

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: P559303

Luminaire Tested: FSR-12-1-LD4-2LO-40-UNV-81-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559303  
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-40-UNV-81-87-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

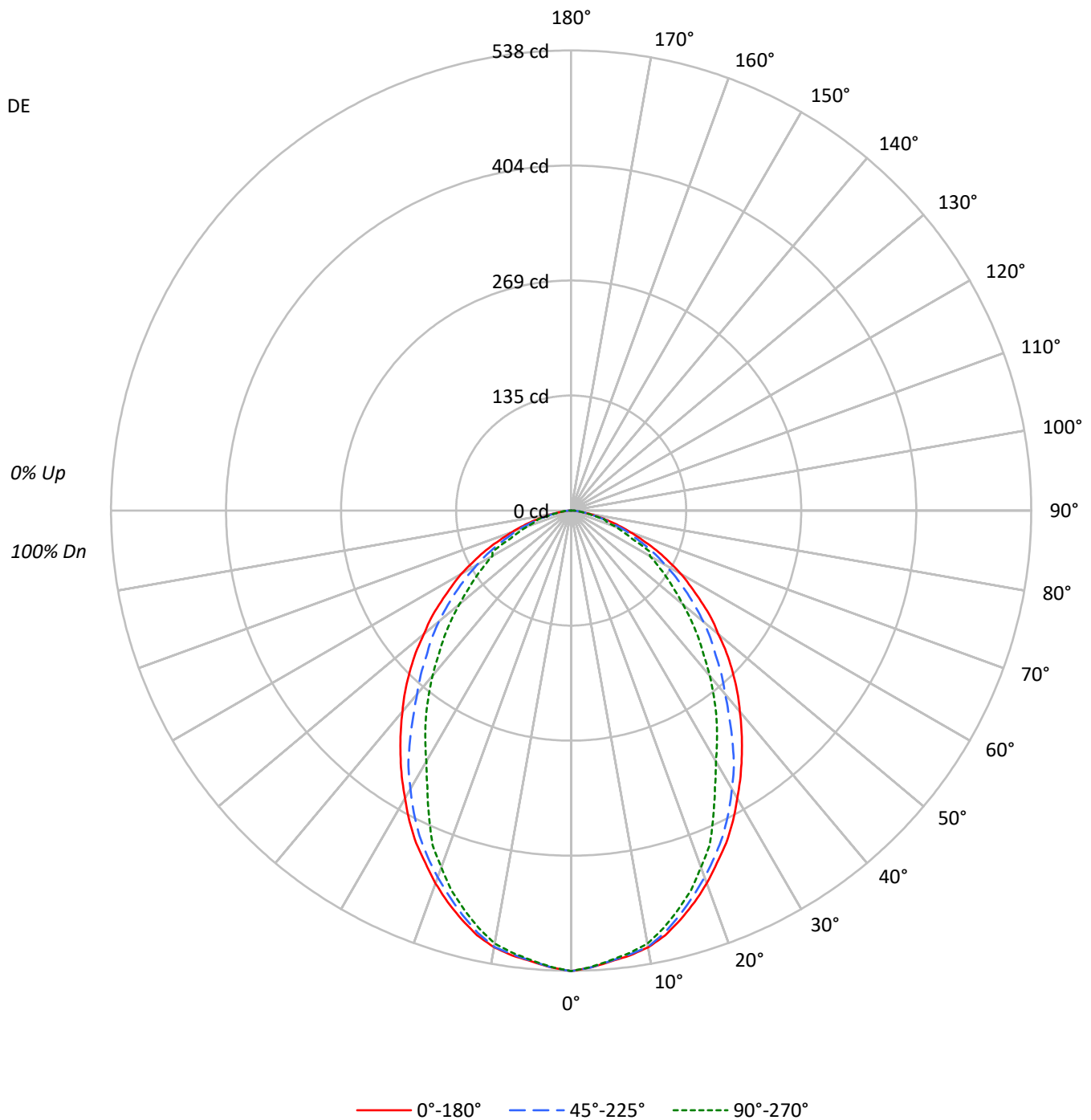
Lumens per Lamp: N/A  
Luminaire Lumens: 1057.0 lumens  
Efficiency: N/A  
Efficacy: 90.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	5795	5795	5795
5°	5717	5710	5703
10°	5667	5661	5619
15°	5514	5459	5382
20°	5312	5227	5084
25°	5094	4982	4672
30°	4827	4673	4208
35°	4573	4319	3893
40°	4312	3936	3542
45°	4064	3638	3203
50°	3763	3378	2857
55°	3481	3061	2558
60°	3188	2734	2291
65°	2807	2394	2030
70°	2310	2096	1725
75°	1838	1605	1684
80°	1234	1159	1079
85°	766	926	1074

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4064 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.1	4.7
10°-20°	137.5	13.0
20°-30°	190.4	18.0
30°-40°	203.1	19.2
40°-50°	185.2	17.5
50°-60°	145.1	13.7
60°-70°	94.6	8.9
70°-80°	41.9	4.0
80°-90°	9.0	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°	378.1	35.8
0°-40°	581.2	55.0
0°-60°	911.5	86.2
0°-90°	1057.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1057.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	538	538	538	538	538	
5°	529	528	528	528	528	50
15°	495	495	490	485	483	139
25°	429	426	420	405	393	197
35°	348	346	329	304	296	218
45°	267	261	239	219	210	206
55°	186	180	163	144	136	166
65°	110	104	94	96	80	109
75°	44	41	39	37	40	47
85°	6	7	8	8	9	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	538.4	538.4	538.4	538.4	538.4
2.5°	534.7	534.7	534.7	534.1	534.1
5°	529.1	528.5	528.5	527.8	527.8
7.5°	524.7	524.1	523.5	522.9	521.6
10°	518.5	518.5	517.9	514.8	514.1
12.5°	508.5	507.9	505.4	501.1	499.8
15°	494.8	494.8	489.9	484.9	483.0
17.5°	479.9	479.3	473.1	468.1	465.6
20°	463.7	462.5	456.3	448.2	443.8
22.5°	445.7	445.7	438.2	427.6	423.3
25°	428.9	426.4	419.5	404.6	393.4
27.5°	409.6	405.8	398.4	377.2	364.1
30°	388.4	386.5	376.0	348.6	338.6
32.5°	368.5	365.4	354.2	325.5	317.5
35°	348.0	345.5	328.7	303.8	296.3
37.5°	327.4	324.3	303.1	283.2	273.9
40°	306.9	303.1	280.1	262.1	252.1
42.5°	287.6	282.6	260.2	240.9	229.7
45°	267.0	261.4	239.0	219.1	210.4
47.5°	246.5	241.5	221.0	200.4	190.5
50°	224.7	220.3	201.7	181.1	170.6
52.5°	206.7	199.8	181.8	161.2	152.5
55°	185.5	179.9	163.1	143.8	136.3
57.5°	166.2	160.6	145.0	127.0	120.8
60°	148.1	140.1	127.0	111.4	106.4
62.5°	128.2	122.0	110.8	97.7	103.9
65°	110.2	103.9	94.0	95.9	79.7
67.5°	90.3	87.1	78.4	69.7	67.2
70°	73.4	69.7	66.6	57.3	54.8
72.5°	58.5	54.8	50.4	45.4	43.6
75°	44.2	41.1	38.6	36.7	40.5
77.5°	30.5	29.3	27.4	25.5	24.9
80°	19.9	19.3	18.7	18.1	17.4
82.5°	11.8	11.8	11.8	11.8	11.8
85°	6.2	6.8	7.5	8.1	8.7
87.5°	3.7	3.7	4.4	5.0	5.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)