

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: P560742

Luminaire Tested: FSR-12-2-LD4-2STD-50-UNV-93-87-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560742  
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-12-2-LD4-2STD-50-UNV-93-87-EDD-90  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

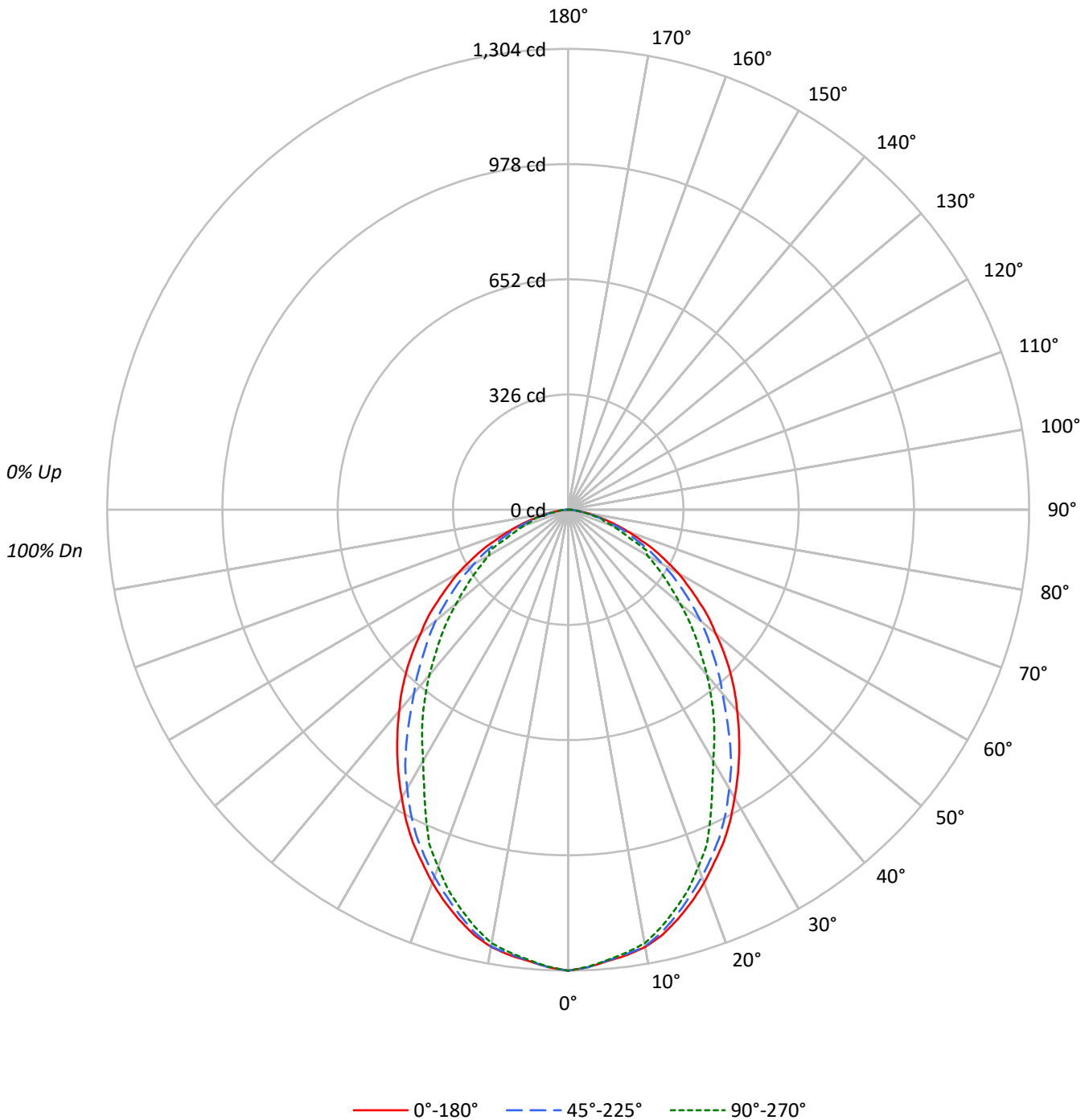
Lumens per Lamp: N/A  
Luminaire Lumens: 2561.0 lumens  
Efficiency: N/A  
Efficacy: 76.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	7021	7021	7021
5°	6925	6917	6909
10°	6866	6857	6808
15°	6681	6613	6521
20°	6435	6332	6159
25°	6171	6036	5660
30°	5849	5661	5098
35°	5539	5232	4717
40°	5224	4768	4291
45°	4924	4408	3880
50°	4558	4091	3460
55°	4217	3707	3099
60°	3863	3312	2776
65°	3399	2900	2458
70°	2801	2540	2088
75°	2227	1944	2038
80°	1497	1401	1308
85°	932	1118	1303

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4924 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	121.4	4.7
10°-20°	333.3	13.0
20°-30°	461.4	18.0
30°-40°	492.0	19.2
40°-50°	448.8	17.5
50°-60°	351.6	13.7
60°-70°	229.2	8.9
70°-80°	101.5	4.0
80°-90°	21.8	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°	916.1	35.8
0°-40°	1408.1	55.0
0°-60°	2208.5	86.2
0°-90°	2561.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2561.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1304	1304	1304	1304	1304	
5°	1282	1280	1280	1279	1279	122
15°	1199	1199	1187	1175	1170	337
25°	1039	1033	1016	980	953	477
35°	843	837	796	736	718	527
45°	647	633	579	531	510	498
55°	449	436	395	348	330	403
65°	267	252	228	232	193	263
75°	107	100	94	89	98	115
85°	15	17	18	20	21	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1304.5	1304.5	1304.5	1304.5	1304.5
2.5°	1295.5	1295.5	1295.5	1294.0	1294.0
5°	1281.9	1280.4	1280.4	1278.9	1278.9
7.5°	1271.4	1269.9	1268.3	1266.8	1263.8
10°	1256.3	1256.3	1254.8	1247.2	1245.7
12.5°	1232.1	1230.6	1224.6	1214.1	1211.0
15°	1199.0	1199.0	1186.9	1174.8	1170.3
17.5°	1162.8	1161.3	1146.2	1134.1	1128.1
20°	1123.6	1120.5	1105.5	1085.9	1075.3
22.5°	1079.8	1079.8	1061.7	1036.1	1025.5
25°	1039.1	1033.1	1016.5	980.3	953.1
27.5°	992.4	983.3	965.2	913.9	882.3
30°	941.1	936.6	910.9	844.6	820.4
32.5°	892.8	885.3	858.1	788.8	769.2
35°	843.0	837.0	796.3	736.0	717.9
37.5°	793.3	785.7	734.5	686.2	663.6
40°	743.5	734.5	678.7	634.9	610.8
42.5°	696.8	684.7	630.4	583.6	556.5
45°	647.0	633.4	579.1	530.9	509.8
47.5°	597.2	585.2	535.4	485.6	461.5
50°	544.4	533.9	488.6	438.9	413.2
52.5°	500.7	484.1	440.4	390.6	369.5
55°	449.4	435.9	395.1	348.4	330.3
57.5°	402.7	389.1	351.4	307.7	292.6
60°	358.9	339.3	307.7	270.0	257.9
62.5°	310.7	295.6	268.4	236.8	251.9
65°	266.9	251.9	227.7	232.3	193.0
67.5°	218.7	211.1	190.0	168.9	162.9
70°	178.0	168.9	161.4	138.7	132.7
72.5°	141.8	132.7	122.2	110.1	105.6
75°	107.1	99.5	93.5	89.0	98.0
77.5°	73.9	70.9	66.4	61.8	60.3
80°	48.3	46.8	45.2	43.7	42.2
82.5°	28.7	28.7	28.7	28.7	28.7
85°	15.1	16.6	18.1	19.6	21.1
87.5°	9.0	9.0	10.6	12.1	13.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)