

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: P547374

Luminaire Tested: **FMR-24-4-LD4-4LO-35-UNV-82-97-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: P547374
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-35-UNV-82-97-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC 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

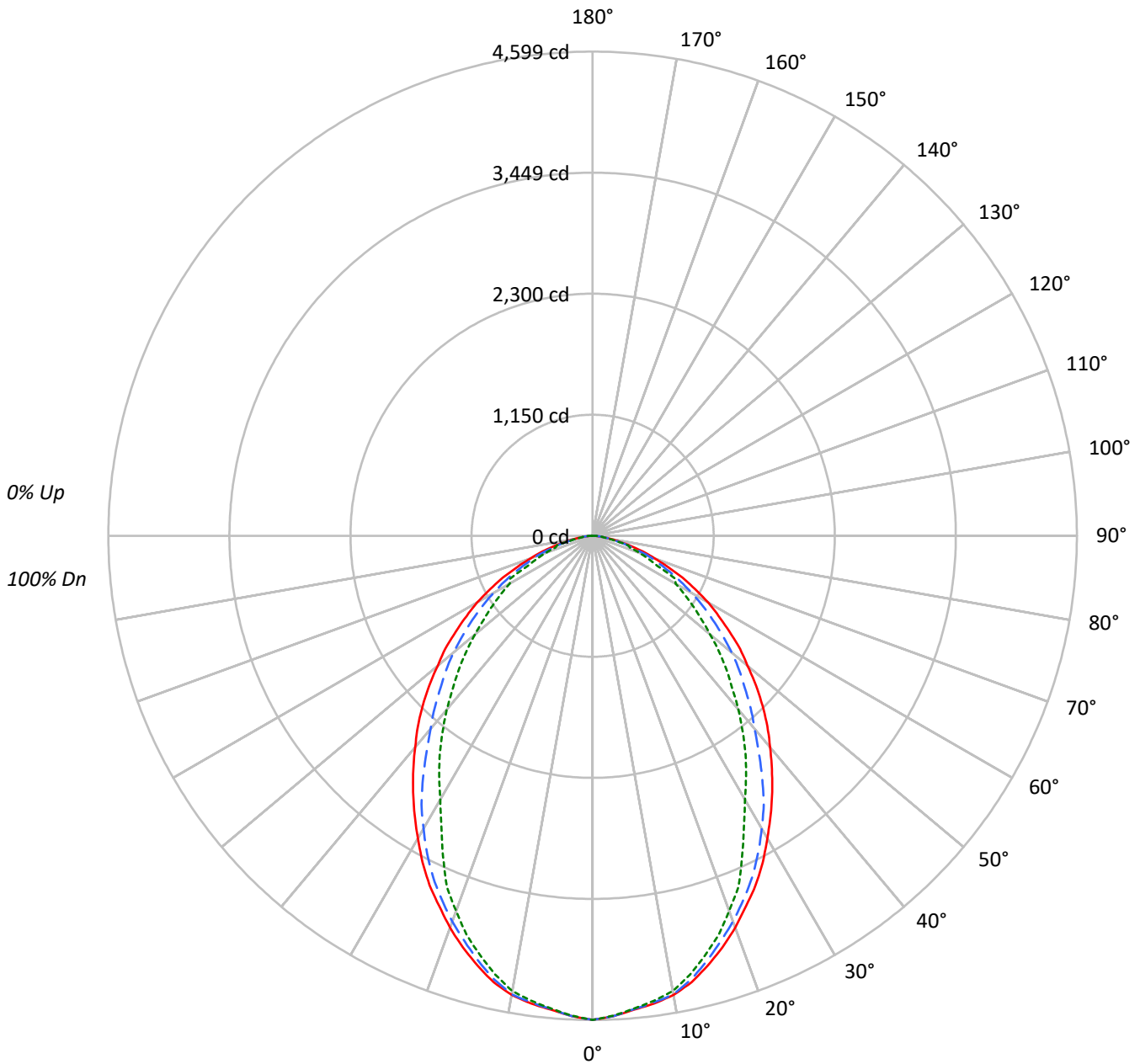
Lumens per Lamp: N/A
Luminaire Lumens: 9028.0 lumens
Efficiency: N/A
Efficacy: 96.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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

TEST NUMBER: P547374

CATALOG NUMBER: FMR-24-4-LD4-4LO-35-UNV-82-97-EDD

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°	6188	6188	6188
5°	6103	6096	6089
10°	6051	6043	6000
15°	5887	5828	5747
20°	5671	5580	5428
25°	5438	5320	4988
30°	5154	4989	4493
35°	4881	4611	4157
40°	4604	4202	3782
45°	4340	3885	3419
50°	4017	3606	3049
55°	3716	3267	2731
60°	3405	2919	2446
65°	2996	2556	2167
70°	2468	2238	1840
75°	1962	1713	1797
80°	1318	1236	1154
85°	821	985	1149



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	428.1	4.7
10°-20°	1174.8	13.0
20°-30°	1626.5	18.0
30°-40°	1734.3	19.2
40°-50°	1582.2	17.5
50°-60°	1239.5	13.7
60°-70°	807.8	8.9
70°-80°	357.9	4.0
80°-90°	76.8	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°	3229.4	35.8
0°-40°	4963.7	55.0
0°-60°	7785.4	86.2
0°-90°	9028.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9028.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4599	4599	4599	4599	4599	
5°	4519	4514	4514	4508	4508	429
15°	4227	4227	4184	4142	4126	1188
25°	3663	3642	3583	3456	3360	1682
35°	2972	2951	2807	2594	2531	1858
45°	2281	2233	2042	1871	1797	1757
55°	1584	1536	1393	1228	1164	1421
65°	941	888	803	819	680	927
75°	378	351	330	314	346	405
85°	53	58	64	69	74	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4598.7	4598.7	4598.7	4598.7	4598.7
2.5°	4566.8	4566.8	4566.8	4561.5	4561.5
5°	4519.0	4513.7	4513.7	4508.4	4508.4
7.5°	4481.8	4476.5	4471.1	4465.8	4455.2
10°	4428.6	4428.6	4423.3	4396.7	4391.4
12.5°	4343.6	4338.2	4317.0	4279.8	4269.1
15°	4226.6	4226.6	4184.1	4141.5	4125.6
17.5°	4099.0	4093.7	4040.5	3998.0	3976.7
20°	3960.8	3950.1	3897.0	3827.9	3790.6
22.5°	3806.6	3806.6	3742.8	3652.4	3615.2
25°	3663.0	3641.8	3583.3	3455.7	3360.0
27.5°	3498.2	3466.3	3402.5	3221.8	3110.1
30°	3317.5	3301.5	3211.1	2977.2	2892.2
32.5°	3147.3	3120.8	3025.1	2780.5	2711.4
35°	2971.9	2950.6	2807.1	2594.4	2530.6
37.5°	2796.5	2769.9	2589.1	2419.0	2339.2
40°	2621.0	2589.1	2392.4	2238.2	2153.2
42.5°	2456.2	2413.7	2222.3	2057.5	1961.8
45°	2280.8	2232.9	2041.5	1871.4	1797.0
47.5°	2105.3	2062.8	1887.3	1711.9	1626.8
50°	1919.2	1882.0	1722.5	1547.1	1456.7
52.5°	1765.1	1706.6	1552.4	1377.0	1302.5
55°	1584.3	1536.5	1392.9	1228.1	1164.3
57.5°	1419.5	1371.6	1238.7	1084.6	1031.4
60°	1265.3	1196.2	1084.6	951.6	909.1
62.5°	1095.2	1042.0	946.3	834.7	887.8
65°	941.0	887.8	802.8	818.7	680.5
67.5°	770.9	744.3	669.9	595.4	574.2
70°	627.3	595.4	568.9	489.1	467.8
72.5°	499.7	467.8	430.6	388.1	372.2
75°	377.5	350.9	329.6	313.7	345.6
77.5°	260.5	249.9	233.9	218.0	212.7
80°	170.1	164.8	159.5	154.2	148.9
82.5°	101.0	101.0	101.0	101.0	101.0
85°	53.2	58.5	63.8	69.1	74.4
87.5°	31.9	31.9	37.2	42.5	47.8
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)