

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: P559942

Luminaire Tested: FSR-12-2-LD4-1LO-50-UNV-81-87-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559942  
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-LD4-1LO-50-UNV-81-87-EDD-90  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

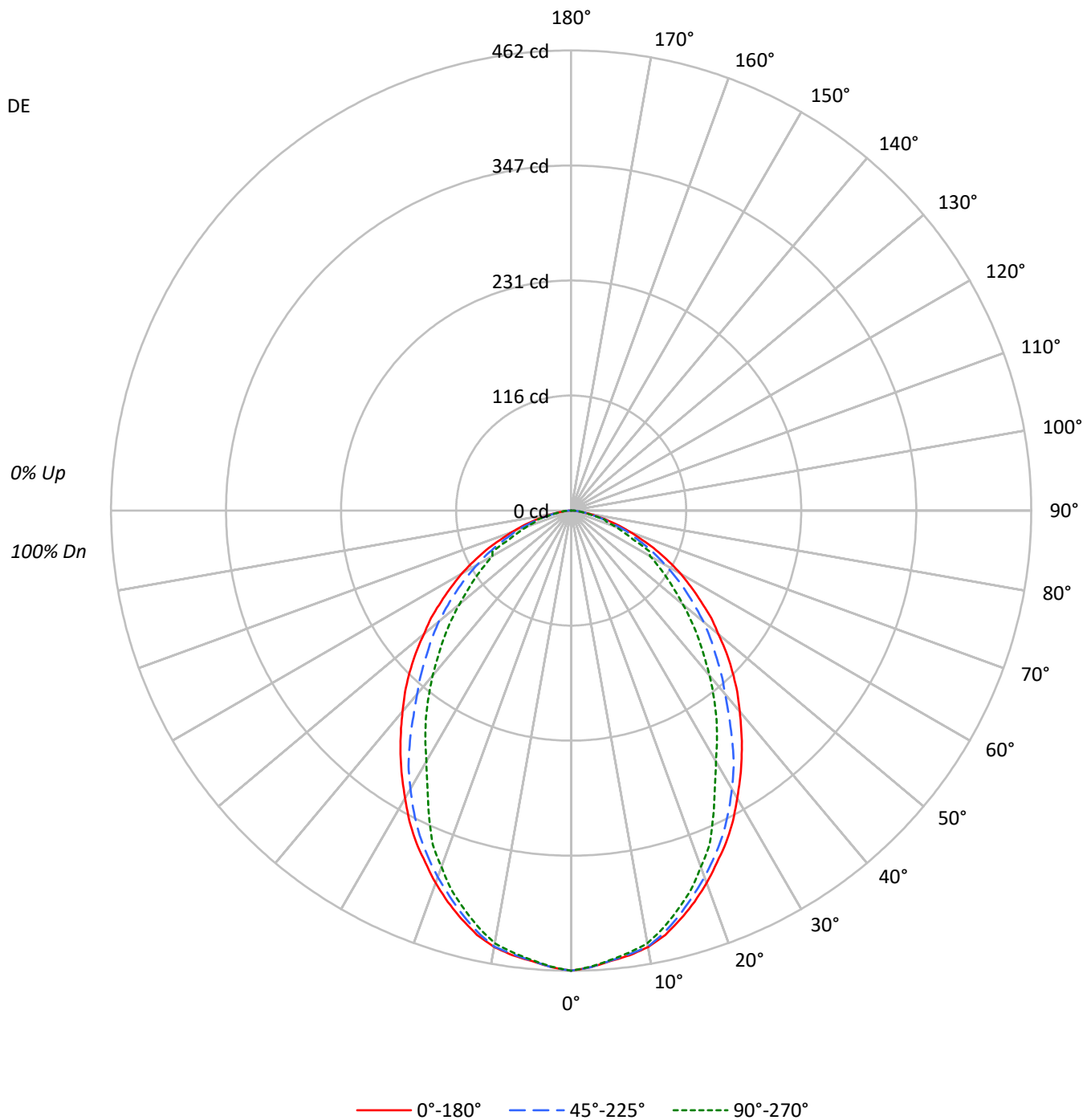
Lumens per Lamp: N/A  
Luminaire Lumens: 907.0 lumens  
Efficiency: N/A  
Efficacy: 77.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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																												
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°	2486	2486	2486
5°	2453	2450	2447
10°	2431	2429	2411
15°	2366	2342	2310
20°	2279	2242	2181
25°	2185	2138	2005
30°	2071	2005	1806
35°	1962	1853	1670
40°	1850	1689	1520
45°	1744	1561	1374
50°	1614	1449	1225
55°	1494	1313	1098
60°	1368	1173	983
65°	1203	1028	871
70°	991	900	740
75°	788	688	722
80°	530	496	465
85°	327	395	463

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1744 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.0	4.7
10°-20°	118.0	13.0
20°-30°	163.4	18.0
30°-40°	174.2	19.2
40°-50°	159.0	17.5
50°-60°	124.5	13.7
60°-70°	81.2	8.9
70°-80°	36.0	4.0
80°-90°	7.7	0.8
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°	324.4	35.8
0°-40°	498.7	55.0
0°-60°	782.2	86.2
0°-90°	907.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	907.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	462	462	462	462	462	
5°	454	454	454	453	453	43
15°	425	425	420	416	414	119
25°	368	366	360	347	338	169
35°	299	296	282	261	254	187
45°	229	224	205	188	180	176
55°	159	154	140	123	117	143
65°	94	89	81	82	68	93
75°	38	35	33	32	35	41
85°	5	6	6	7	8	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	462.0	462.0	462.0	462.0	462.0
2.5°	458.8	458.8	458.8	458.3	458.3
5°	454.0	453.5	453.5	452.9	452.9
7.5°	450.3	449.7	449.2	448.7	447.6
10°	444.9	444.9	444.4	441.7	441.2
12.5°	436.4	435.8	433.7	430.0	428.9
15°	424.6	424.6	420.4	416.1	414.5
17.5°	411.8	411.3	405.9	401.7	399.5
20°	397.9	396.9	391.5	384.6	380.8
22.5°	382.4	382.4	376.0	366.9	363.2
25°	368.0	365.9	360.0	347.2	337.6
27.5°	351.5	348.2	341.8	323.7	312.5
30°	333.3	331.7	322.6	299.1	290.6
32.5°	316.2	313.5	303.9	279.3	272.4
35°	298.6	296.4	282.0	260.7	254.2
37.5°	280.9	278.3	260.1	243.0	235.0
40°	263.3	260.1	240.4	224.9	216.3
42.5°	246.8	242.5	223.3	206.7	197.1
45°	229.1	224.3	205.1	188.0	180.5
47.5°	211.5	207.2	189.6	172.0	163.4
50°	192.8	189.1	173.1	155.4	146.3
52.5°	177.3	171.5	156.0	138.3	130.9
55°	159.2	154.4	139.9	123.4	117.0
57.5°	142.6	137.8	124.4	109.0	103.6
60°	127.1	120.2	109.0	95.6	91.3
62.5°	110.0	104.7	95.1	83.9	89.2
65°	94.5	89.2	80.7	82.3	68.4
67.5°	77.4	74.8	67.3	59.8	57.7
70°	63.0	59.8	57.2	49.1	47.0
72.5°	50.2	47.0	43.3	39.0	37.4
75°	37.9	35.3	33.1	31.5	34.7
77.5°	26.2	25.1	23.5	21.9	21.4
80°	17.1	16.6	16.0	15.5	15.0
82.5°	10.1	10.1	10.1	10.1	10.1
85°	5.3	5.9	6.4	6.9	7.5
87.5°	3.2	3.2	3.7	4.3	4.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)