

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: P559945

Luminaire Tested: FSR-12-2-LD4-1LO-50-UNV-81-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559945  
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-81-88-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

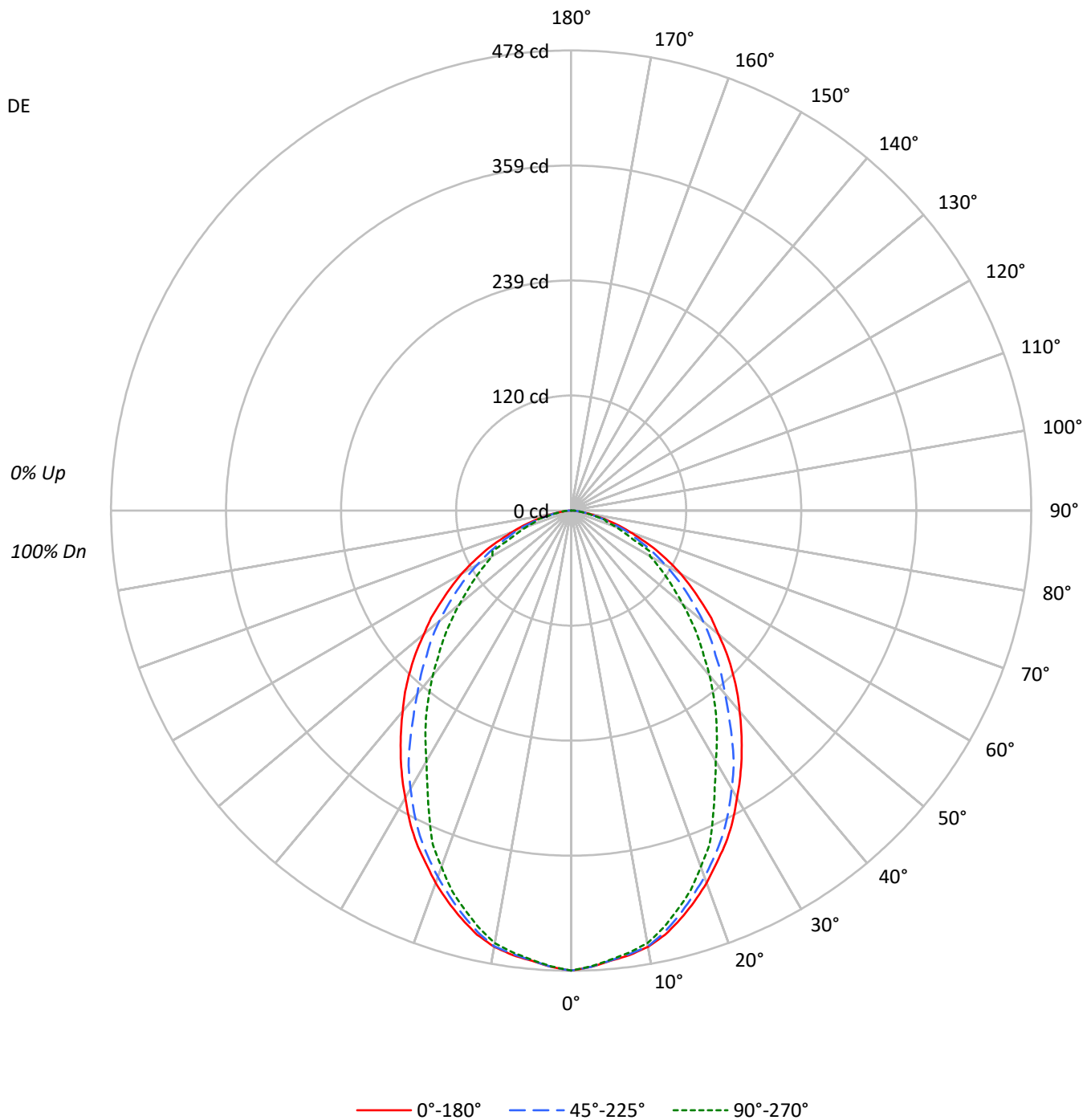
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 938.0 lumens  
Efficiency: N/A  
Efficacy: 80.2 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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					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°	2571	2571	2571
5°	2536	2534	2531
10°	2514	2512	2494
15°	2447	2422	2388
20°	2357	2319	2255
25°	2260	2211	2073
30°	2142	2073	1867
35°	2029	1917	1727
40°	1913	1747	1572
45°	1804	1614	1421
50°	1670	1499	1268
55°	1544	1358	1135
60°	1415	1213	1017
65°	1245	1062	900
70°	1026	930	765
75°	815	711	747
80°	549	514	480
85°	340	408	475

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1804 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.5	4.7
10°-20°	122.1	13.0
20°-30°	169.0	18.0
30°-40°	180.2	19.2
40°-50°	164.4	17.5
50°-60°	128.8	13.7
60°-70°	83.9	8.9
70°-80°	37.2	4.0
80°-90°	8.0	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°	335.5	35.8
0°-40°	515.7	55.0
0°-60°	808.9	86.2
0°-90°	938.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	938.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	478	478	478	478	478	
5°	470	469	469	468	468	45
15°	439	439	435	430	429	123
25°	381	378	372	359	349	175
35°	309	307	292	270	263	193
45°	237	232	212	194	187	183
55°	165	160	145	128	121	148
65°	98	92	83	85	71	96
75°	39	36	34	33	36	42
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	477.8	477.8	477.8	477.8	477.8
2.5°	474.5	474.5	474.5	473.9	473.9
5°	469.5	469.0	469.0	468.4	468.4
7.5°	465.7	465.1	464.5	464.0	462.9
10°	460.1	460.1	459.6	456.8	456.3
12.5°	451.3	450.7	448.5	444.7	443.6
15°	439.1	439.1	434.7	430.3	428.6
17.5°	425.9	425.3	419.8	415.4	413.2
20°	411.5	410.4	404.9	397.7	393.8
22.5°	395.5	395.5	388.9	379.5	375.6
25°	380.6	378.4	372.3	359.0	349.1
27.5°	363.5	360.1	353.5	334.7	323.1
30°	344.7	343.0	333.6	309.3	300.5
32.5°	327.0	324.2	314.3	288.9	281.7
35°	308.8	306.6	291.7	269.6	262.9
37.5°	290.5	287.8	269.0	251.3	243.0
40°	272.3	269.0	248.6	232.6	223.7
42.5°	255.2	250.8	230.9	213.8	203.8
45°	237.0	232.0	212.1	194.4	186.7
47.5°	218.7	214.3	196.1	177.9	169.0
50°	199.4	195.5	179.0	160.7	151.4
52.5°	183.4	177.3	161.3	143.1	135.3
55°	164.6	159.6	144.7	127.6	121.0
57.5°	147.5	142.5	128.7	112.7	107.2
60°	131.5	124.3	112.7	98.9	94.5
62.5°	113.8	108.3	98.3	86.7	92.2
65°	97.8	92.2	83.4	85.1	70.7
67.5°	80.1	77.3	69.6	61.9	59.7
70°	65.2	61.9	59.1	50.8	48.6
72.5°	51.9	48.6	44.7	40.3	38.7
75°	39.2	36.5	34.2	32.6	35.9
77.5°	27.1	26.0	24.3	22.6	22.1
80°	17.7	17.1	16.6	16.0	15.5
82.5°	10.5	10.5	10.5	10.5	10.5
85°	5.5	6.1	6.6	7.2	7.7
87.5°	3.3	3.3	3.9	4.4	5.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)