

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: P589163

Luminaire Tested: **FMR-24-2-LD4-2LO-50-UNV-82-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589163
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-50-UNV-82-96-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

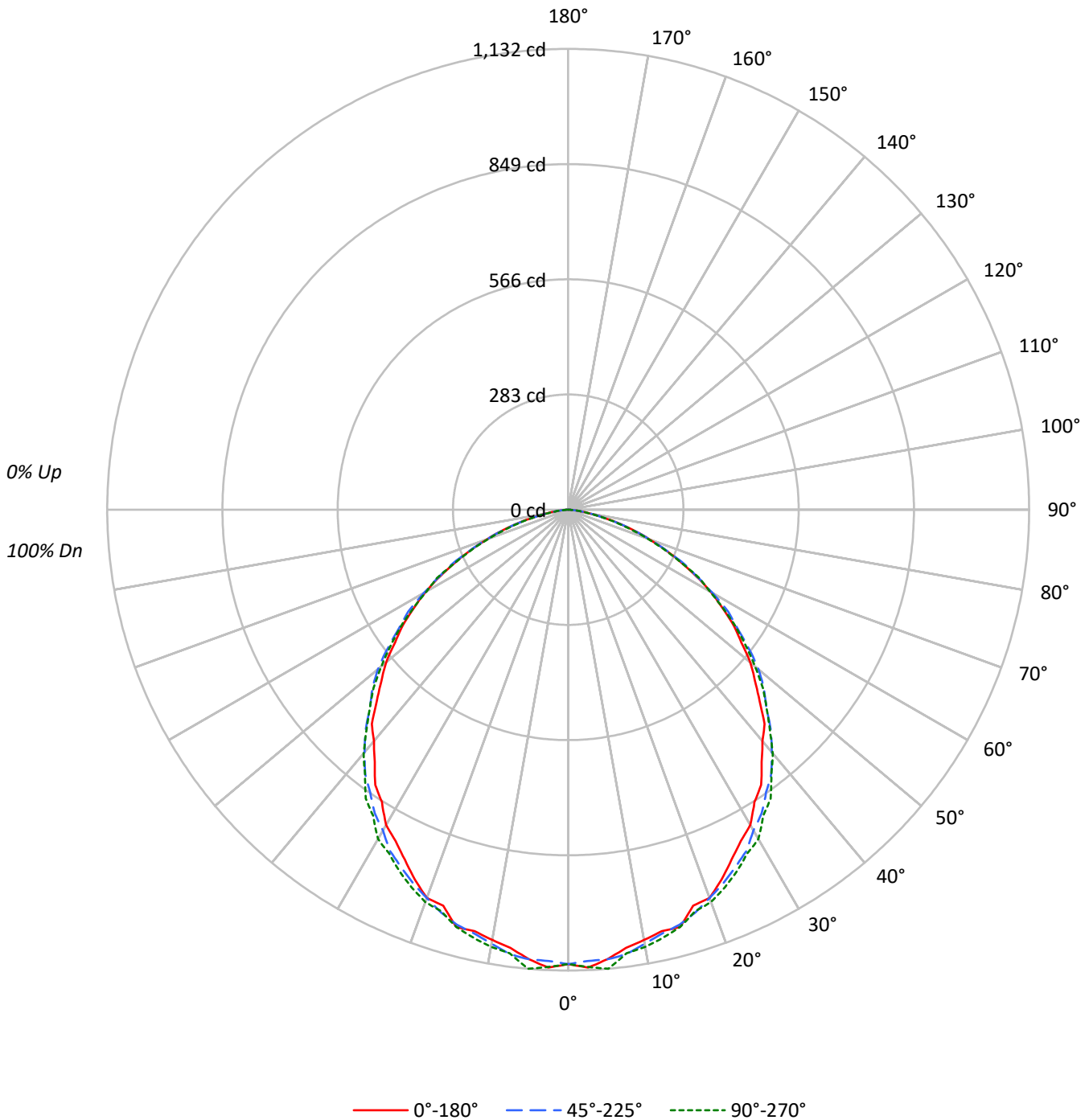
Lumens per Lamp: N/A
Luminaire Lumens: 2813.0 lumens
Efficiency: N/A
Efficacy: 120.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	3003	3003	3003
5°	2994	2995	3058
10°	2933	2958	2979
15°	2956	2940	2956
20°	2906	2906	2937
25°	2817	2878	2910
30°	2778	2827	2902
35°	2712	2784	2846
40°	2607	2733	2745
45°	2528	2618	2622
50°	2445	2555	2507
55°	2330	2375	2358
60°	2179	2200	2161
65°	1943	1992	1929
70°	1666	1673	1626
75°	1320	1317	1266
80°	885	860	826
85°	482	475	445



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.0	3.7
10°-20°	297.5	10.6
20°-30°	445.8	15.8
30°-40°	528.4	18.8
40°-50°	529.3	18.8
50°-60°	449.3	16.0
60°-70°	302.9	10.8
70°-80°	133.1	4.7
80°-90°	21.6	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°	848.3	30.2
0°-40°	1376.7	48.9
0°-60°	2355.3	83.7
0°-90°	2813.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2813.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1116	1116	1116	1116	1116	
5°	1108	1106	1109	1105	1132	104
15°	1061	1049	1055	1061	1061	296
25°	949	954	969	982	980	439
35°	826	828	847	867	866	513
45°	664	677	688	706	689	514
55°	497	493	506	503	503	442
65°	305	301	313	301	303	303
75°	127	124	127	118	122	136
85°	16	15	15	15	14	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1116.1	1116.1	1116.1	1116.1	1116.1
2.5°	1125.8	1117.3	1109.4	1118.6	1124.2
5°	1108.2	1105.6	1108.6	1105.3	1132.0
7.5°	1085.4	1095.4	1101.1	1097.5	1099.1
10°	1073.3	1069.9	1082.7	1091.6	1090.3
12.5°	1060.4	1065.5	1066.3	1075.9	1076.8
15°	1061.1	1048.8	1055.3	1060.8	1061.2
17.5°	1019.9	1033.1	1037.6	1050.1	1034.6
20°	1014.8	1005.2	1014.8	1027.6	1025.6
22.5°	983.8	973.0	993.8	1005.2	1004.4
25°	948.7	953.9	969.4	982.1	980.1
27.5°	917.8	923.9	946.1	963.5	952.3
30°	894.1	891.0	909.8	925.3	934.0
32.5°	851.5	862.5	884.4	899.8	891.6
35°	825.7	828.2	847.4	867.0	866.4
37.5°	780.6	792.0	819.0	824.4	819.4
40°	742.2	753.5	777.9	783.8	781.4
42.5°	713.8	715.8	736.7	743.5	732.7
45°	664.3	676.7	688.0	705.7	689.0
47.5°	622.3	628.0	652.2	657.0	648.2
50°	584.1	586.1	610.4	604.5	598.8
52.5°	536.1	544.6	558.3	557.1	550.4
55°	496.6	493.3	506.3	502.8	502.7
57.5°	449.2	455.0	465.6	460.1	451.4
60°	404.8	404.9	408.8	402.6	401.5
62.5°	355.4	357.1	358.0	350.3	362.7
65°	305.1	301.0	312.9	300.9	302.9
67.5°	258.8	260.8	259.7	252.2	255.1
70°	211.8	214.4	212.6	204.1	206.7
72.5°	168.9	165.7	167.7	157.1	162.0
75°	127.0	124.4	126.7	117.7	121.8
77.5°	86.5	88.5	87.0	82.3	85.0
80°	57.1	55.5	55.5	52.7	53.3
82.5°	33.3	31.7	31.3	30.4	31.7
85°	15.6	15.1	15.4	15.0	14.4
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)