

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: P561916

Luminaire Tested: FSR-24-2-LD4-1LO-35-UNV-80-96-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P561916  
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-24-2-LD4-1LO-35-UNV-80-96-EDD-90  
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

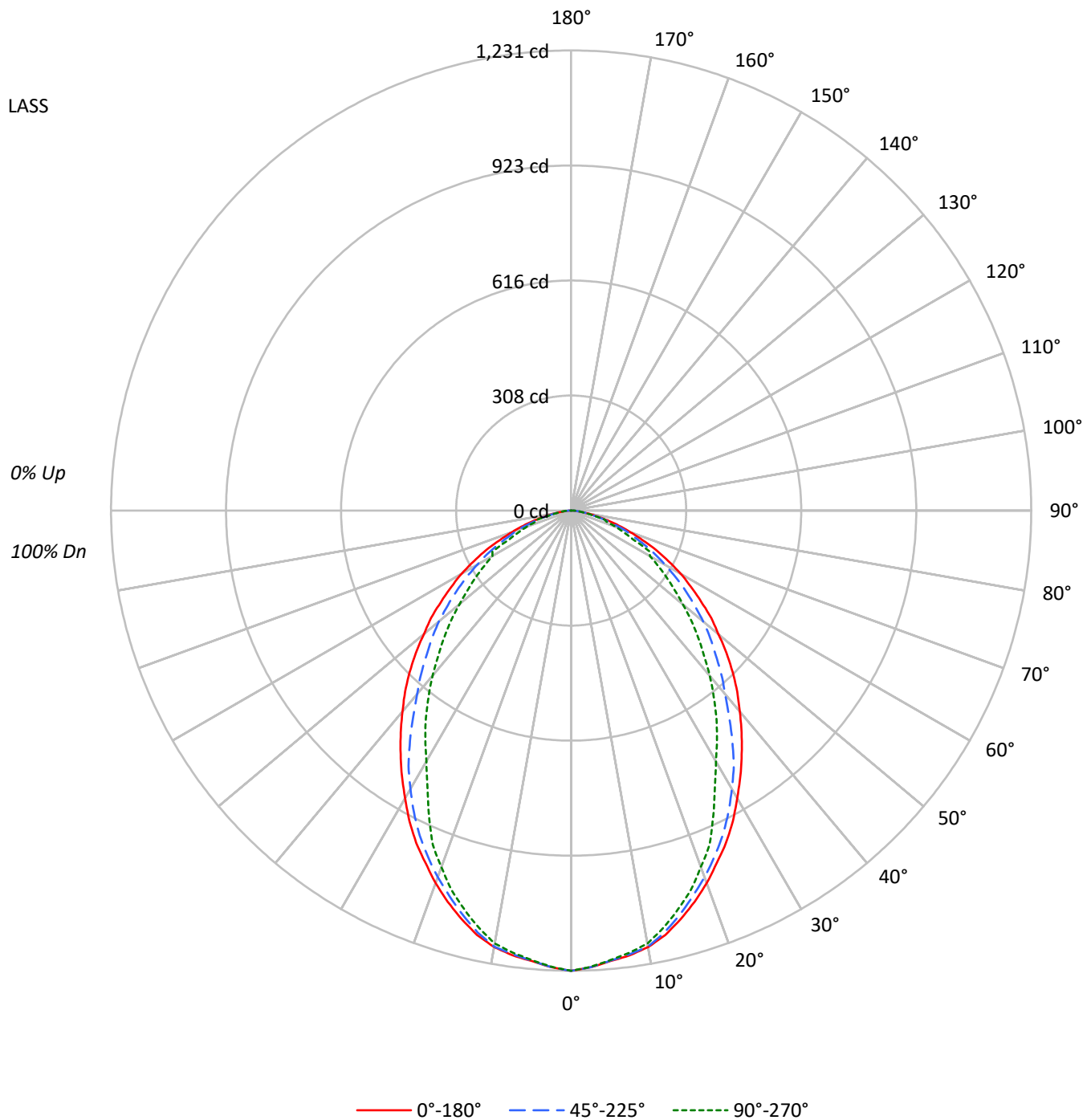
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2417.0 lumens  
Efficiency: N/A  
Efficacy: 103.3 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	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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

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

	0°	45°	90°
0°	1657	1657	1657
5°	1634	1632	1630
10°	1620	1618	1606
15°	1576	1560	1539
20°	1518	1494	1453
25°	1456	1424	1335
30°	1380	1336	1203
35°	1307	1234	1113
40°	1232	1125	1013
45°	1162	1040	915
50°	1075	965	816
55°	995	875	731
60°	912	781	655
65°	802	684	580
70°	661	599	493
75°	526	459	481
80°	353	331	309
85°	219	264	307

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1162 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.6	4.7
10°-20°	314.5	13.0
20°-30°	435.4	18.0
30°-40°	464.3	19.2
40°-50°	423.6	17.5
50°-60°	331.8	13.7
60°-70°	216.3	8.9
70°-80°	95.8	4.0
80°-90°	20.6	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°	864.6	35.8
0°-40°	1328.9	55.0
0°-60°	2084.3	86.2
0°-90°	2417.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2417.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1231	1231	1231	1231	1231	
5°	1210	1208	1208	1207	1207	115
15°	1132	1132	1120	1109	1104	318
25°	981	975	959	925	900	450
35°	796	790	752	695	678	497
45°	611	598	547	501	481	470
55°	424	411	373	329	312	380
65°	252	238	215	219	182	248
75°	101	94	88	84	92	108
85°	14	16	17	18	20	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1231.2	1231.2	1231.2	1231.2	1231.2
2.5°	1222.6	1222.6	1222.6	1221.2	1221.2
5°	1209.8	1208.4	1208.4	1207.0	1207.0
7.5°	1199.9	1198.5	1197.0	1195.6	1192.8
10°	1185.6	1185.6	1184.2	1177.1	1175.7
12.5°	1162.9	1161.4	1155.8	1145.8	1142.9
15°	1131.6	1131.6	1120.2	1108.8	1104.5
17.5°	1097.4	1096.0	1081.7	1070.4	1064.7
20°	1060.4	1057.5	1043.3	1024.8	1014.8
22.5°	1019.1	1019.1	1002.0	977.8	967.9
25°	980.7	975.0	959.3	925.2	899.5
27.5°	936.6	928.0	910.9	862.5	832.7
30°	888.2	883.9	859.7	797.1	774.3
32.5°	842.6	835.5	809.9	744.4	725.9
35°	795.6	790.0	751.5	694.6	677.5
37.5°	748.7	741.6	693.2	647.6	626.3
40°	701.7	693.2	640.5	599.2	576.5
42.5°	657.6	646.2	595.0	550.8	525.2
45°	610.6	597.8	546.6	501.0	481.1
47.5°	563.6	552.3	505.3	458.3	435.5
50°	513.8	503.9	461.2	414.2	390.0
52.5°	472.5	456.9	415.6	368.6	348.7
55°	424.2	411.3	372.9	328.8	311.7
57.5°	380.0	367.2	331.6	290.4	276.1
60°	338.8	320.3	290.4	254.8	243.4
62.5°	293.2	279.0	253.4	223.5	237.7
65°	251.9	237.7	214.9	219.2	182.2
67.5°	206.4	199.3	179.3	159.4	153.7
70°	168.0	159.4	152.3	130.9	125.3
72.5°	133.8	125.3	115.3	103.9	99.6
75°	101.1	93.9	88.2	84.0	92.5
77.5°	69.7	66.9	62.6	58.4	56.9
80°	45.5	44.1	42.7	41.3	39.9
82.5°	27.0	27.0	27.0	27.0	27.0
85°	14.2	15.7	17.1	18.5	19.9
87.5°	8.5	8.5	10.0	11.4	12.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)