

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P562230

Luminaire Tested: FSR-24-4-LD4-1LO-50-UNV-80-87-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P562230  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/20/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FSR-24-4-LD4-1LO-50-UNV-80-87-EDD-90  
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON  
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

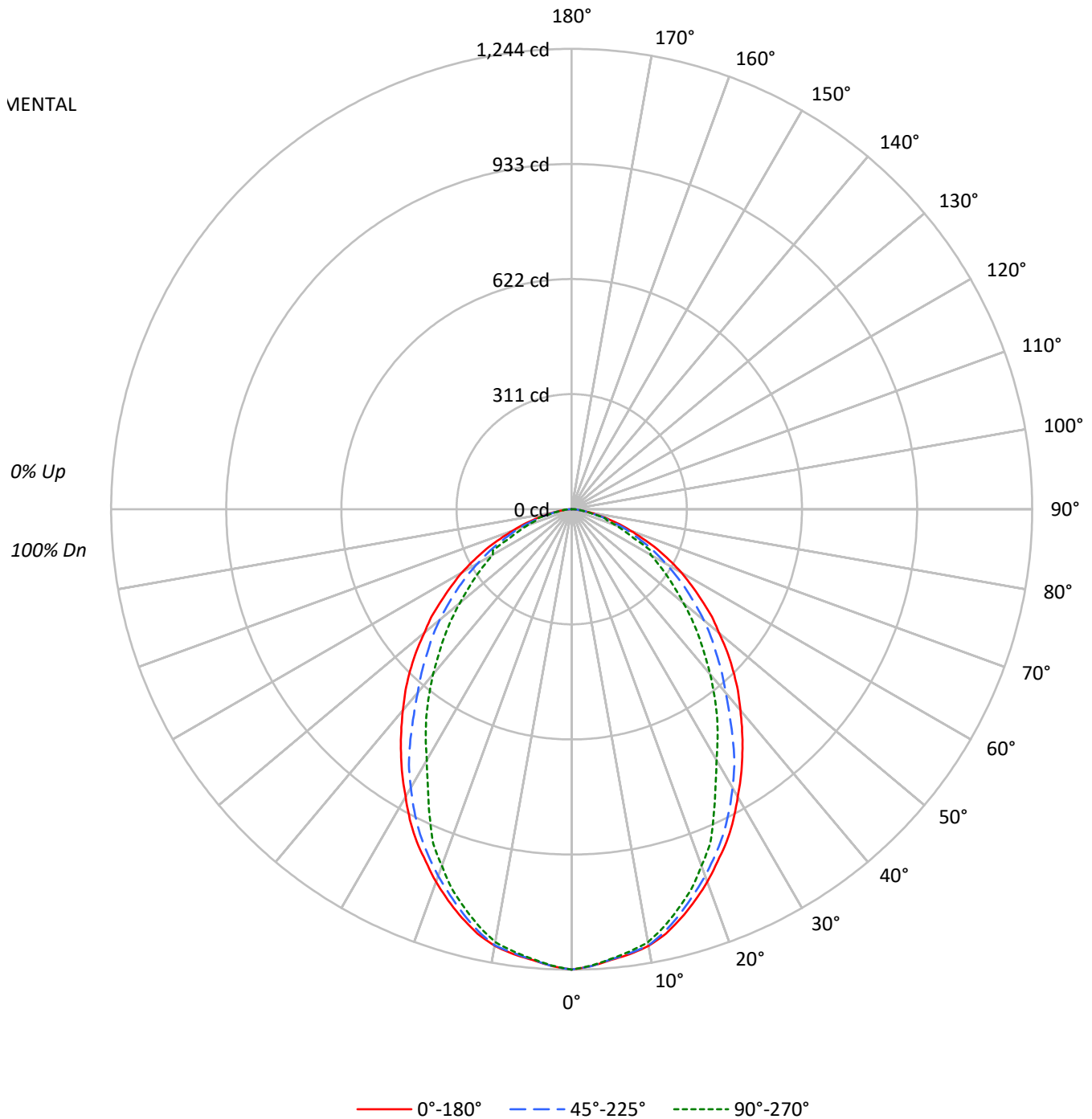
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2442.0 lumens  
Efficiency: N/A  
Efficacy: 104.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.4  
Input Voltage (V):  
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: 24 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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1674	1674	1674
5°	1651	1649	1647
10°	1637	1635	1623
15°	1593	1577	1554
20°	1534	1509	1468
25°	1471	1439	1349
30°	1394	1349	1215
35°	1320	1247	1124
40°	1245	1137	1023
45°	1174	1051	925
50°	1087	975	825
55°	1005	884	739
60°	921	790	662
65°	810	691	586
70°	668	605	498
75°	531	464	486
80°	356	334	312
85°	222	267	310

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1174 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	115.8	4.7
10°-20°	317.8	13.0
20°-30°	440.0	18.0
30°-40°	469.1	19.2
40°-50°	428.0	17.5
50°-60°	335.3	13.7
60°-70°	218.5	8.9
70°-80°	96.8	4.0
80°-90°	20.8	0.9
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°	873.5	35.8
0°-40°	1342.6	55.0
0°-60°	2105.9	86.2
0°-90°	2442.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2442.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1244	1244	1244	1244	1244	
5°	1222	1221	1221	1220	1220	116
15°	1143	1143	1132	1120	1116	321
25°	991	985	969	935	909	455
35°	804	798	759	702	684	503
45°	617	604	552	506	486	475
55°	428	416	377	332	315	384
65°	254	240	217	222	184	251
75°	102	95	89	85	94	109
85°	14	16	17	19	20	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1243.9	1243.9	1243.9	1243.9	1243.9
2.5°	1235.3	1235.3	1235.3	1233.9	1233.9
5°	1222.4	1220.9	1220.9	1219.5	1219.5
7.5°	1212.3	1210.8	1209.4	1208.0	1205.1
10°	1197.9	1197.9	1196.5	1189.3	1187.8
12.5°	1174.9	1173.5	1167.7	1157.6	1154.8
15°	1143.3	1143.3	1131.8	1120.2	1115.9
17.5°	1108.7	1107.3	1092.9	1081.4	1075.7
20°	1071.4	1068.5	1054.1	1035.4	1025.3
22.5°	1029.7	1029.7	1012.4	987.9	977.9
25°	990.8	985.1	969.3	934.7	908.9
27.5°	946.2	937.6	920.4	871.5	841.3
30°	897.3	893.0	868.6	805.3	782.3
32.5°	851.3	844.1	818.3	752.1	733.4
35°	803.9	798.1	759.3	701.8	684.5
37.5°	756.4	749.2	700.3	654.3	632.7
40°	709.0	700.3	647.1	605.4	582.4
42.5°	664.4	652.9	601.1	556.5	530.6
45°	616.9	604.0	552.2	506.2	486.1
47.5°	569.5	558.0	510.5	463.1	440.0
50°	519.1	509.1	465.9	418.5	394.0
52.5°	477.4	461.6	419.9	372.5	352.3
55°	428.5	415.6	376.8	332.2	314.9
57.5°	384.0	371.0	335.1	293.4	279.0
60°	342.3	323.6	293.4	257.4	245.9
62.5°	296.2	281.9	256.0	225.8	240.2
65°	254.5	240.2	217.1	221.5	184.1
67.5°	208.5	201.3	181.2	161.1	155.3
70°	169.7	161.1	153.9	132.3	126.5
72.5°	135.2	126.5	116.5	105.0	100.7
75°	102.1	94.9	89.2	84.8	93.5
77.5°	70.5	67.6	63.3	59.0	57.5
80°	46.0	44.6	43.1	41.7	40.3
82.5°	27.3	27.3	27.3	27.3	27.3
85°	14.4	15.8	17.3	18.7	20.1
87.5°	8.6	8.6	10.1	11.5	12.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)