

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: P560730

Luminaire Tested: FSR-12-2-LD4-2STD-50-UNV-82-94-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560730  
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-82-94-EDD-90  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

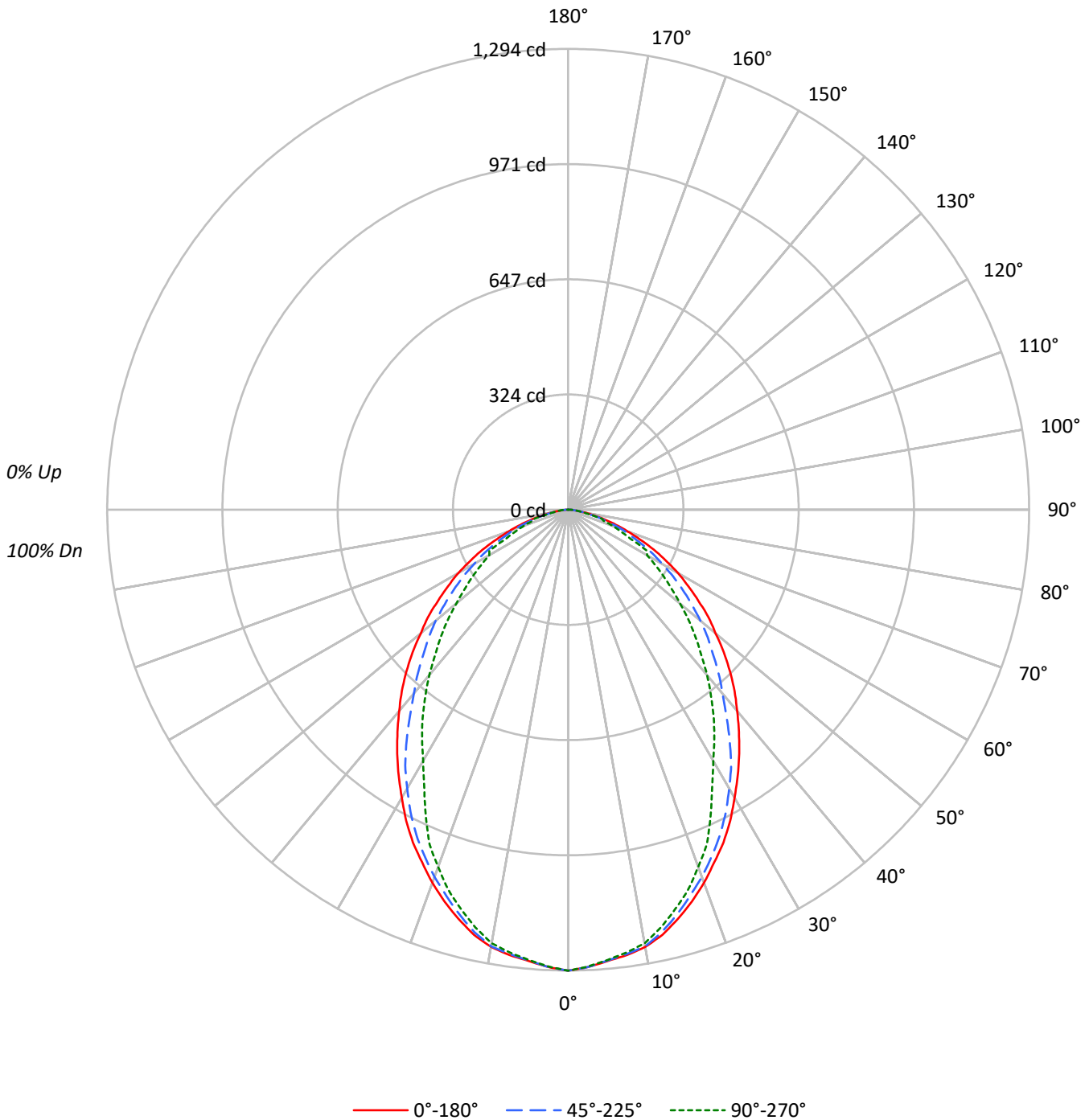
Lumens per Lamp: N/A  
Luminaire Lumens: 2541.0 lumens  
Efficiency: N/A  
Efficacy: 76.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	6966	6966	6966
5°	6871	6863	6855
10°	6812	6804	6755
15°	6628	6561	6470
20°	6385	6282	6111
25°	6122	5989	5616
30°	5803	5617	5059
35°	5496	5191	4680
40°	5183	4731	4258
45°	4886	4373	3850
50°	4523	4059	3433
55°	4184	3678	3075
60°	3833	3286	2754
65°	3373	2878	2439
70°	2779	2519	2072
75°	2208	1930	2023
80°	1485	1392	1299
85°	926	1112	1291

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4886 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	120.5	4.7
10°-20°	330.7	13.0
20°-30°	457.8	18.0
30°-40°	488.1	19.2
40°-50°	445.3	17.5
50°-60°	348.9	13.7
60°-70°	227.4	8.9
70°-80°	100.7	4.0
80°-90°	21.6	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°	908.9	35.8
0°-40°	1397.1	55.0
0°-60°	2191.3	86.2
0°-90°	2541.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2541.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1294	1294	1294	1294	1294	
5°	1272	1270	1270	1269	1269	121
15°	1190	1190	1178	1166	1161	334
25°	1031	1025	1008	973	946	473
35°	836	830	790	730	712	523
45°	642	628	575	527	506	494
55°	446	432	392	346	328	400
65°	265	250	226	230	192	261
75°	106	99	93	88	97	114
85°	15	16	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°	1294.4	1294.4	1294.4	1294.4	1294.4
2.5°	1285.4	1285.4	1285.4	1283.9	1283.9
5°	1271.9	1270.4	1270.4	1268.9	1268.9
7.5°	1261.4	1259.9	1258.4	1256.9	1253.9
10°	1246.5	1246.5	1245.0	1237.5	1236.0
12.5°	1222.5	1221.0	1215.0	1204.6	1201.6
15°	1189.6	1189.6	1177.6	1165.7	1161.2
17.5°	1153.7	1152.2	1137.2	1125.3	1119.3
20°	1114.8	1111.8	1096.8	1077.4	1066.9
22.5°	1071.4	1071.4	1053.4	1028.0	1017.5
25°	1031.0	1025.0	1008.5	972.6	945.7
27.5°	984.6	975.6	957.7	906.8	875.4
30°	933.7	929.2	903.8	838.0	814.0
32.5°	885.8	878.4	851.4	782.6	763.1
35°	836.5	830.5	790.1	730.2	712.3
37.5°	787.1	779.6	728.7	680.8	658.4
40°	737.7	728.7	673.4	630.0	606.0
42.5°	691.3	679.3	625.5	579.1	552.2
45°	641.9	628.5	574.6	526.7	505.8
47.5°	592.6	580.6	531.2	481.8	457.9
50°	540.2	529.7	484.8	435.4	410.0
52.5°	496.8	480.3	436.9	387.6	366.6
55°	445.9	432.4	392.0	345.7	327.7
57.5°	399.5	386.1	348.7	305.3	290.3
60°	356.1	336.7	305.3	267.8	255.9
62.5°	308.3	293.3	266.4	234.9	249.9
65°	264.9	249.9	226.0	230.4	191.5
67.5°	217.0	209.5	188.5	167.6	161.6
70°	176.6	167.6	160.1	137.7	131.7
72.5°	140.7	131.7	121.2	109.2	104.7
75°	106.2	98.8	92.8	88.3	97.3
77.5°	73.3	70.3	65.8	61.4	59.9
80°	47.9	46.4	44.9	43.4	41.9
82.5°	28.4	28.4	28.4	28.4	28.4
85°	15.0	16.5	18.0	19.5	20.9
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)