.8	948.4	967.2	803.9
67.5°	910.7	879.3	791.3	703.4	678.3
70°	741.1	703.4	672.0	577.8	552.7
72.5°	590.4	552.7	508.7	458.5	439.6
75°	445.9	414.5	389.4	370.5	408.2
77.5°	307.7	295.2	276.3	257.5	251.2
80°	201.0	194.7	188.4	182.1	175.9
82.5°	119.3	119.3	119.3	119.3	119.3
85°	62.8	69.1	75.4	81.6	87.9
87.5°	37.7	37.7	44.0	50.2	56.5
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)