

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: P547173

Luminaire Tested: **FMR-24-4-LD4-3STD-35-UNV-81-96-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: P547173
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-LD4-3STD-35-UNV-81-96-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

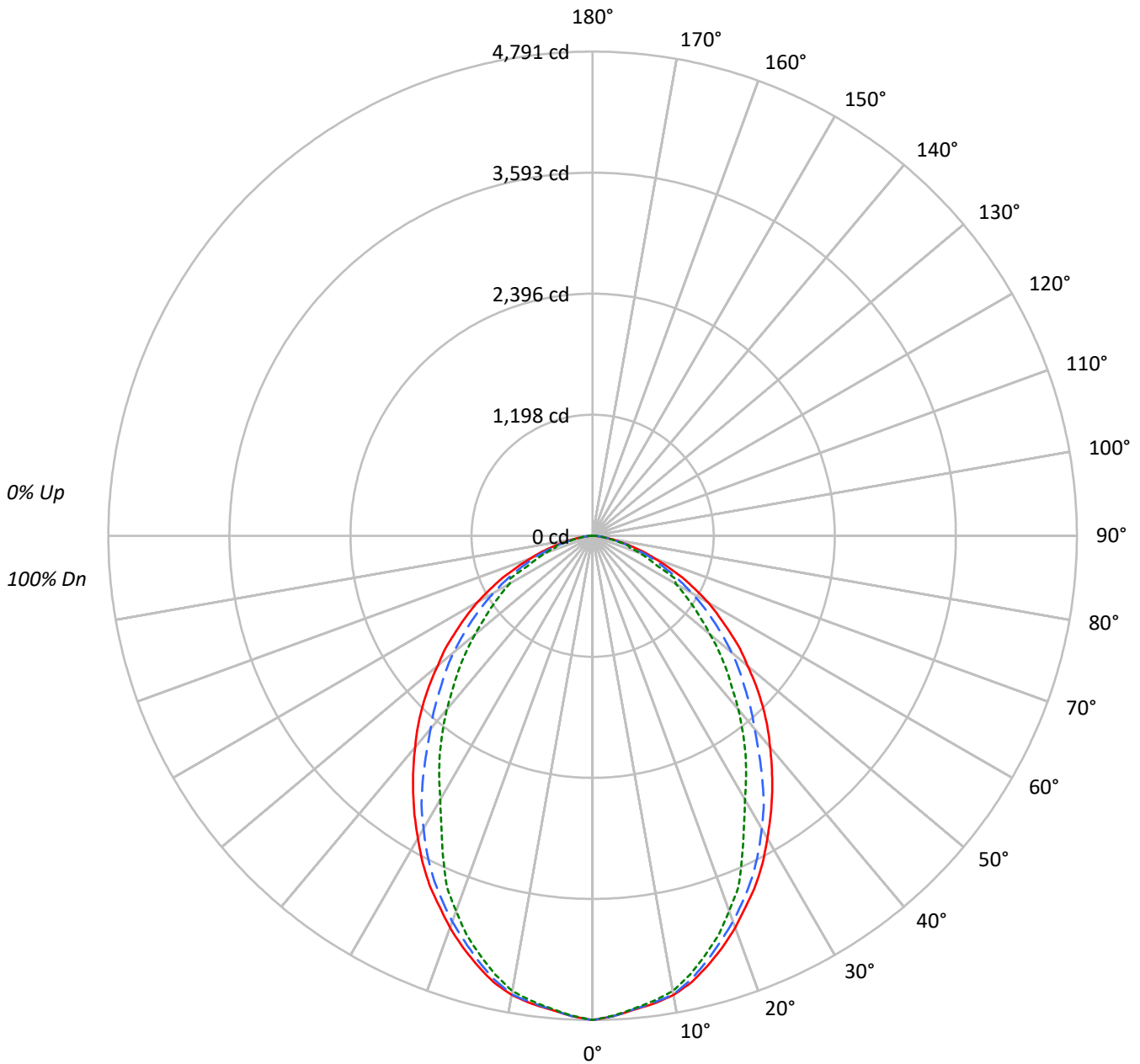
Lumens per Lamp: N/A
Luminaire Lumens: 9405.0 lumens
Efficiency: N/A
Efficacy: 94.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	6446	6446	6446
5°	6358	6351	6343
10°	6303	6296	6250
15°	6133	6072	5987
20°	5908	5813	5654
25°	5665	5542	5196
30°	5369	5197	4681
35°	5085	4803	4330
40°	4796	4378	3940
45°	4521	4047	3562
50°	4185	3756	3176
55°	3872	3404	2845
60°	3547	3040	2549
65°	3121	2663	2257
70°	2571	2331	1917
75°	2044	1785	1871
80°	1373	1288	1202
85°	855	1027	1196



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	446.0	4.7
10°-20°	1223.9	13.0
20°-30°	1694.4	18.0
30°-40°	1806.7	19.2
40°-50°	1648.3	17.5
50°-60°	1291.3	13.7
60°-70°	841.6	8.9
70°-80°	372.9	4.0
80°-90°	80.0	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°	3364.2	35.8
0°-40°	5171.0	55.0
0°-60°	8110.5	86.2
0°-90°	9405.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9405.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4791	4791	4791	4791	4791	
5°	4708	4702	4702	4697	4697	447
15°	4403	4403	4359	4314	4298	1238
25°	3816	3794	3733	3600	3500	1752
35°	3096	3074	2924	2703	2636	1936
45°	2376	2326	2127	1950	1872	1830
55°	1650	1601	1451	1279	1213	1480
65°	980	925	836	853	709	966
75°	393	366	343	327	360	421
85°	55	61	66	72	78	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4790.8	4790.8	4790.8	4790.8	4790.8
2.5°	4757.6	4757.6	4757.6	4752.0	4752.0
5°	4707.7	4702.2	4702.2	4696.6	4696.6
7.5°	4668.9	4663.4	4657.9	4652.3	4641.2
10°	4613.6	4613.6	4608.0	4580.3	4574.8
12.5°	4524.9	4519.4	4497.2	4458.5	4447.4
15°	4403.1	4403.1	4358.8	4314.5	4297.9
17.5°	4270.2	4264.6	4209.2	4164.9	4142.8
20°	4126.2	4115.1	4059.7	3987.7	3948.9
22.5°	3965.5	3965.5	3899.1	3804.9	3766.2
25°	3816.0	3793.9	3732.9	3600.0	3500.3
27.5°	3644.3	3611.1	3544.6	3356.3	3240.0
30°	3456.0	3439.4	3345.2	3101.5	3012.9
32.5°	3278.8	3251.1	3151.4	2896.6	2824.6
35°	3096.0	3073.9	2924.3	2702.8	2636.3
37.5°	2913.2	2885.5	2697.2	2520.0	2436.9
40°	2730.5	2697.2	2492.3	2331.7	2243.1
42.5°	2558.8	2514.5	2315.1	2143.4	2043.7
45°	2376.0	2326.2	2126.8	1949.5	1872.0
47.5°	2193.2	2148.9	1966.2	1783.4	1694.8
50°	1999.4	1960.6	1794.5	1611.7	1517.5
52.5°	1838.8	1777.9	1617.2	1434.5	1356.9
55°	1650.5	1600.6	1451.1	1279.4	1212.9
57.5°	1478.8	1428.9	1290.5	1129.8	1074.5
60°	1318.2	1246.2	1129.8	991.4	947.1
62.5°	1140.9	1085.5	985.8	869.5	924.9
65°	980.3	924.9	836.3	852.9	708.9
67.5°	803.1	775.4	697.8	620.3	598.2
70°	653.5	620.3	592.6	509.5	487.4
72.5°	520.6	487.4	448.6	404.3	387.7
75°	393.2	365.5	343.4	326.8	360.0
77.5°	271.4	260.3	243.7	227.1	221.5
80°	177.2	171.7	166.2	160.6	155.1
82.5°	105.2	105.2	105.2	105.2	105.2
85°	55.4	60.9	66.5	72.0	77.5
87.5°	33.2	33.2	38.8	44.3	49.8
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)