

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: P589122

Luminaire Tested: **FMR-24-2-LD4-2LO-40-UNV-81-94-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589122
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-81-94-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

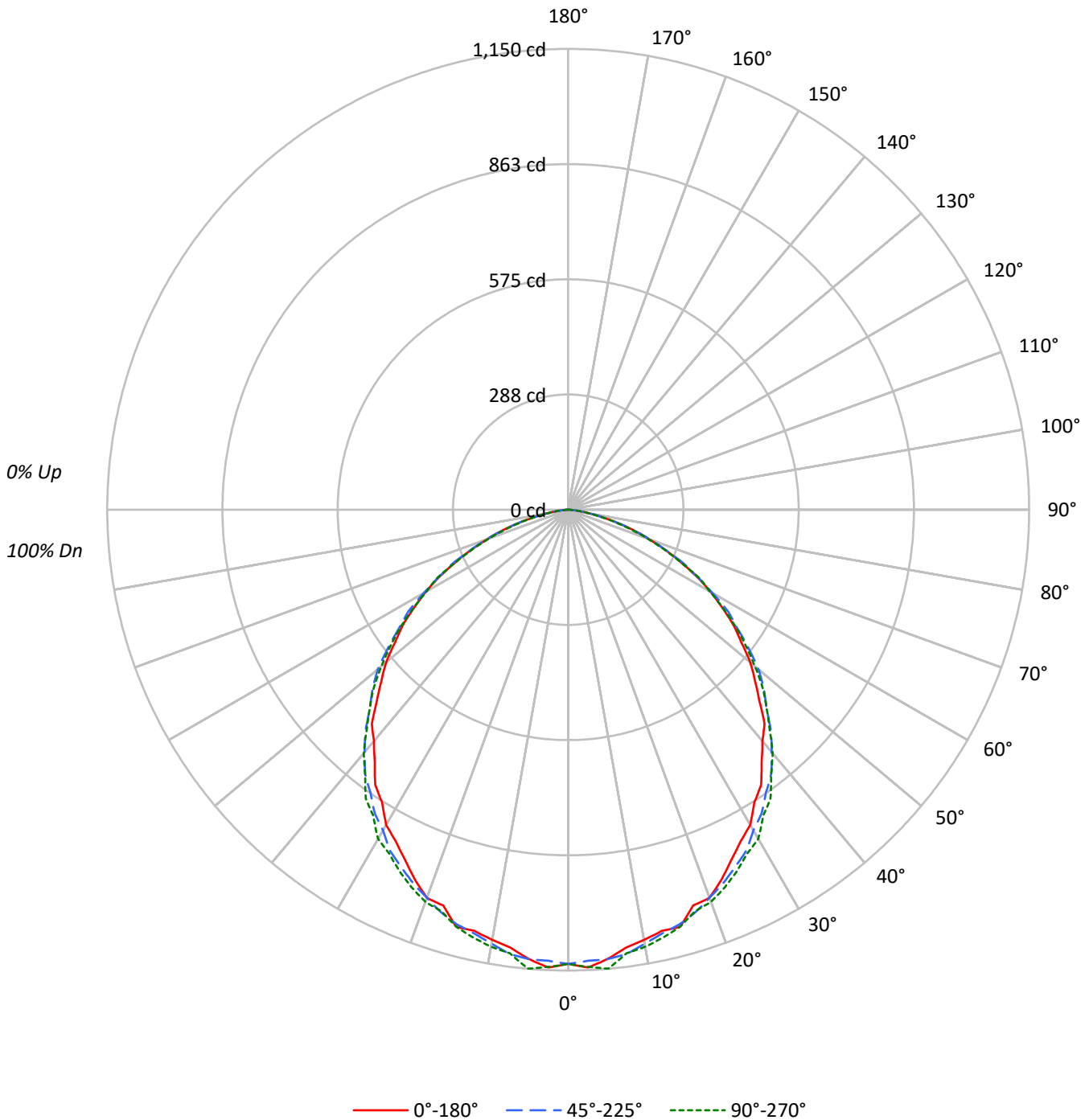
Lumens per Lamp: N/A
Luminaire Lumens: 2857.0 lumens
Efficiency: N/A
Efficacy: 122.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	3050	3050	3050
5°	3040	3042	3106
10°	2979	3005	3026
15°	3002	2986	3003
20°	2952	2952	2983
25°	2861	2923	2956
30°	2821	2871	2948
35°	2755	2827	2891
40°	2648	2775	2788
45°	2568	2659	2663
50°	2483	2596	2546
55°	2366	2412	2395
60°	2213	2235	2195
65°	1973	2024	1959
70°	1693	1699	1651
75°	1340	1338	1286
80°	899	872	840
85°	488	485	451



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.6	3.7
10°-20°	302.2	10.6
20°-30°	452.8	15.8
30°-40°	536.6	18.8
40°-50°	537.6	18.8
50°-60°	456.3	16.0
60°-70°	307.7	10.8
70°-80°	135.2	4.7
80°-90°	22.0	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°	861.6	30.2
0°-40°	1398.2	48.9
0°-60°	2392.2	83.7
0°-90°	2857.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2857.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1134	1134	1134	1134	1134	
5°	1126	1123	1126	1123	1150	106
15°	1078	1065	1072	1077	1078	300
25°	964	969	985	998	995	445
35°	839	841	861	880	880	521
45°	675	687	699	717	700	522
55°	504	501	514	511	510	449
65°	310	306	318	306	308	308
75°	129	126	129	120	124	138
85°	16	15	16	15	15	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1133.6	1133.6	1133.6	1133.6	1133.6
2.5°	1143.4	1134.8	1126.7	1136.1	1141.8
5°	1125.5	1122.9	1126.0	1122.6	1149.7
7.5°	1102.4	1112.5	1118.4	1114.7	1116.3
10°	1090.1	1086.6	1099.6	1108.7	1107.4
12.5°	1076.9	1082.2	1082.9	1092.8	1093.6
15°	1077.7	1065.2	1071.8	1077.4	1077.8
17.5°	1035.8	1049.3	1053.8	1066.6	1050.7
20°	1030.7	1020.9	1030.7	1043.7	1041.7
22.5°	999.2	988.2	1009.3	1020.9	1020.2
25°	963.5	968.8	984.6	997.5	995.4
27.5°	932.2	938.3	960.9	978.6	967.2
30°	908.0	905.0	924.0	939.8	948.6
32.5°	864.9	876.0	898.2	913.9	905.6
35°	838.7	841.2	860.6	880.5	879.9
37.5°	792.9	804.4	831.8	837.3	832.2
40°	753.8	765.3	790.1	796.1	793.6
42.5°	724.9	727.0	748.2	755.1	744.1
45°	674.7	687.3	698.7	716.7	699.8
47.5°	632.0	637.9	662.4	667.3	658.3
50°	593.2	595.3	620.0	614.0	608.1
52.5°	544.5	553.1	567.0	565.8	559.0
55°	504.4	501.0	514.2	510.7	510.5
57.5°	456.2	462.1	472.9	467.3	458.4
60°	411.1	411.3	415.2	408.9	407.8
62.5°	360.9	362.7	363.6	355.8	368.4
65°	309.9	305.8	317.8	305.6	307.7
67.5°	262.9	264.9	263.7	256.1	259.1
70°	215.2	217.8	215.9	207.3	209.9
72.5°	171.5	168.3	170.4	159.5	164.5
75°	128.9	126.3	128.7	119.6	123.7
77.5°	87.8	89.9	88.4	83.6	86.4
80°	58.0	56.3	56.3	53.6	54.2
82.5°	33.8	32.2	31.8	30.9	32.2
85°	15.8	15.4	15.7	15.2	14.6
87.5°	5.7	5.9	5.9	5.6	5.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)