

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: P559362

Luminaire Tested: FSR-12-1-LD4-2LO-50-UNV-81-85-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559362  
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-12-1-LD4-2LO-50-UNV-81-85-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

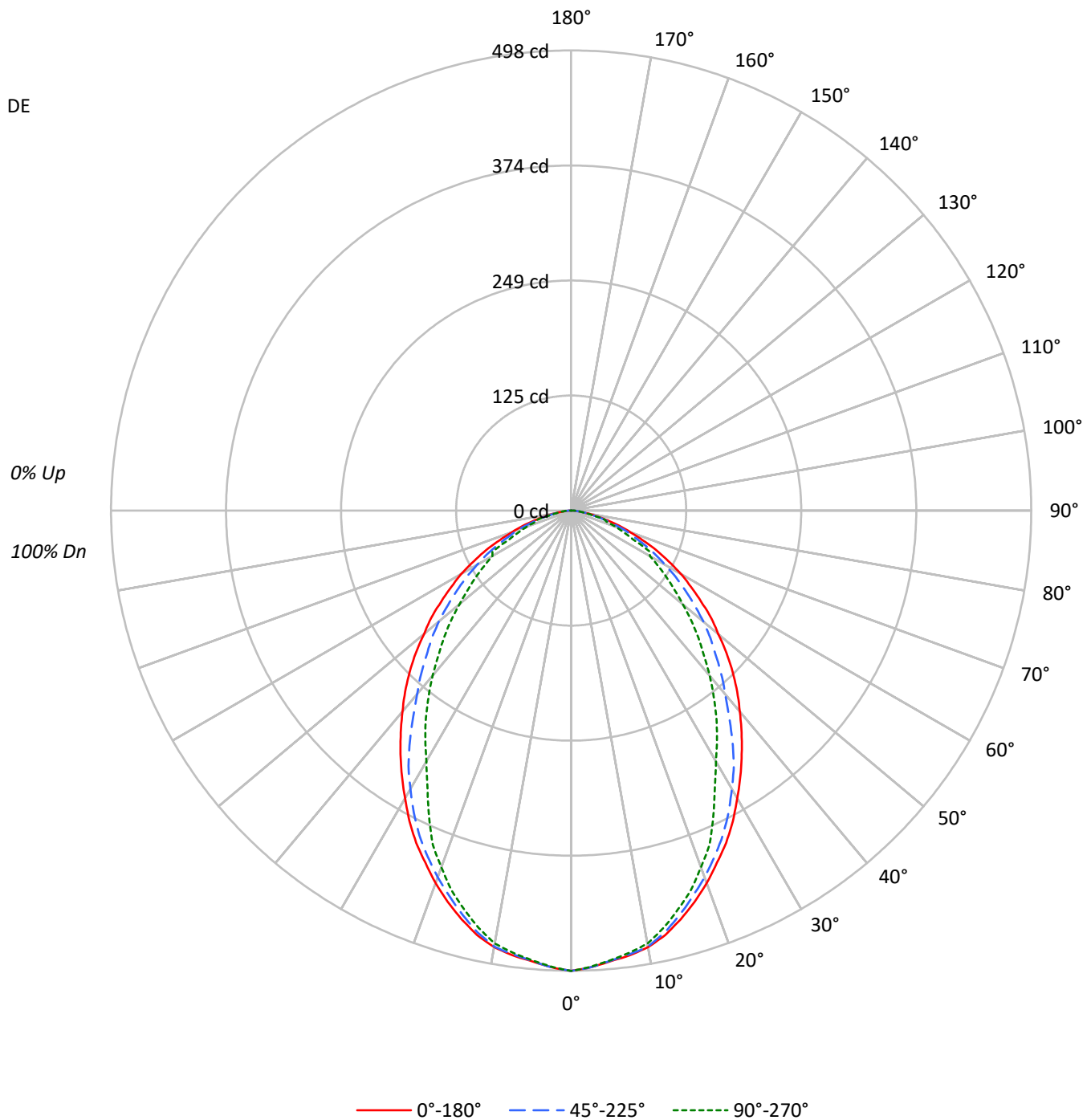
Lumens per Lamp: N/A  
Luminaire Lumens: 978.0 lumens  
Efficiency: N/A  
Efficacy: 83.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	5363	5363	5363
5°	5289	5284	5277
10°	5244	5238	5199
15°	5103	5051	4980
20°	4915	4836	4703
25°	4713	4611	4323
30°	4467	4324	3894
35°	4230	3996	3602
40°	3989	3642	3278
45°	3761	3367	2964
50°	3481	3125	2642
55°	3220	2832	2366
60°	2951	2530	2120
65°	2595	2216	1877
70°	2140	1939	1596
75°	1701	1485	1555
80°	1141	1072	998
85°	716	852	1000

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3761 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.4	4.7
10°-20°	127.3	13.0
20°-30°	176.2	18.0
30°-40°	187.9	19.2
40°-50°	171.4	17.5
50°-60°	134.3	13.7
60°-70°	87.5	8.9
70°-80°	38.8	4.0
80°-90°	8.3	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°	349.8	35.8
0°-40°	537.7	55.0
0°-60°	843.4	86.2
0°-90°	978.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	978.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	498	498	498	498	498	
5°	490	489	489	488	488	46
15°	458	458	453	449	447	129
25°	397	394	388	374	364	182
35°	322	320	304	281	274	201
45°	247	242	221	203	195	190
55°	172	166	151	133	126	154
65°	102	96	87	89	74	100
75°	41	38	36	34	37	44
85°	6	6	7	8	8	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	498.2	498.2	498.2	498.2	498.2
2.5°	494.7	494.7	494.7	494.1	494.1
5°	489.5	489.0	489.0	488.4	488.4
7.5°	485.5	484.9	484.4	483.8	482.6
10°	479.8	479.8	479.2	476.3	475.7
12.5°	470.5	470.0	467.7	463.6	462.5
15°	457.9	457.9	453.3	448.7	446.9
17.5°	444.0	443.5	437.7	433.1	430.8
20°	429.1	427.9	422.2	414.7	410.6
22.5°	412.4	412.4	405.5	395.7	391.6
25°	396.8	394.5	388.2	374.4	364.0
27.5°	379.0	375.5	368.6	349.0	336.9
30°	359.4	357.7	347.9	322.5	313.3
32.5°	341.0	338.1	327.7	301.2	293.7
35°	321.9	319.6	304.1	281.1	274.1
37.5°	302.9	300.1	280.5	262.0	253.4
40°	283.9	280.5	259.2	242.5	233.3
42.5°	266.1	261.5	240.7	222.9	212.5
45°	247.1	241.9	221.2	202.7	194.7
47.5°	228.1	223.5	204.5	185.4	176.2
50°	207.9	203.9	186.6	167.6	157.8
52.5°	191.2	184.9	168.2	149.2	141.1
55°	171.6	166.4	150.9	133.0	126.1
57.5°	153.8	148.6	134.2	117.5	111.7
60°	137.1	129.6	117.5	103.1	98.5
62.5°	118.6	112.9	102.5	90.4	96.2
65°	101.9	96.2	87.0	88.7	73.7
67.5°	83.5	80.6	72.6	64.5	62.2
70°	68.0	64.5	61.6	53.0	50.7
72.5°	54.1	50.7	46.7	42.0	40.3
75°	40.9	38.0	35.7	34.0	37.4
77.5°	28.2	27.1	25.3	23.6	23.0
80°	18.4	17.9	17.3	16.7	16.1
82.5°	10.9	10.9	10.9	10.9	10.9
85°	5.8	6.3	6.9	7.5	8.1
87.5°	3.5	3.5	4.0	4.6	5.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)