

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: P589124

Luminaire Tested: **FMR-24-2-LD4-2LO-40-UNV-81-97-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589124
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-81-97-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

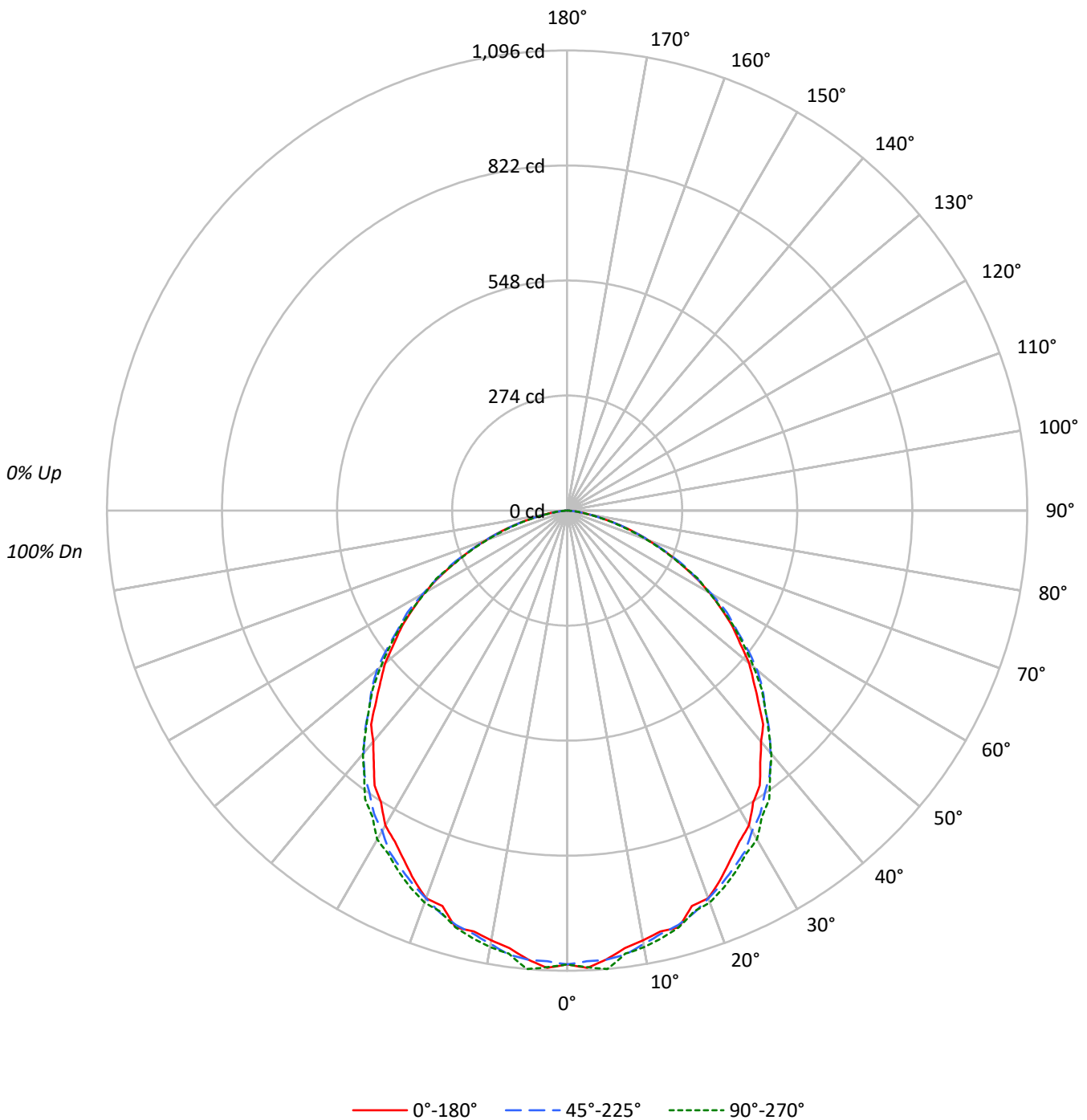
Lumens per Lamp: N/A
Luminaire Lumens: 2724.0 lumens
Efficiency: N/A
Efficacy: 116.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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				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°	2908	2908	2908
5°	2899	2900	2961
10°	2840	2865	2885
15°	2863	2847	2863
20°	2814	2814	2844
25°	2728	2787	2818
30°	2690	2738	2810
35°	2627	2696	2756
40°	2525	2646	2658
45°	2448	2535	2539
50°	2368	2475	2427
55°	2256	2300	2284
60°	2110	2131	2093
65°	1881	1929	1868
70°	1614	1619	1574
75°	1278	1276	1226
80°	857	832	800
85°	466	460	432



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.7	3.7
10°-20°	288.1	10.6
20°-30°	431.7	15.8
30°-40°	511.6	18.8
40°-50°	512.6	18.8
50°-60°	435.1	16.0
60°-70°	293.3	10.8
70°-80°	128.9	4.7
80°-90°	20.9	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°	821.5	30.2
0°-40°	1333.1	48.9
0°-60°	2280.8	83.7
0°-90°	2724.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2724.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1081	1081	1081	1081	1081	
5°	1073	1071	1074	1070	1096	101
15°	1028	1016	1022	1027	1028	286
25°	919	924	939	951	949	425
35°	800	802	821	840	839	496
45°	643	655	666	683	667	498
55°	481	478	490	487	487	428
65°	295	292	303	291	293	294
75°	123	120	123	114	118	132
85°	15	15	15	14	14	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1080.8	1080.8	1080.8	1080.8	1080.8
2.5°	1090.2	1081.9	1074.3	1083.2	1088.6
5°	1073.1	1070.6	1073.6	1070.3	1096.2
7.5°	1051.1	1060.7	1066.3	1062.8	1064.3
10°	1039.4	1036.0	1048.4	1057.1	1055.8
12.5°	1026.8	1031.8	1032.5	1041.9	1042.7
15°	1027.5	1015.6	1021.9	1027.2	1027.6
17.5°	987.6	1000.4	1004.8	1016.9	1001.8
20°	982.7	973.4	982.7	995.1	993.2
22.5°	952.7	942.2	962.3	973.4	972.7
25°	918.7	923.7	938.8	951.0	949.1
27.5°	888.8	894.7	916.1	933.0	922.1
30°	865.8	862.8	881.0	896.1	904.4
32.5°	824.6	835.2	856.4	871.3	863.4
35°	799.6	802.0	820.6	839.5	839.0
37.5°	755.9	767.0	793.1	798.4	793.5
40°	718.7	729.7	753.3	759.0	756.6
42.5°	691.2	693.1	713.4	719.9	709.5
45°	643.3	655.3	666.2	683.4	667.2
47.5°	602.6	608.2	631.6	636.2	627.7
50°	565.6	567.5	591.1	585.4	579.8
52.5°	519.1	527.4	540.6	539.5	532.9
55°	480.9	477.7	490.2	486.9	486.8
57.5°	435.0	440.6	450.9	445.6	437.1
60°	392.0	392.1	395.9	389.9	388.8
62.5°	344.1	345.8	346.6	339.2	351.2
65°	295.4	291.5	303.0	291.4	293.3
67.5°	250.6	252.6	251.5	244.2	247.0
70°	205.1	207.7	205.8	197.6	200.1
72.5°	163.6	160.5	162.4	152.1	156.9
75°	122.9	120.4	122.7	114.0	117.9
77.5°	83.7	85.7	84.3	79.7	82.3
80°	55.3	53.7	53.7	51.1	51.6
82.5°	32.2	30.7	30.3	29.4	30.7
85°	15.1	14.7	14.9	14.5	14.0
87.5°	5.4	5.6	5.6	5.3	5.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)