

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: P560694

Luminaire Tested: FSR-12-2-LD4-2STD-50-UNV-80-87-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560694  
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-80-87-EDD-90  
Description: 1X2 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**

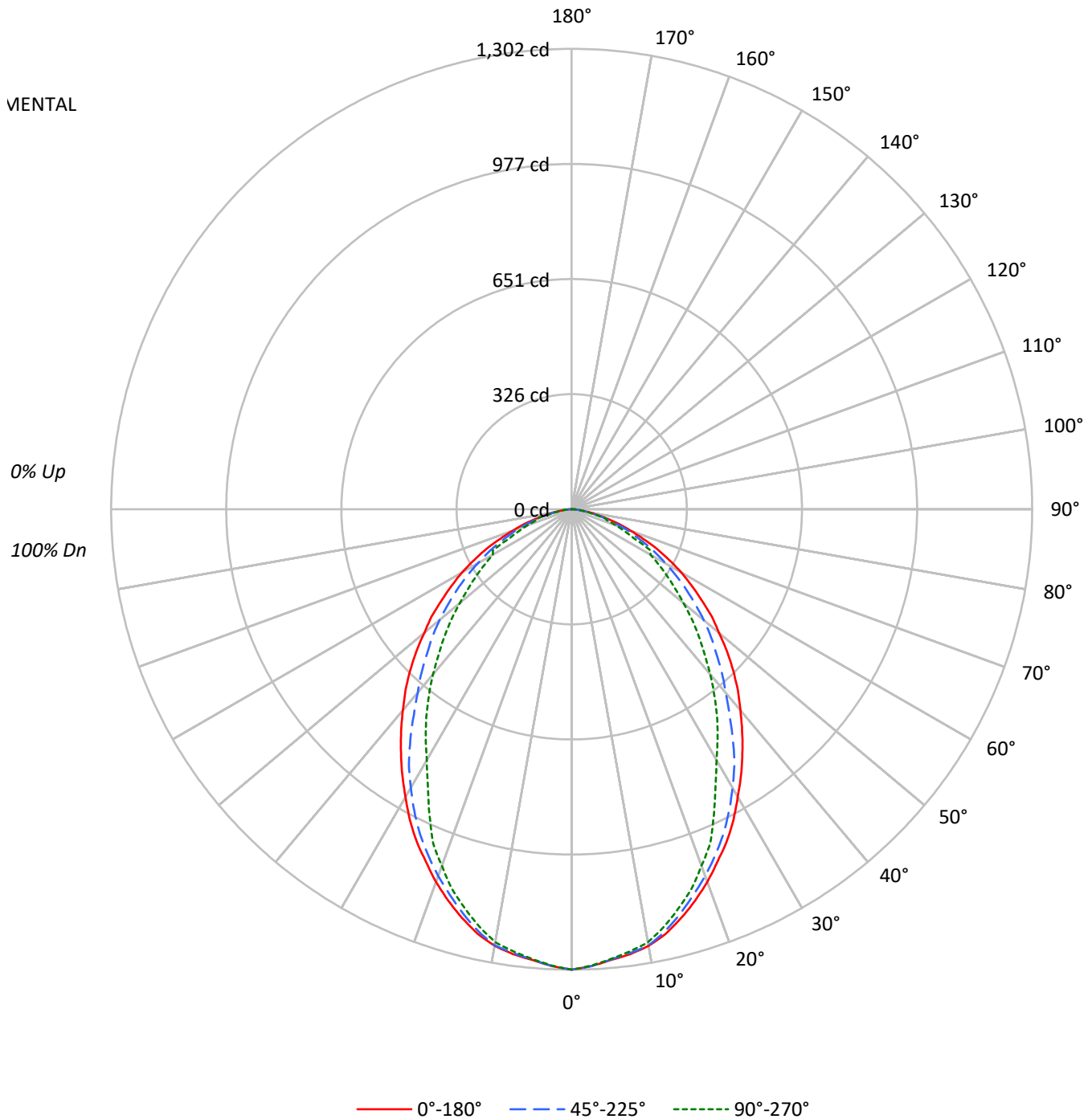
Lumens per Lamp: N/A  
Luminaire Lumens: 2556.0 lumens  
Efficiency: N/A  
Efficacy: 76.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	7007	7007	7007
5°	6912	6904	6896
10°	6852	6844	6795
15°	6667	6600	6508
20°	6423	6319	6147
25°	6159	6024	5649
30°	5837	5650	5088
35°	5528	5221	4708
40°	5214	4758	4283
45°	4915	4399	3873
50°	4550	4083	3453
55°	4208	3701	3093
60°	3856	3306	2771
65°	3393	2895	2454
70°	2795	2535	2085
75°	2223	1940	2034
80°	1494	1401	1305
85°	932	1118	1303

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4915 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	121.2	4.7
10°-20°	332.6	13.0
20°-30°	460.5	18.0
30°-40°	491.0	19.2
40°-50°	447.9	17.5
50°-60°	350.9	13.7
60°-70°	228.7	8.9
70°-80°	101.3	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°	914.3	35.8
0°-40°	1405.3	55.0
0°-60°	2204.2	86.2
0°-90°	2556.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2556.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1302	1302	1302	1302	1302	
5°	1279	1278	1278	1276	1276	121
15°	1197	1197	1185	1172	1168	336
25°	1037	1031	1014	978	951	476
35°	841	835	795	734	716	526
45°	646	632	578	530	509	497
55°	448	435	394	348	330	402
65°	266	251	227	232	193	263
75°	107	99	93	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°	1302.0	1302.0	1302.0	1302.0	1302.0
2.5°	1293.0	1293.0	1293.0	1291.5	1291.5
5°	1279.4	1277.9	1277.9	1276.4	1276.4
7.5°	1268.9	1267.4	1265.9	1264.4	1261.4
10°	1253.8	1253.8	1252.3	1244.8	1243.3
12.5°	1229.7	1228.2	1222.2	1211.7	1208.7
15°	1196.6	1196.6	1184.6	1172.5	1168.0
17.5°	1160.5	1159.0	1143.9	1131.9	1125.9
20°	1121.4	1118.4	1103.3	1083.7	1073.2
22.5°	1077.7	1077.7	1059.7	1034.1	1023.5
25°	1037.1	1031.1	1014.5	978.4	951.3
27.5°	990.4	981.4	963.3	912.1	880.5
30°	939.2	934.7	909.1	842.9	818.8
32.5°	891.1	883.5	856.5	787.2	767.6
35°	841.4	835.4	794.7	734.5	716.5
37.5°	791.7	784.2	733.0	684.9	662.3
40°	742.1	733.0	677.3	633.7	609.6
42.5°	695.4	683.4	629.2	582.5	555.4
45°	645.7	632.2	578.0	529.8	508.8
47.5°	596.1	584.0	534.3	484.7	460.6
50°	543.4	532.8	487.7	438.0	412.4
52.5°	499.7	483.2	439.5	389.8	368.8
55°	448.5	435.0	394.4	347.7	329.6
57.5°	401.9	388.3	350.7	307.1	292.0
60°	358.2	338.7	307.1	269.4	257.4
62.5°	310.1	295.0	267.9	236.3	251.4
65°	266.4	251.4	227.3	231.8	192.7
67.5°	218.3	210.7	189.7	168.6	162.6
70°	177.6	168.6	161.1	138.5	132.5
72.5°	141.5	132.5	121.9	109.9	105.4
75°	106.9	99.3	93.3	88.8	97.8
77.5°	73.8	70.7	66.2	61.7	60.2
80°	48.2	46.7	45.2	43.7	42.1
82.5°	28.6	28.6	28.6	28.6	28.6
85°	15.1	16.6	18.1	19.6	21.1
87.5°	9.0	9.0	10.5	12.0	13.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)