

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: P547454

Luminaire Tested: **FMR-24-4-LD4-4STD-35-UNV-80-97-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: P547454
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-LD4-4STD-35-UNV-80-97-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

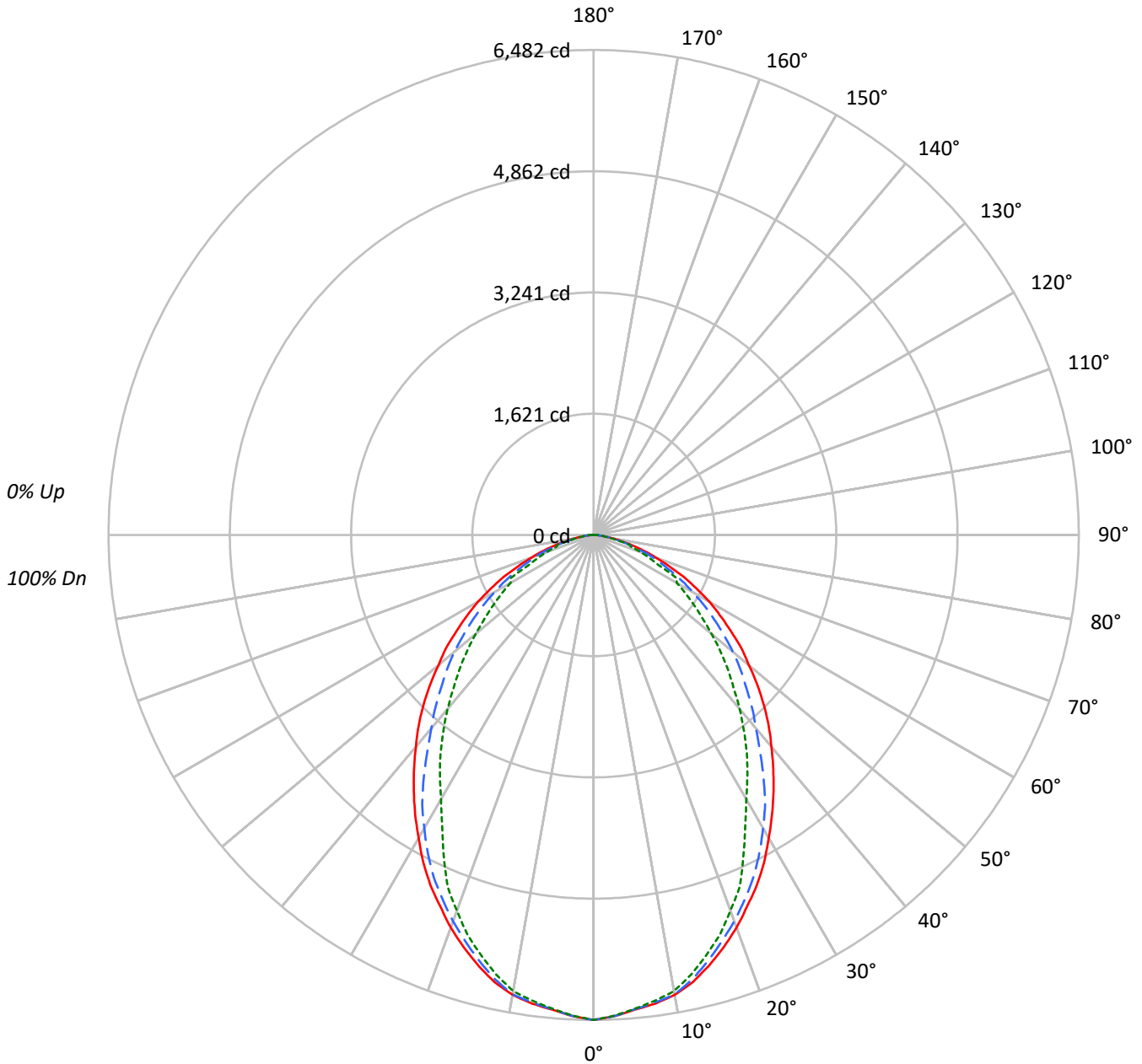
Lumens per Lamp: N/A
Luminaire Lumens: 12726.0 lumens
Efficiency: N/A
Efficacy: 95.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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°	8722	8722	8722
5°	8604	8593	8583
10°	8529	8519	8457
15°	8299	8215	8101
20°	7994	7865	7651
25°	7666	7499	7031
30°	7265	7033	6334
35°	6881	6499	5859
40°	6489	5923	5331
45°	6118	5476	4820
50°	5663	5083	4298
55°	5239	4606	3850
60°	4800	4114	3448
65°	4223	3603	3054
70°	3479	3155	2594
75°	2766	2415	2532
80°	1858	1742	1626
85°	1156	1388	1619



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	603.4	4.7
10°-20°	1656.1	13.0
20°-30°	2292.7	18.0
30°-40°	2444.7	19.2
40°-50°	2230.3	17.5
50°-60°	1747.2	13.7
60°-70°	1138.8	8.9
70°-80°	504.5	4.0
80°-90°	108.3	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°	4552.2	35.8
0°-40°	6996.9	55.0
0°-60°	10974.4	86.2
0°-90°	12726.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12726.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6482	6482	6482	6482	6482	
5°	6370	6362	6362	6355	6355	605
15°	5958	5958	5898	5838	5816	1675
25°	5164	5134	5051	4871	4736	2371
35°	4189	4159	3957	3657	3567	2619
45°	3215	3148	2878	2638	2533	2476
55°	2233	2166	1964	1731	1641	2003
65°	1326	1252	1132	1154	959	1307
75°	532	495	465	442	487	570
85°	75	82	90	97	105	104
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6482.5	6482.5	6482.5	6482.5	6482.5
2.5°	6437.5	6437.5	6437.5	6430.0	6430.0
5°	6370.0	6362.5	6362.5	6355.1	6355.1
7.5°	6317.6	6310.1	6302.6	6295.1	6280.1
10°	6242.6	6242.6	6235.1	6197.7	6190.2
12.5°	6122.7	6115.2	6085.3	6032.8	6017.8
15°	5957.9	5957.9	5897.9	5838.0	5815.5
17.5°	5778.0	5770.5	5695.6	5635.6	5605.6
20°	5583.2	5568.2	5493.2	5395.8	5343.3
22.5°	5365.8	5365.8	5275.9	5148.5	5096.0
25°	5163.5	5133.5	5051.1	4871.2	4736.3
27.5°	4931.2	4886.2	4796.3	4541.5	4384.1
30°	4676.4	4653.9	4526.5	4196.7	4076.8
32.5°	4436.5	4399.1	4264.2	3919.4	3822.0
35°	4189.2	4159.3	3956.9	3657.2	3567.2
37.5°	3941.9	3904.5	3649.7	3409.8	3297.4
40°	3694.6	3649.7	3372.4	3155.0	3035.1
42.5°	3462.3	3402.4	3132.6	2900.2	2765.3
45°	3215.0	3147.6	2877.8	2637.9	2533.0
47.5°	2967.7	2907.7	2660.4	2413.1	2293.2
50°	2705.4	2652.9	2428.1	2180.8	2053.4
52.5°	2488.1	2405.6	2188.3	1941.0	1836.1
55°	2233.3	2165.8	1963.5	1731.2	1641.2
57.5°	2000.9	1933.5	1746.1	1528.8	1453.9
60°	1783.6	1686.2	1528.8	1341.5	1281.5
62.5°	1543.8	1468.9	1334.0	1176.6	1251.5
65°	1326.5	1251.5	1131.6	1154.1	959.3
67.5°	1086.7	1049.2	944.3	839.3	809.4
70°	884.3	839.3	801.9	689.5	659.5
72.5°	704.5	659.5	607.0	547.1	524.6
75°	532.1	494.6	464.6	442.2	487.1
77.5°	367.2	352.2	329.7	307.3	299.8
80°	239.8	232.3	224.8	217.3	209.8
82.5°	142.4	142.4	142.4	142.4	142.4
85°	74.9	82.4	89.9	97.4	104.9
87.5°	45.0	45.0	52.5	60.0	67.4
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)