

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: P546925

Luminaire Tested: **FMR-24-4-LD4-2STD-40-UNV-82-96-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: P546925
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-40-UNV-82-96-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

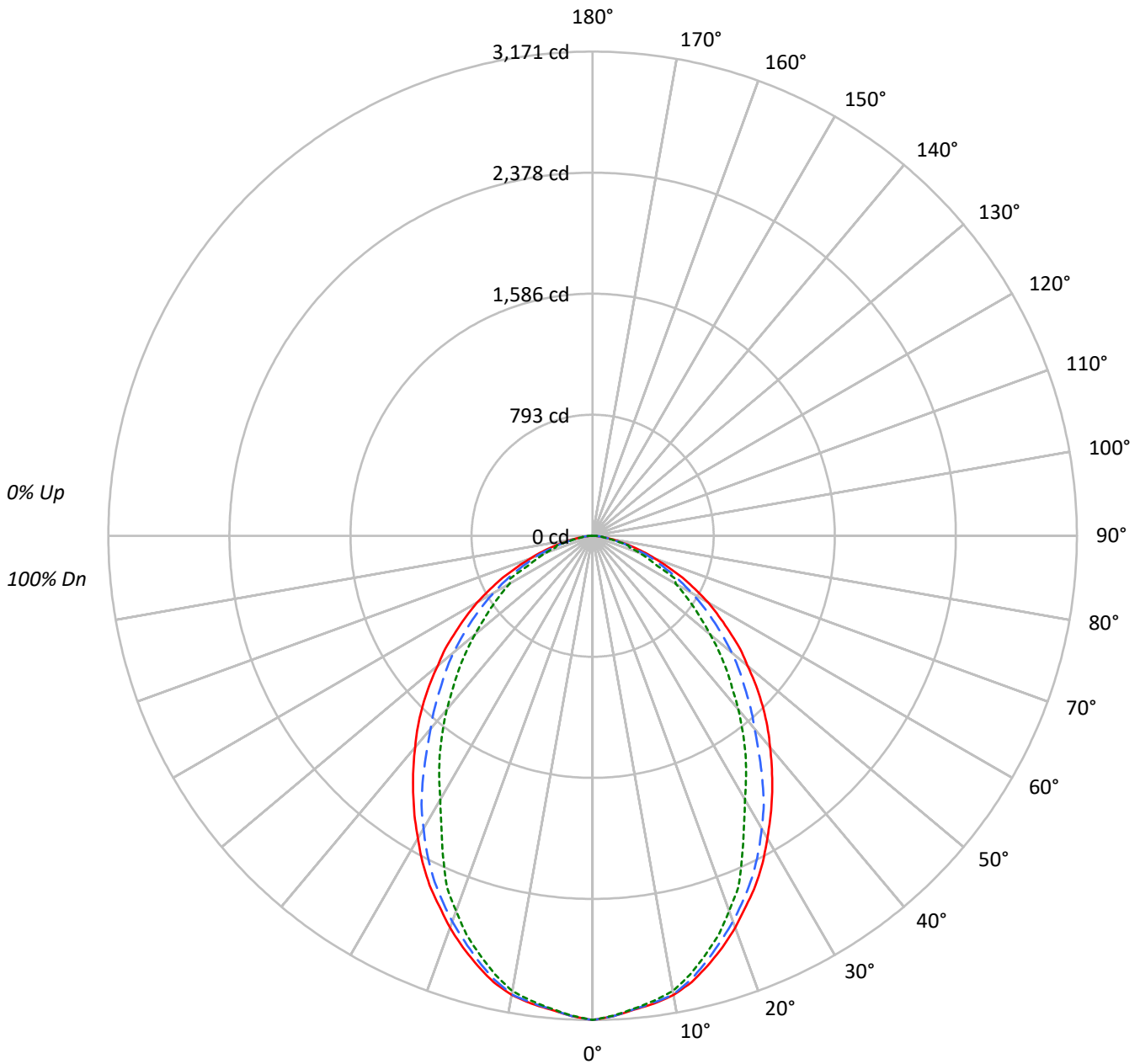
Lumens per Lamp: N/A
Luminaire Lumens: 6225.0 lumens
Efficiency: N/A
Efficacy: 93.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	4266	4266	4266
5°	4208	4204	4199
10°	4172	4167	4137
15°	4059	4019	3963
20°	3910	3847	3742
25°	3750	3668	3439
30°	3554	3440	3098
35°	3366	3179	2866
40°	3174	2897	2608
45°	2992	2679	2358
50°	2770	2486	2102
55°	2563	2253	1883
60°	2348	2012	1687
65°	2066	1762	1494
70°	1702	1543	1269
75°	1353	1182	1239
80°	909	852	795
85°	567	679	792



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	295.2	4.7
10°-20°	810.1	13.0
20°-30°	1121.5	18.0
30°-40°	1195.8	19.2
40°-50°	1091.0	17.5
50°-60°	854.7	13.7
60°-70°	557.0	8.9
70°-80°	246.8	4.0
80°-90°	53.0	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°	2226.7	35.8
0°-40°	3422.6	55.0
0°-60°	5368.2	86.2
0°-90°	6225.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6225.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3171	3171	3171	3171	3171	
5°	3116	3112	3112	3109	3109	296
15°	2914	2914	2885	2856	2845	819
25°	2526	2511	2471	2383	2317	1160
35°	2049	2034	1936	1789	1745	1281
45°	1573	1540	1408	1290	1239	1211
55°	1092	1059	960	847	803	980
65°	649	612	554	564	469	639
75°	260	242	227	216	238	279
85°	37	40	44	48	51	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3170.9	3170.9	3170.9	3170.9	3170.9
2.5°	3148.9	3148.9	3148.9	3145.3	3145.3
5°	3115.9	3112.3	3112.3	3108.6	3108.6
7.5°	3090.3	3086.6	3083.0	3079.3	3072.0
10°	3053.6	3053.6	3050.0	3031.6	3028.0
12.5°	2995.0	2991.3	2976.6	2951.0	2943.7
15°	2914.3	2914.3	2885.0	2855.7	2844.7
17.5°	2826.3	2822.7	2786.0	2756.7	2742.0
20°	2731.0	2723.7	2687.0	2639.4	2613.7
22.5°	2624.7	2624.7	2580.7	2518.4	2492.8
25°	2525.7	2511.1	2470.8	2382.8	2316.8
27.5°	2412.1	2390.1	2346.1	2221.5	2144.5
30°	2287.5	2276.5	2214.2	2052.9	1994.2
32.5°	2170.2	2151.8	2085.8	1917.2	1869.6
35°	2049.2	2034.5	1935.6	1788.9	1744.9
37.5°	1928.2	1909.9	1785.3	1667.9	1613.0
40°	1807.2	1785.3	1649.6	1543.3	1484.7
42.5°	1693.6	1664.3	1532.3	1418.7	1352.7
45°	1572.6	1539.6	1407.7	1290.4	1239.0
47.5°	1451.7	1422.3	1301.4	1180.4	1121.7
50°	1323.4	1297.7	1187.7	1066.8	1004.4
52.5°	1217.1	1176.7	1070.4	949.4	898.1
55°	1092.4	1059.4	960.4	846.8	802.8
57.5°	978.8	945.8	854.1	747.8	711.2
60°	872.5	824.8	747.8	656.2	626.9
62.5°	755.2	718.5	652.5	575.5	612.2
65°	648.8	612.2	553.5	564.5	469.2
67.5°	531.5	513.2	461.9	410.6	395.9
70°	432.6	410.6	392.2	337.3	322.6
72.5°	344.6	322.6	296.9	267.6	256.6
75°	260.3	241.9	227.3	216.3	238.3
77.5°	179.6	172.3	161.3	150.3	146.6
80°	117.3	113.6	110.0	106.3	102.6
82.5°	69.7	69.7	69.7	69.7	69.7
85°	36.7	40.3	44.0	47.7	51.3
87.5°	22.0	22.0	25.7	29.3	33.0
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)