

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: P559939

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

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559939  
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-81-85-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

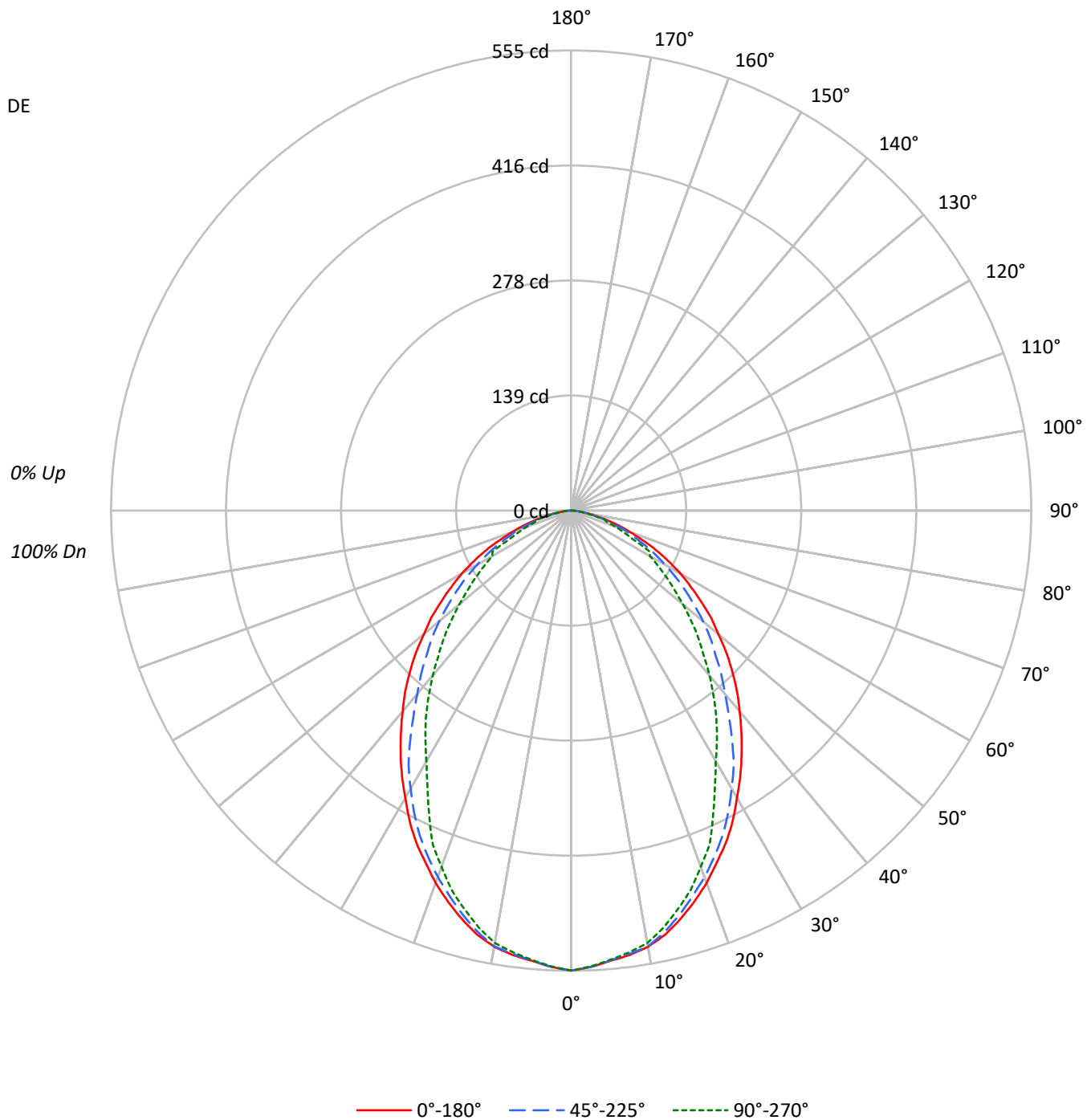
Lumens per Lamp: N/A  
Luminaire Lumens: 1089.0 lumens  
Efficiency: N/A  
Efficacy: 93.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	2985	2985	2985
5°	2945	2942	2938
10°	2919	2916	2895
15°	2841	2812	2773
20°	2737	2692	2619
25°	2624	2567	2407
30°	2487	2407	2168
35°	2355	2225	2006
40°	2222	2028	1825
45°	2094	1875	1650
50°	1938	1740	1471
55°	1793	1576	1317
60°	1643	1408	1181
65°	1445	1233	1046
70°	1191	1079	887
75°	946	828	867
80°	635	595	558
85°	395	475	556

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2094 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.6	4.7
10°-20°	141.7	13.0
20°-30°	196.2	18.0
30°-40°	209.2	19.2
40°-50°	190.9	17.5
50°-60°	149.5	13.7
60°-70°	97.5	8.9
70°-80°	43.2	4.0
80°-90°	9.3	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°	389.5	35.8
0°-40°	598.7	55.0
0°-60°	939.1	86.2
0°-90°	1089.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1089.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	555	555	555	555	555	
5°	545	544	544	544	544	52
15°	510	510	505	500	498	143
25°	442	439	432	417	405	203
35°	358	356	339	313	305	224
45°	275	269	246	226	217	212
55°	191	185	168	148	140	171
65°	114	107	97	99	82	112
75°	46	42	40	38	42	49
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°	554.7	554.7	554.7	554.7	554.7
2.5°	550.9	550.9	550.9	550.2	550.2
5°	545.1	544.5	544.5	543.8	543.8
7.5°	540.6	540.0	539.3	538.7	537.4
10°	534.2	534.2	533.6	530.4	529.7
12.5°	523.9	523.3	520.7	516.2	515.0
15°	509.8	509.8	504.7	499.6	497.6
17.5°	494.4	493.8	487.4	482.3	479.7
20°	477.8	476.5	470.1	461.7	457.2
22.5°	459.2	459.2	451.5	440.6	436.1
25°	441.9	439.3	432.2	416.8	405.3
27.5°	422.0	418.1	410.4	388.6	375.2
30°	400.2	398.2	387.3	359.1	348.9
32.5°	379.6	376.4	364.9	335.4	327.1
35°	358.5	355.9	338.6	313.0	305.3
37.5°	337.3	334.1	312.3	291.8	282.2
40°	316.2	312.3	288.6	270.0	259.7
42.5°	296.3	291.1	268.1	248.2	236.6
45°	275.1	269.3	246.3	225.7	216.8
47.5°	254.0	248.8	227.7	206.5	196.2
50°	231.5	227.0	207.8	186.6	175.7
52.5°	212.9	205.9	187.3	166.1	157.1
55°	191.1	185.3	168.0	148.1	140.4
57.5°	171.2	165.5	149.4	130.8	124.4
60°	152.6	144.3	130.8	114.8	109.7
62.5°	132.1	125.7	114.2	100.7	107.1
65°	113.5	107.1	96.8	98.8	82.1
67.5°	93.0	89.8	80.8	71.8	69.3
70°	75.7	71.8	68.6	59.0	56.4
72.5°	60.3	56.4	51.9	46.8	44.9
75°	45.5	42.3	39.8	37.8	41.7
77.5°	31.4	30.1	28.2	26.3	25.7
80°	20.5	19.9	19.2	18.6	18.0
82.5°	12.2	12.2	12.2	12.2	12.2
85°	6.4	7.1	7.7	8.3	9.0
87.5°	3.8	3.8	4.5	5.1	5.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)