

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: P589102

Luminaire Tested: **FMR-24-2-LD4-2LO-35-UNV-93-85-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589102
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-35-UNV-93-85-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

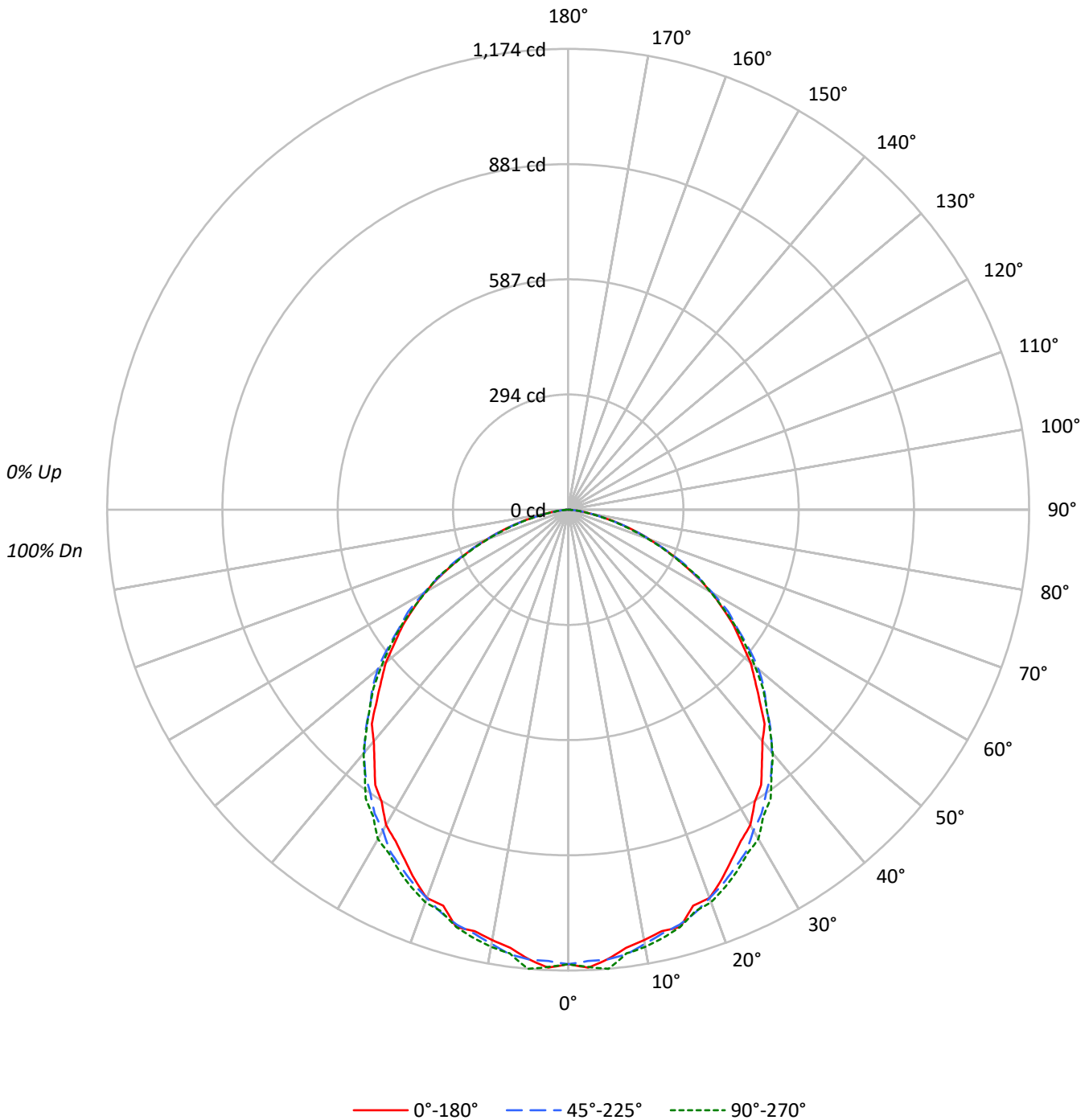
Lumens per Lamp: N/A
Luminaire Lumens: 2918.0 lumens
Efficiency: N/A
Efficacy: 124.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	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°	3116	3116	3116
5°	3105	3106	3172
10°	3042	3069	3090
15°	3066	3050	3067
20°	3015	3015	3047
25°	2922	2986	3019
30°	2882	2932	3010
35°	2814	2888	2952
40°	2705	2834	2847
45°	2622	2716	2720
50°	2537	2651	2600
55°	2417	2464	2446
60°	2260	2282	2242
65°	2015	2066	2001
70°	1729	1735	1687
75°	1369	1366	1313
80°	917	893	857
85°	497	494	460



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.9	3.7
10°-20°	308.7	10.6
20°-30°	462.4	15.8
30°-40°	548.1	18.8
40°-50°	549.1	18.8
50°-60°	466.1	16.0
60°-70°	314.2	10.8
70°-80°	138.1	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°	880.0	30.2
0°-40°	1428.1	48.9
0°-60°	2443.3	83.7
0°-90°	2918.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2918.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1158	1158	1158	1158	1158	
5°	1150	1147	1150	1147	1174	108
15°	1101	1088	1095	1100	1101	307
25°	984	990	1006	1019	1017	455
35°	857	859	879	899	899	532
45°	689	702	714	732	715	533
55°	515	512	525	522	521	458
65°	316	312	324	312	314	315
75°	132	129	131	122	126	141
85°	16	16	16	16	15	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1157.8	1157.8	1157.8	1157.8	1157.8
2.5°	1167.8	1159.0	1150.8	1160.3	1166.2
5°	1149.6	1146.9	1150.0	1146.6	1174.2
7.5°	1125.9	1136.3	1142.2	1138.5	1140.1
10°	1113.4	1109.8	1123.1	1132.4	1131.0
12.5°	1099.9	1105.3	1106.1	1116.1	1117.0
15°	1100.7	1088.0	1094.7	1100.4	1100.8
17.5°	1057.9	1071.7	1076.3	1089.3	1073.2
20°	1052.7	1042.7	1052.7	1066.0	1063.9
22.5°	1020.6	1009.3	1030.9	1042.7	1041.9
25°	984.1	989.5	1005.6	1018.8	1016.7
27.5°	952.1	958.4	981.4	999.5	987.8
30°	927.4	924.3	943.7	959.9	968.8
32.5°	883.3	894.7	917.4	933.4	924.9
35°	856.6	859.1	879.0	899.3	898.7
37.5°	809.8	821.6	849.5	855.2	850.0
40°	769.9	781.7	806.9	813.1	810.5
42.5°	740.4	742.5	764.2	771.2	760.0
45°	689.1	702.0	713.7	732.0	714.7
47.5°	645.5	651.5	676.6	681.5	672.4
50°	605.9	608.0	633.2	627.1	621.1
52.5°	556.1	564.9	579.1	577.9	570.9
55°	515.1	511.7	525.2	521.6	521.4
57.5°	466.0	471.9	483.0	477.3	468.2
60°	419.9	420.1	424.1	417.7	416.5
62.5°	368.6	370.4	371.3	363.4	376.3
65°	316.5	312.3	324.5	312.1	314.2
67.5°	268.5	270.6	269.4	261.6	264.6
70°	219.7	222.4	220.5	211.7	214.4
72.5°	175.2	171.9	174.0	162.9	168.0
75°	131.7	129.0	131.4	122.1	126.3
77.5°	89.7	91.8	90.3	85.4	88.2
80°	59.2	57.6	57.6	54.7	55.3
82.5°	34.5	32.9	32.4	31.5	32.9
85°	16.1	15.7	16.0	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)