

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: P589123

Luminaire Tested: **FMR-24-2-LD4-2LO-40-UNV-81-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589123
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-81-96-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

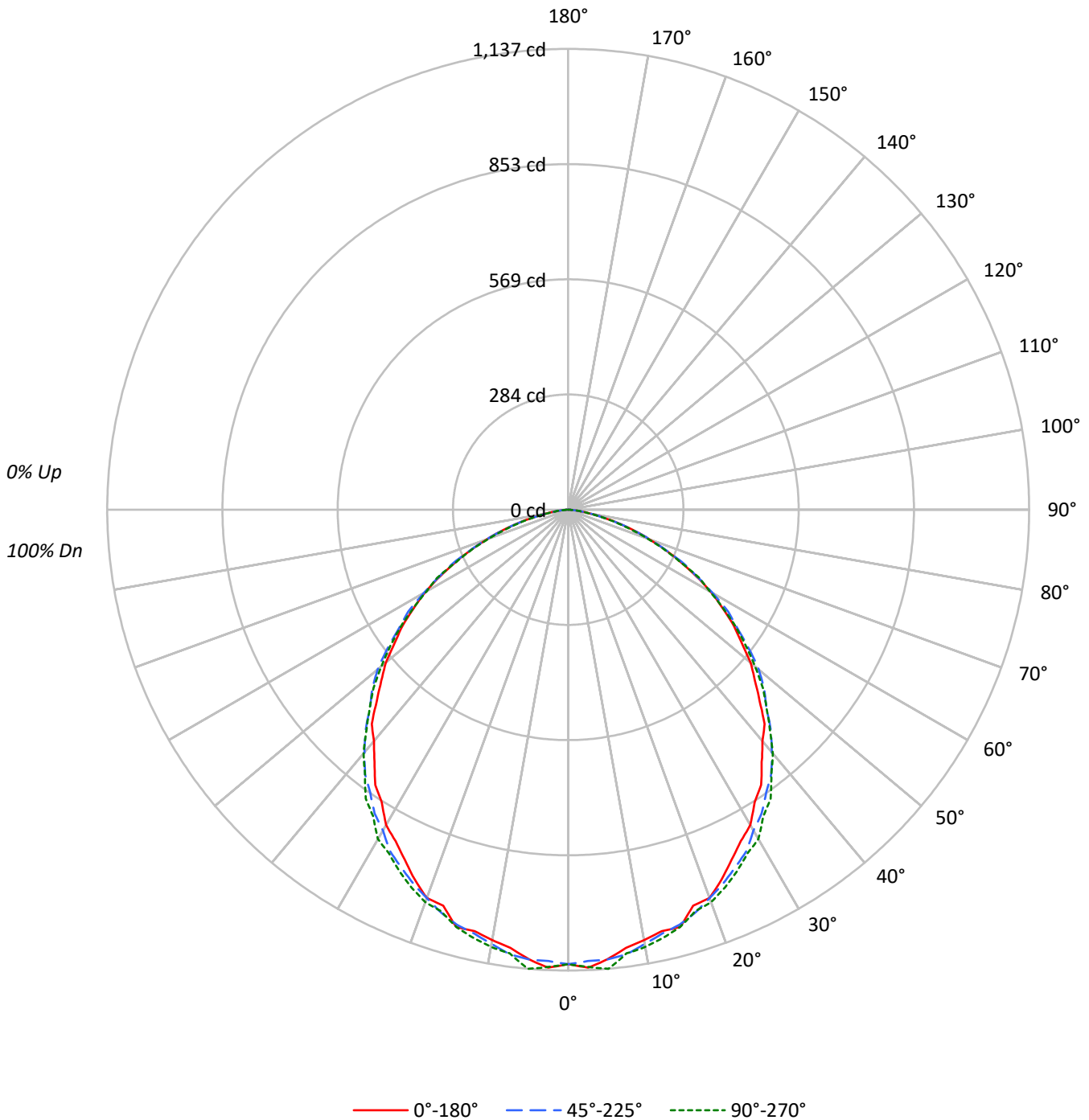
Lumens per Lamp: N/A
Luminaire Lumens: 2826.0 lumens
Efficiency: N/A
Efficacy: 120.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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				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°	3017	3017	3017
5°	3007	3009	3072
10°	2946	2972	2993
15°	2970	2954	2970
20°	2920	2920	2951
25°	2830	2892	2923
30°	2791	2840	2916
35°	2725	2797	2859
40°	2619	2745	2758
45°	2540	2630	2634
50°	2457	2568	2518
55°	2341	2386	2369
60°	2189	2210	2171
65°	1952	2001	1938
70°	1674	1680	1633
75°	1326	1324	1272
80°	888	863	831
85°	482	479	448



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.5	3.7
10°-20°	298.9	10.6
20°-30°	447.9	15.8
30°-40°	530.8	18.8
40°-50°	531.8	18.8
50°-60°	451.4	16.0
60°-70°	304.3	10.8
70°-80°	133.7	4.7
80°-90°	21.7	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°	852.3	30.2
0°-40°	1383.1	48.9
0°-60°	2366.2	83.7
0°-90°	2826.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2826.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1121	1121	1121	1121	1121	
5°	1113	1111	1114	1110	1137	105
15°	1066	1054	1060	1066	1066	297
25°	953	958	974	987	985	441
35°	830	832	851	871	870	515
45°	667	680	691	709	692	516
55°	499	496	509	505	505	444
65°	306	302	314	302	304	305
75°	128	125	127	118	122	137
85°	16	15	16	15	14	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1121.3	1121.3	1121.3	1121.3	1121.3
2.5°	1131.0	1122.4	1114.5	1123.7	1129.4
5°	1113.3	1110.7	1113.8	1110.4	1137.2
7.5°	1090.4	1100.4	1106.2	1102.6	1104.2
10°	1078.3	1074.8	1087.7	1096.7	1095.4
12.5°	1065.3	1070.5	1071.2	1080.9	1081.8
15°	1066.0	1053.7	1060.2	1065.7	1066.1
17.5°	1024.6	1037.9	1042.4	1055.0	1039.3
20°	1019.5	1009.8	1019.5	1032.4	1030.4
22.5°	988.4	977.5	998.4	1009.8	1009.1
25°	953.1	958.3	973.9	986.6	984.6
27.5°	922.1	928.2	950.5	968.0	956.7
30°	898.2	895.1	914.0	929.6	938.3
32.5°	855.5	866.5	888.5	904.0	895.7
35°	829.6	832.0	851.3	871.0	870.4
37.5°	784.2	795.7	822.8	828.3	823.2
40°	745.6	757.0	781.5	787.4	785.0
42.5°	717.1	719.1	740.1	746.9	736.0
45°	667.4	679.9	691.2	709.0	692.2
47.5°	625.1	630.9	655.3	660.0	651.2
50°	586.8	588.8	613.3	607.3	601.5
52.5°	538.6	547.1	560.9	559.7	552.9
55°	498.9	495.6	508.6	505.1	505.0
57.5°	451.3	457.1	467.8	462.3	453.4
60°	406.7	406.8	410.7	404.5	403.3
62.5°	357.0	358.8	359.6	351.9	364.4
65°	306.5	302.4	314.3	302.3	304.3
67.5°	260.0	262.0	260.9	253.4	256.3
70°	212.8	215.4	213.5	205.0	207.6
72.5°	169.7	166.5	168.5	157.8	162.7
75°	127.5	124.9	127.3	118.3	122.3
77.5°	86.9	88.9	87.4	82.7	85.4
80°	57.3	55.7	55.7	53.0	53.6
82.5°	33.4	31.9	31.4	30.5	31.9
85°	15.6	15.2	15.5	15.1	14.5
87.5°	5.6	5.8	5.8	5.5	5.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)