

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: P589077

Luminaire Tested: **FMR-24-2-LD4-2LO-35-UNV-80-84-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589077  
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-80-84-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

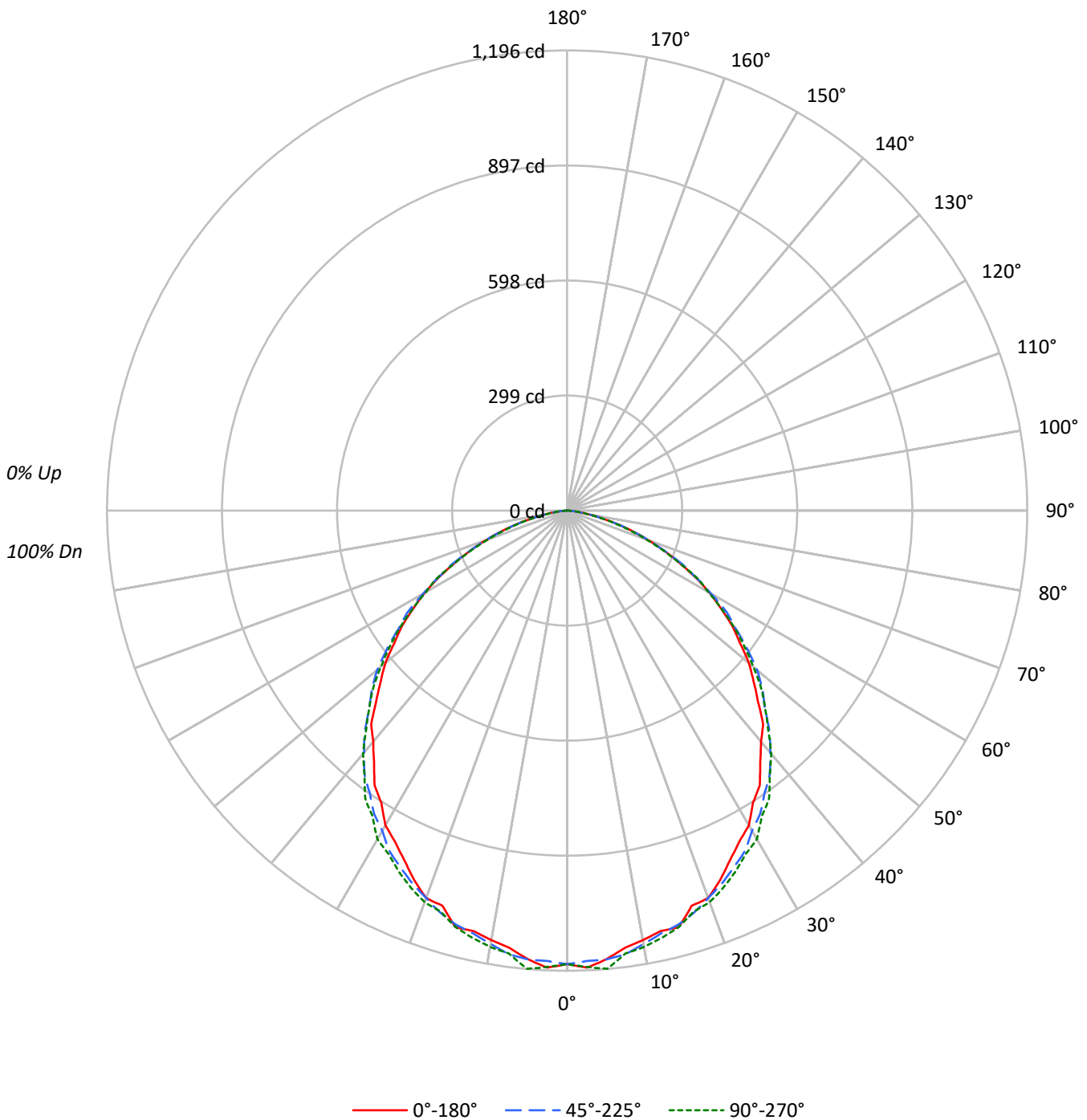
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2971.0 lumens  
Efficiency: N/A  
Efficacy: 127.0 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°	3172	3172	3172
5°	3162	3163	3230
10°	3098	3125	3147
15°	3122	3105	3122
20°	3069	3069	3102
25°	2975	3040	3073
30°	2934	2986	3065
35°	2865	2940	3006
40°	2753	2886	2899
45°	2670	2765	2769
50°	2583	2699	2647
55°	2461	2509	2491
60°	2301	2324	2282
65°	2052	2104	2037
70°	1760	1766	1718
75°	1394	1391	1337
80°	934	908	872
85°	506	503	469



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.9	3.7
10°-20°	314.3	10.6
20°-30°	470.8	15.8
30°-40°	558.0	18.8
40°-50°	559.1	18.8
50°-60°	474.6	16.0
60°-70°	320.0	10.8
70°-80°	140.6	4.7
80°-90°	22.8	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°	896.0	30.2
0°-40°	1454.0	48.9
0°-60°	2487.6	83.7
0°-90°	2971.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2971.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1179	1179	1179	1179	1179	
5°	1170	1168	1171	1167	1196	110
15°	1121	1108	1115	1120	1121	312
25°	1002	1007	1024	1037	1035	463
35°	872	875	895	916	915	541
45°	702	715	727	745	728	543
55°	524	521	535	531	531	467
65°	322	318	330	318	320	320
75°	134	131	134	124	129	144
85°	16	16	16	16	15	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1178.8	1178.8	1178.8	1178.8	1178.8
2.5°	1189.0	1180.0	1171.7	1181.4	1187.3
5°	1170.4	1167.7	1170.9	1167.4	1195.6
7.5°	1146.4	1156.9	1163.0	1159.2	1160.9
10°	1133.6	1130.0	1143.5	1152.9	1151.6
12.5°	1119.9	1125.4	1126.2	1136.4	1137.3
15°	1120.7	1107.7	1114.6	1120.4	1120.8
17.5°	1077.1	1091.1	1095.9	1109.1	1092.7
20°	1071.8	1061.6	1071.8	1085.4	1083.2
22.5°	1039.1	1027.7	1049.6	1061.6	1060.9
25°	1002.0	1007.4	1023.9	1037.3	1035.1
27.5°	969.4	975.8	999.2	1017.6	1005.8
30°	944.3	941.1	960.9	977.3	986.4
32.5°	899.4	910.9	934.1	950.4	941.7
35°	872.1	874.7	895.0	915.7	915.0
37.5°	824.5	836.5	865.0	870.8	865.4
40°	783.8	795.9	821.6	827.8	825.2
42.5°	753.9	756.0	778.1	785.2	773.8
45°	701.7	714.7	726.6	745.3	727.7
47.5°	657.2	663.3	688.9	693.9	684.6
50°	616.9	619.0	644.7	638.5	632.4
52.5°	566.2	575.2	589.6	588.4	581.3
55°	524.5	521.0	534.7	531.0	530.9
57.5°	474.4	480.5	491.8	486.0	476.7
60°	427.5	427.7	431.8	425.3	424.0
62.5°	375.3	377.2	378.1	370.0	383.1
65°	322.2	318.0	330.4	317.8	319.9
67.5°	273.4	275.5	274.3	266.4	269.4
70°	223.7	226.5	224.5	215.5	218.3
72.5°	178.4	175.0	177.2	165.9	171.1
75°	134.1	131.4	133.8	124.4	128.6
77.5°	91.3	93.5	91.9	86.9	89.8
80°	60.3	58.6	58.6	55.7	56.3
82.5°	35.2	33.5	33.0	32.1	33.5
85°	16.4	16.0	16.3	15.8	15.2
87.5°	5.9	6.1	6.1	5.8	5.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)