

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: P546885

Luminaire Tested: **FMR-24-4-LD4-2STD-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: P546885
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-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

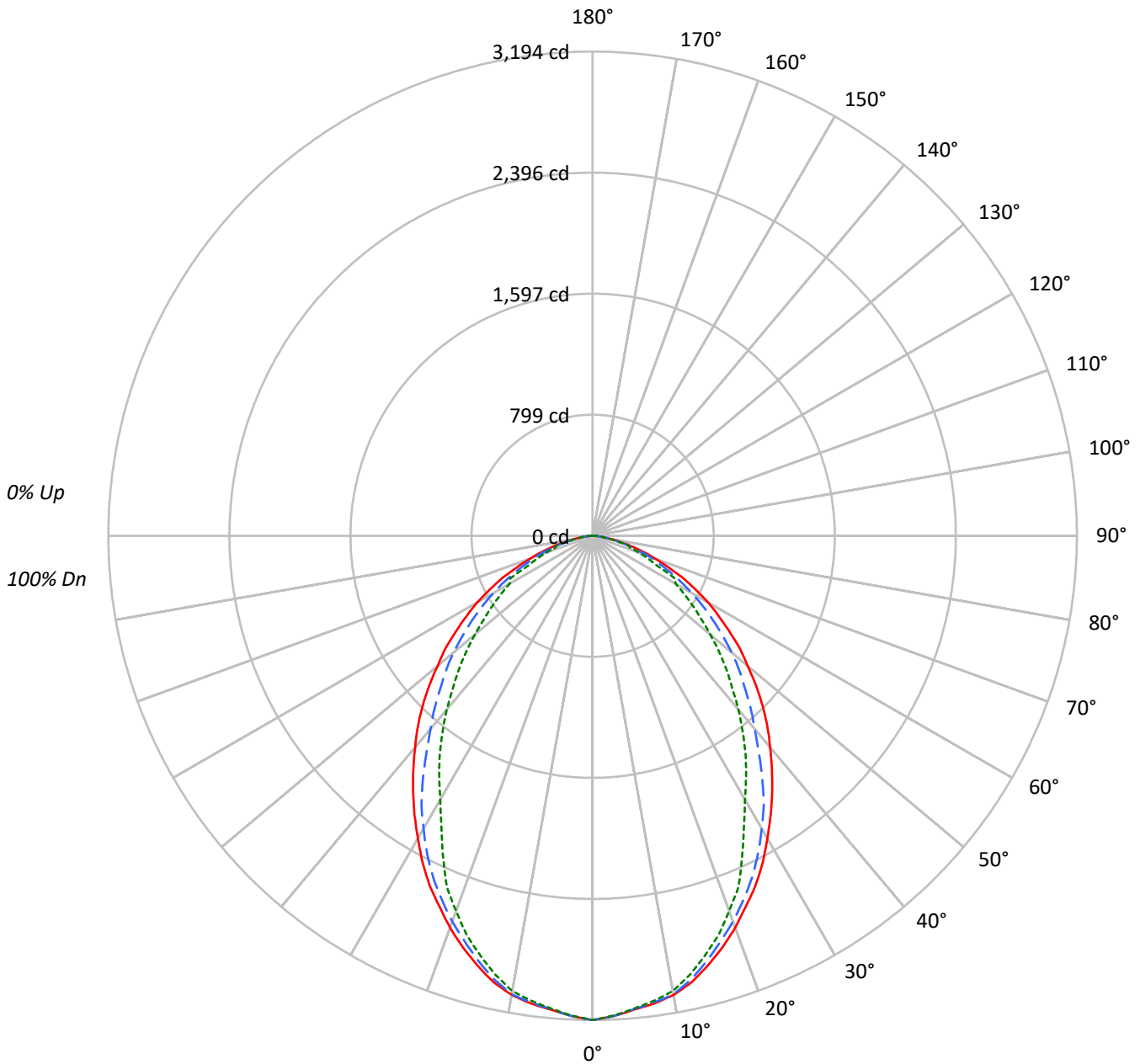
Lumens per Lamp: N/A
Luminaire Lumens: 6270.0 lumens
Efficiency: N/A
Efficacy: 94.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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									
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°	4297	4297	4297
5°	4239	4234	4229
10°	4202	4197	4167
15°	4089	4048	3991
20°	3939	3875	3769
25°	3777	3695	3464
30°	3580	3465	3121
35°	3390	3202	2887
40°	3197	2918	2627
45°	3014	2698	2375
50°	2790	2504	2118
55°	2581	2269	1897
60°	2365	2027	1699
65°	2081	1775	1505
70°	1714	1554	1278
75°	1363	1190	1248
80°	916	859	801
85°	570	684	798



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	297.3	4.7
10°-20°	815.9	13.0
20°-30°	1129.6	18.0
30°-40°	1204.5	19.2
40°-50°	1098.8	17.5
50°-60°	860.8	13.7
60°-70°	561.0	8.9
70°-80°	248.6	4.0
80°-90°	53.4	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°	2242.8	35.8
0°-40°	3447.3	55.0
0°-60°	5407.0	86.2
0°-90°	6270.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6270.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3194	3194	3194	3194	3194	
5°	3138	3135	3135	3131	3131	298
15°	2935	2935	2906	2876	2865	825
25°	2544	2529	2489	2400	2334	1168
35°	2064	2049	1950	1802	1758	1290
45°	1584	1551	1418	1300	1248	1220
55°	1100	1067	967	853	809	987
65°	654	617	558	569	473	644
75°	262	244	229	218	240	281
85°	37	41	44	48	52	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3193.9	3193.9	3193.9	3193.9	3193.9
2.5°	3171.7	3171.7	3171.7	3168.0	3168.0
5°	3138.5	3134.8	3134.8	3131.1	3131.1
7.5°	3112.6	3108.9	3105.2	3101.5	3094.2
10°	3075.7	3075.7	3072.0	3053.5	3049.9
12.5°	3016.6	3012.9	2998.2	2972.3	2964.9
15°	2935.4	2935.4	2905.9	2876.3	2865.2
17.5°	2846.8	2843.1	2806.2	2776.6	2761.9
20°	2750.8	2743.4	2706.5	2658.5	2632.6
22.5°	2643.7	2643.7	2599.4	2536.6	2510.8
25°	2544.0	2529.2	2488.6	2400.0	2333.5
27.5°	2429.5	2407.4	2363.1	2237.5	2160.0
30°	2304.0	2292.9	2230.2	2067.7	2008.6
32.5°	2185.9	2167.4	2100.9	1931.1	1883.1
35°	2064.0	2049.2	1949.5	1801.9	1757.5
37.5°	1942.2	1923.7	1798.2	1680.0	1624.6
40°	1820.3	1798.2	1661.5	1554.5	1495.4
42.5°	1705.9	1676.3	1543.4	1428.9	1362.5
45°	1584.0	1550.8	1417.8	1299.7	1248.0
47.5°	1462.2	1432.6	1310.8	1188.9	1129.8
50°	1332.9	1307.1	1196.3	1074.5	1011.7
52.5°	1225.8	1185.2	1078.2	956.3	904.6
55°	1100.3	1067.1	967.4	852.9	808.6
57.5°	985.8	952.6	860.3	753.2	716.3
60°	878.8	830.8	753.2	660.9	631.4
62.5°	760.6	723.7	657.2	579.7	616.6
65°	653.5	616.6	557.5	568.6	472.6
67.5°	535.4	516.9	465.2	413.5	398.8
70°	435.7	413.5	395.1	339.7	324.9
72.5°	347.1	324.9	299.1	269.5	258.5
75°	262.2	243.7	228.9	217.8	240.0
77.5°	180.9	173.5	162.5	151.4	147.7
80°	118.2	114.5	110.8	107.1	103.4
82.5°	70.2	70.2	70.2	70.2	70.2
85°	36.9	40.6	44.3	48.0	51.7
87.5°	22.2	22.2	25.8	29.5	33.2
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)