

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: P559877

Luminaire Tested: FSR-12-2-LD4-1LO-40-UNV-81-86-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559877  
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-40-UNV-81-86-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

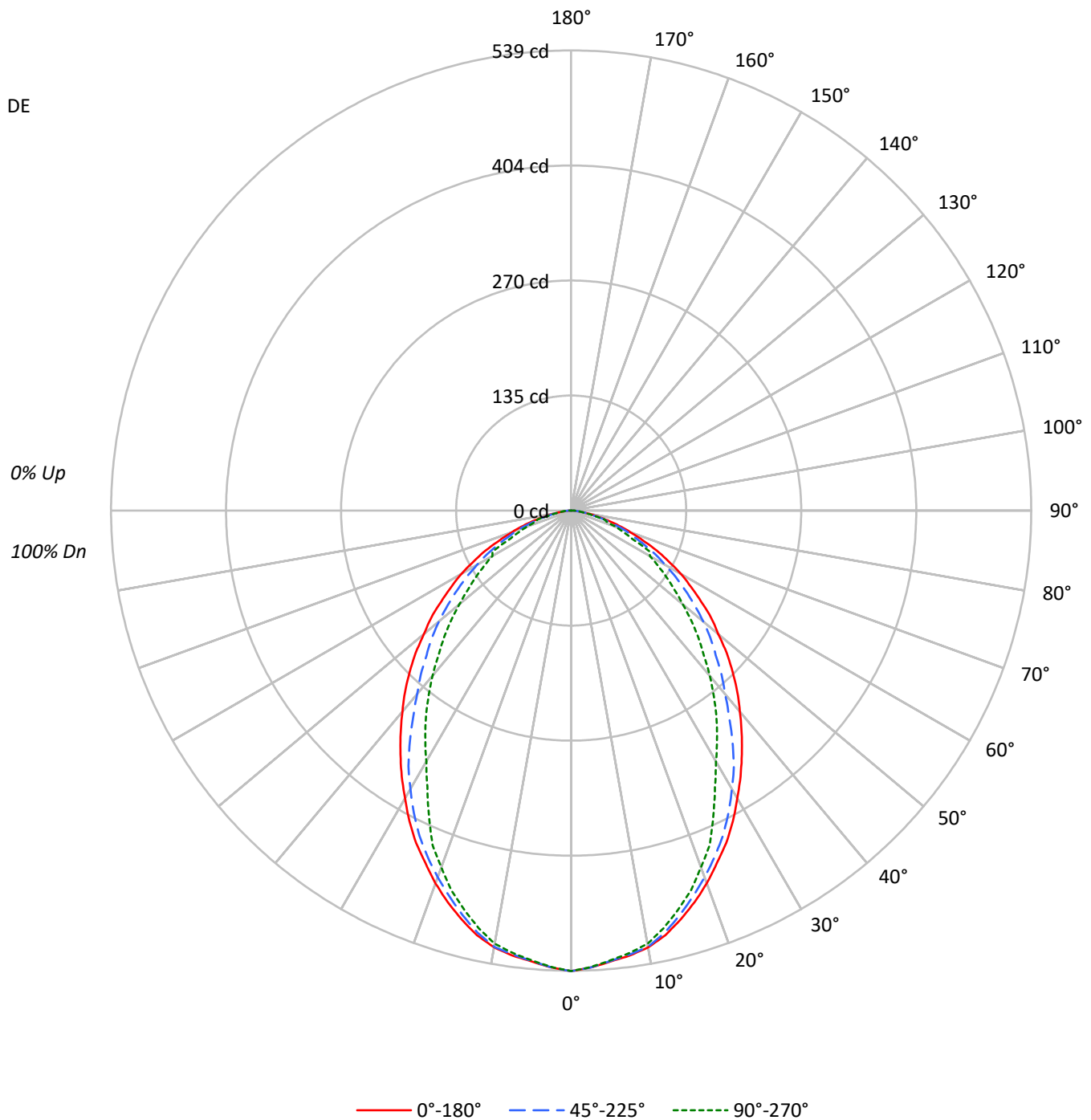
Lumens per Lamp: N/A  
Luminaire Lumens: 1059.0 lumens  
Efficiency: N/A  
Efficacy: 90.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	2903	2903	2903
5°	2864	2861	2857
10°	2839	2836	2815
15°	2763	2735	2696
20°	2661	2618	2546
25°	2552	2496	2340
30°	2418	2341	2109
35°	2290	2164	1950
40°	2160	1971	1775
45°	2036	1823	1604
50°	1885	1692	1431
55°	1743	1533	1282
60°	1597	1369	1147
65°	1406	1200	1016
70°	1158	1050	864
75°	921	805	842
80°	620	580	542
85°	383	463	537

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2036 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.2	4.7
10°-20°	137.8	13.0
20°-30°	190.8	18.0
30°-40°	203.4	19.2
40°-50°	185.6	17.5
50°-60°	145.4	13.7
60°-70°	94.8	8.9
70°-80°	42.0	4.0
80°-90°	9.0	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°	378.8	35.8
0°-40°	582.2	55.0
0°-60°	913.2	86.2
0°-90°	1059.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1059.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	539	539	539	539	539	
5°	530	530	530	529	529	50
15°	496	496	491	486	484	139
25°	430	427	420	405	394	197
35°	349	346	329	304	297	218
45°	268	262	240	220	211	206
55°	186	180	163	144	137	167
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°	539.4	539.4	539.4	539.4	539.4
2.5°	535.7	535.7	535.7	535.1	535.1
5°	530.1	529.5	529.5	528.8	528.8
7.5°	525.7	525.1	524.5	523.8	522.6
10°	519.5	519.5	518.9	515.7	515.1
12.5°	509.5	508.9	506.4	502.0	500.8
15°	495.8	495.8	490.8	485.8	483.9
17.5°	480.8	480.2	474.0	469.0	466.5
20°	464.6	463.4	457.1	449.0	444.6
22.5°	446.5	446.5	439.0	428.4	424.1
25°	429.7	427.2	420.3	405.4	394.1
27.5°	410.3	406.6	399.1	377.9	364.8
30°	389.1	387.3	376.7	349.2	339.3
32.5°	369.2	366.1	354.8	326.2	318.1
35°	348.6	346.1	329.3	304.3	296.8
37.5°	328.0	324.9	303.7	283.8	274.4
40°	307.4	303.7	280.6	262.5	252.6
42.5°	288.1	283.1	260.7	241.3	230.1
45°	267.5	261.9	239.5	219.5	210.8
47.5°	247.0	242.0	221.4	200.8	190.8
50°	225.1	220.8	202.1	181.5	170.9
52.5°	207.0	200.2	182.1	161.5	152.8
55°	185.8	180.2	163.4	144.1	136.6
57.5°	166.5	160.9	145.3	127.2	121.0
60°	148.4	140.3	127.2	111.6	106.6
62.5°	128.5	122.2	111.0	97.9	104.1
65°	110.4	104.1	94.2	96.0	79.8
67.5°	90.4	87.3	78.6	69.8	67.4
70°	73.6	69.8	66.7	57.4	54.9
72.5°	58.6	54.9	50.5	45.5	43.7
75°	44.3	41.2	38.7	36.8	40.5
77.5°	30.6	29.3	27.4	25.6	24.9
80°	20.0	19.3	18.7	18.1	17.5
82.5°	11.8	11.8	11.8	11.8	11.8
85°	6.2	6.9	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)