

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: P589146

Luminaire Tested: **FMR-24-2-LD4-2LO-50-UNV-80-94-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589146  
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-80-94-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

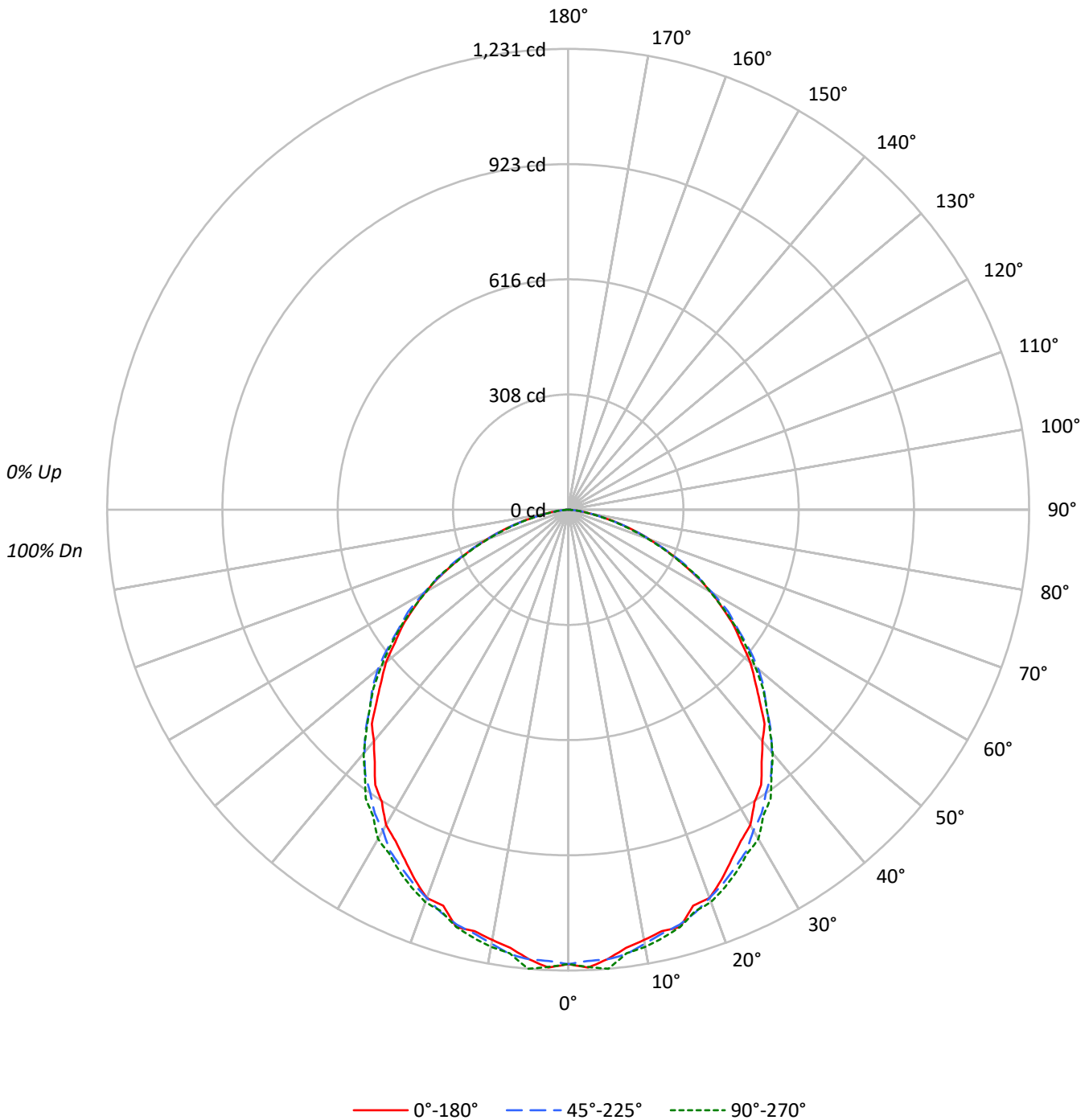
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3059.0 lumens  
Efficiency: N/A  
Efficacy: 130.7 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 (A<sub>in</sub>): 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°	3266	3266	3266
5°	3255	3257	3325
10°	3189	3217	3240
15°	3215	3197	3215
20°	3160	3160	3194
25°	3063	3130	3165
30°	3021	3074	3156
35°	2950	3027	3095
40°	2835	2971	2985
45°	2749	2847	2851
50°	2659	2779	2726
55°	2533	2583	2564
60°	2369	2393	2350
65°	2113	2166	2097
70°	1813	1819	1768
75°	1436	1432	1377
80°	962	934	899
85°	522	519	485



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.2	3.7
10°-20°	323.6	10.6
20°-30°	484.8	15.8
30°-40°	574.6	18.8
40°-50°	575.6	18.8
50°-60°	488.6	16.0
60°-70°	329.4	10.8
70°-80°	144.7	4.7
80°-90°	23.5	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°	922.5	30.2
0°-40°	1497.1	48.9
0°-60°	2561.3	83.7
0°-90°	3059.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3059.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1214	1214	1214	1214	1214	
5°	1205	1202	1206	1202	1231	114
15°	1154	1140	1148	1154	1154	321
25°	1032	1037	1054	1068	1066	477
35°	898	901	922	943	942	558
45°	722	736	748	767	749	559
55°	540	536	550	547	547	480
65°	332	327	340	327	329	330
75°	138	135	138	128	132	148
85°	17	16	17	16	16	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1213.7	1213.7	1213.7	1213.7	1213.7
2.5°	1224.2	1215.0	1206.4	1216.4	1222.5
5°	1205.1	1202.3	1205.6	1202.0	1231.0
7.5°	1180.4	1191.2	1197.4	1193.5	1195.2
10°	1167.2	1163.4	1177.4	1187.1	1185.7
12.5°	1153.1	1158.7	1159.5	1170.0	1171.0
15°	1153.9	1140.5	1147.6	1153.6	1154.0
17.5°	1109.1	1123.5	1128.3	1142.0	1125.0
20°	1103.6	1093.1	1103.6	1117.5	1115.3
22.5°	1069.9	1058.1	1080.7	1093.1	1092.3
25°	1031.6	1037.3	1054.2	1068.0	1065.8
27.5°	998.1	1004.7	1028.8	1047.8	1035.6
30°	972.2	968.9	989.3	1006.2	1015.7
32.5°	926.0	937.9	961.7	978.5	969.6
35°	898.0	900.6	921.5	942.8	942.2
37.5°	848.9	861.3	890.6	896.5	891.1
40°	807.1	819.4	845.9	852.4	849.7
42.5°	776.2	778.4	801.1	808.5	796.7
45°	722.4	735.9	748.1	767.4	749.2
47.5°	676.7	683.0	709.3	714.4	704.9
50°	635.2	637.3	663.8	657.4	651.1
52.5°	583.0	592.2	607.1	605.8	598.5
55°	540.0	536.4	550.5	546.8	546.6
57.5°	488.5	494.7	506.3	500.4	490.8
60°	440.2	440.4	444.6	437.9	436.6
62.5°	386.5	388.3	389.3	381.0	394.4
65°	331.8	327.4	340.2	327.2	329.4
67.5°	281.5	283.6	282.4	274.2	277.4
70°	230.4	233.2	231.2	221.9	224.7
72.5°	183.7	180.2	182.4	170.8	176.1
75°	138.1	135.2	137.7	128.0	132.4
77.5°	94.0	96.2	94.7	89.5	92.5
80°	62.1	60.3	60.3	57.4	58.0
82.5°	36.2	34.5	34.0	33.1	34.5
85°	16.9	16.5	16.8	16.3	15.7
87.5°	6.1	6.3	6.3	6.0	5.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)