

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: P589111

Luminaire Tested: **FMR-24-2-LD4-2LO-40-UNV-80-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589111
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-80-86-EDD
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

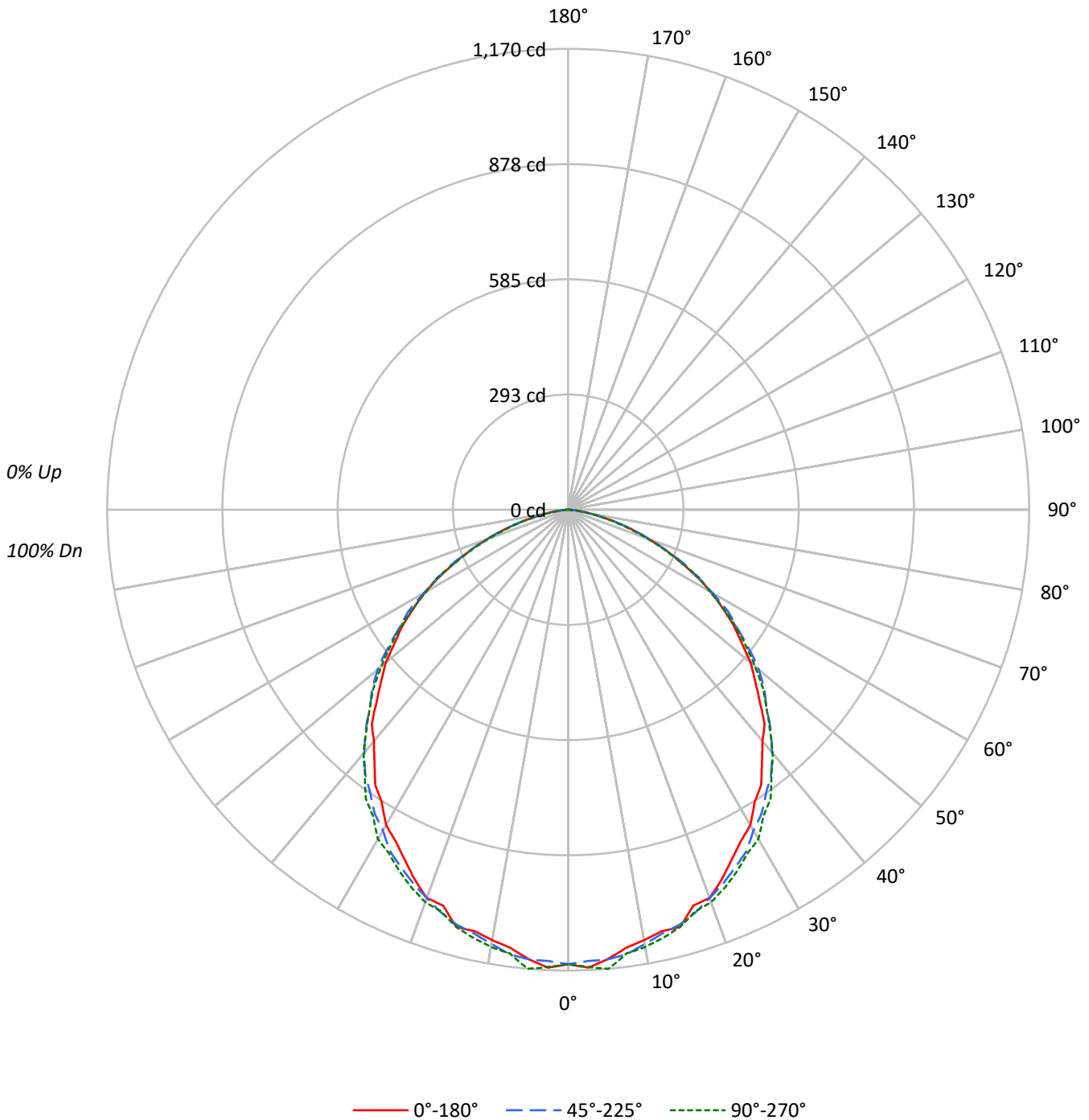
Lumens per Lamp: N/A
Luminaire Lumens: 2908.0 lumens
Efficiency: N/A
Efficacy: 124.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P589111

CATALOG NUMBER: FMR-24-2-LD4-2LO-40-UNV-80-86-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P589111

CATALOG NUMBER: FMR-24-2-LD4-2LO-40-UNV-80-86-EDD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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	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°	3105	3105	3105
5°	3095	3096	3161
10°	3032	3058	3080
15°	3056	3039	3056
20°	3004	3004	3036
25°	2912	2976	3008
30°	2872	2922	3000
35°	2804	2878	2942
40°	2695	2825	2837
45°	2614	2707	2711
50°	2528	2642	2591
55°	2409	2456	2438
60°	2252	2274	2234
65°	2008	2059	1994
70°	1723	1729	1681
75°	1364	1362	1309
80°	914	890	854
85°	497	491	460



TEST NUMBER: P589111

CATALOG NUMBER: FMR-24-2-LD4-2LO-40-UNV-80-86-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.5	3.7
10°-20°	307.6	10.6
20°-30°	460.9	15.8
30°-40°	546.2	18.8
40°-50°	547.2	18.8
50°-60°	464.5	16.0
60°-70°	313.2	10.8
70°-80°	137.6	4.7
80°-90°	22.4	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°	877.0	30.2
0°-40°	1423.2	48.9
0°-60°	2434.9	83.7
0°-90°	2908.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2908.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1154	1154	1154	1154	1154	
5°	1146	1143	1146	1143	1170	108
15°	1097	1084	1091	1097	1097	306
25°	981	986	1002	1015	1013	453
35°	854	856	876	896	896	530
45°	687	700	711	730	712	531
55°	513	510	523	520	520	457
65°	315	311	323	311	313	314
75°	131	129	131	122	126	141
85°	16	16	16	16	15	23
90°	0	0	0	0	0	



TEST NUMBER: P589111

CATALOG NUMBER: FMR-24-2-LD4-2LO-40-UNV-80-86-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1153.8	1153.8	1153.8	1153.8	1153.8
2.5°	1163.8	1155.0	1146.8	1156.4	1162.2
5°	1145.6	1142.9	1146.1	1142.6	1170.2
7.5°	1122.1	1132.4	1138.3	1134.6	1136.2
10°	1109.6	1106.0	1119.3	1128.5	1127.2
12.5°	1096.2	1101.5	1102.3	1112.3	1113.2
15°	1096.9	1084.2	1091.0	1096.6	1097.1
17.5°	1054.3	1068.0	1072.6	1085.6	1069.5
20°	1049.1	1039.1	1049.1	1062.3	1060.3
22.5°	1017.1	1005.9	1027.3	1039.1	1038.4
25°	980.7	986.1	1002.2	1015.3	1013.2
27.5°	948.8	955.1	978.0	996.1	984.4
30°	924.2	921.1	940.5	956.6	965.5
32.5°	880.3	891.6	914.3	930.2	921.7
35°	853.6	856.2	876.0	896.2	895.6
37.5°	807.0	818.8	846.6	852.3	847.1
40°	767.2	779.0	804.2	810.3	807.7
42.5°	737.9	740.0	761.6	768.6	757.4
45°	686.8	699.6	711.2	729.5	712.3
47.5°	643.3	649.2	674.3	679.2	670.1
50°	603.8	605.9	631.1	625.0	619.0
52.5°	554.2	563.0	577.1	575.9	568.9
55°	513.4	509.9	523.4	519.8	519.6
57.5°	464.4	470.3	481.3	475.7	466.6
60°	418.5	418.6	422.6	416.2	415.0
62.5°	367.4	369.2	370.1	362.2	375.0
65°	315.4	311.2	323.4	311.1	313.1
67.5°	267.6	269.6	268.5	260.7	263.7
70°	219.0	221.7	219.7	211.0	213.6
72.5°	174.6	171.3	173.4	162.4	167.4
75°	131.2	128.6	131.0	121.7	125.9
77.5°	89.4	91.5	90.0	85.1	87.9
80°	59.0	57.4	57.4	54.5	55.1
82.5°	34.4	32.8	32.3	31.4	32.8
85°	16.1	15.6	15.9	15.5	14.9
87.5°	5.8	6.0	6.0	5.7	5.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)