

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: P589118

Luminaire Tested: **FMR-24-2-LD4-2LO-40-UNV-81-85-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589118
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-2-LD4-2LO-40-UNV-81-85-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

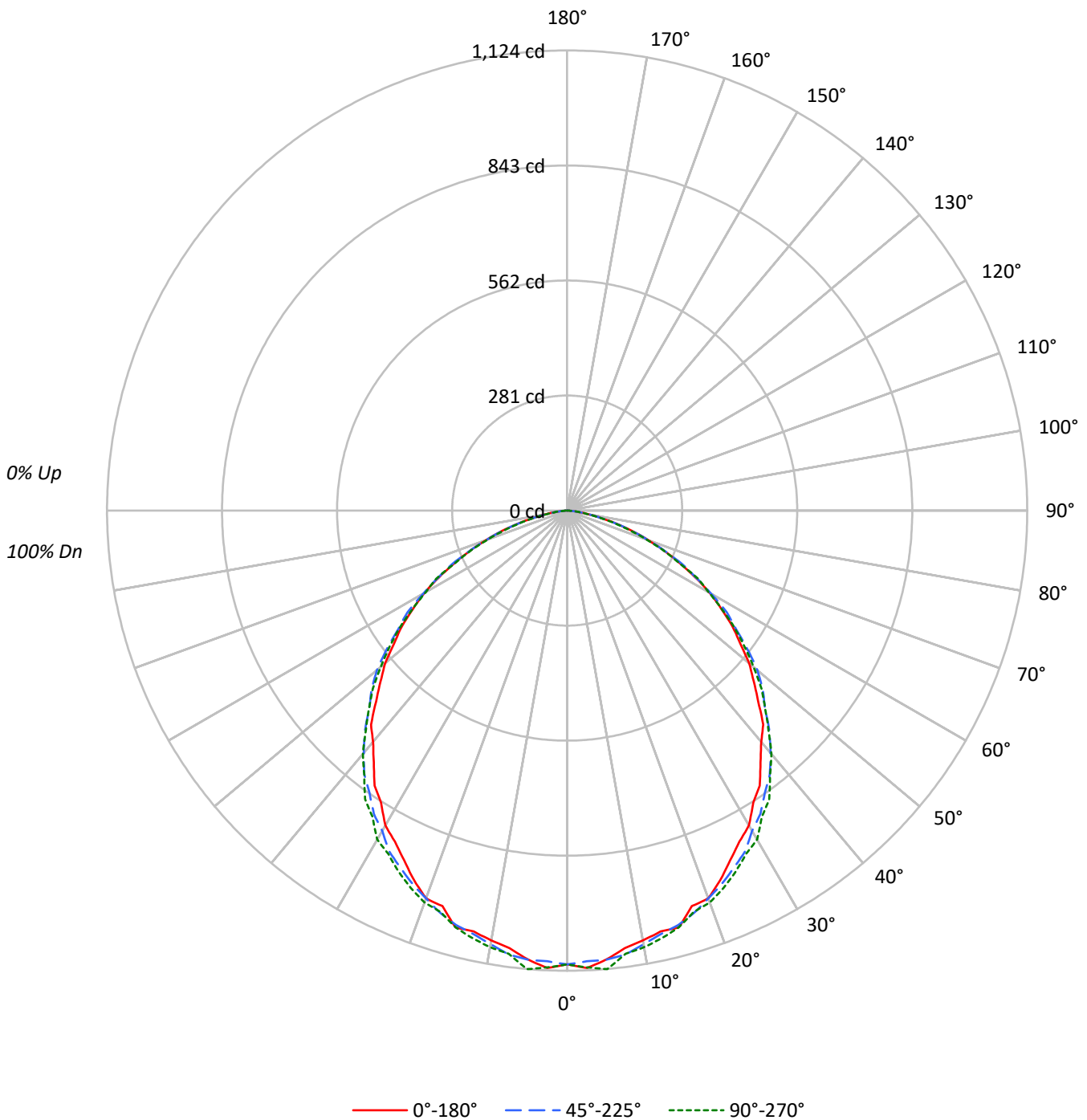
Lumens per Lamp: N/A
Luminaire Lumens: 2794.0 lumens
Efficiency: N/A
Efficacy: 119.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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									70									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	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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86																												
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73																												
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62																												
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53																												
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46																												
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41																												
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36																												
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32																												
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29																												
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2983	2983	2983
5°	2973	2974	3037
10°	2913	2939	2959
15°	2936	2920	2937
20°	2887	2887	2917
25°	2798	2859	2890
30°	2759	2808	2883
35°	2694	2765	2827
40°	2590	2714	2726
45°	2511	2600	2604
50°	2429	2538	2490
55°	2314	2359	2343
60°	2164	2186	2146
65°	1929	1978	1916
70°	1655	1661	1615
75°	1311	1308	1257
80°	879	854	821
85°	479	472	442



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.3	3.7
10°-20°	295.5	10.6
20°-30°	442.8	15.8
30°-40°	524.8	18.8
40°-50°	525.8	18.8
50°-60°	446.3	16.0
60°-70°	300.9	10.8
70°-80°	132.2	4.7
80°-90°	21.5	0.8
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°	842.6	30.2
0°-40°	1367.4	48.9
0°-60°	2339.4	83.7
0°-90°	2794.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2794.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1109	1109	1109	1109	1109	
5°	1101	1098	1101	1098	1124	104
15°	1054	1042	1048	1054	1054	294
25°	942	947	963	976	974	436
35°	820	823	842	861	860	509
45°	660	672	683	701	684	510
55°	493	490	503	499	499	439
65°	303	299	311	299	301	301
75°	126	124	126	117	121	135
85°	16	15	15	15	14	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1108.6	1108.6	1108.6	1108.6	1108.6
2.5°	1118.2	1109.7	1101.9	1111.0	1116.6
5°	1100.7	1098.1	1101.1	1097.9	1124.3
7.5°	1078.1	1088.0	1093.7	1090.1	1091.7
10°	1066.1	1062.6	1075.4	1084.3	1083.0
12.5°	1053.2	1058.3	1059.1	1068.7	1069.5
15°	1053.9	1041.7	1048.2	1053.6	1054.1
17.5°	1013.0	1026.1	1030.6	1043.0	1027.6
20°	1008.0	998.4	1008.0	1020.7	1018.7
22.5°	977.2	966.5	987.1	998.4	997.7
25°	942.3	947.4	962.9	975.5	973.5
27.5°	911.6	917.6	939.7	957.0	945.8
30°	888.0	885.0	903.6	919.1	927.7
32.5°	845.8	856.7	878.4	893.7	885.6
35°	820.2	822.6	841.6	861.1	860.5
37.5°	775.4	786.7	813.4	818.9	813.9
40°	737.2	748.5	772.6	778.5	776.1
42.5°	709.0	711.0	731.7	738.4	727.7
45°	659.9	672.2	683.3	700.9	684.3
47.5°	618.1	623.8	647.8	652.6	643.8
50°	580.1	582.1	606.3	600.5	594.7
52.5°	532.5	540.9	554.5	553.4	546.6
55°	493.2	490.0	502.8	499.4	499.3
57.5°	446.2	451.9	462.5	457.0	448.3
60°	402.1	402.2	406.1	399.9	398.8
62.5°	353.0	354.7	355.5	348.0	360.3
65°	303.0	299.0	310.7	298.9	300.9
67.5°	257.1	259.1	257.9	250.5	253.4
70°	210.4	213.0	211.1	202.7	205.3
72.5°	167.8	164.6	166.6	156.0	160.9
75°	126.1	123.5	125.8	116.9	120.9
77.5°	85.9	87.9	86.5	81.7	84.5
80°	56.7	55.1	55.1	52.4	53.0
82.5°	33.1	31.5	31.1	30.2	31.5
85°	15.5	15.0	15.3	14.9	14.3
87.5°	5.6	5.7	5.7	5.4	5.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)