

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: P559250

Luminaire Tested: FSR-12-1-LD4-2LO-35-UNV-82-85-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559250  
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-35-UNV-82-85-EDD-90  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

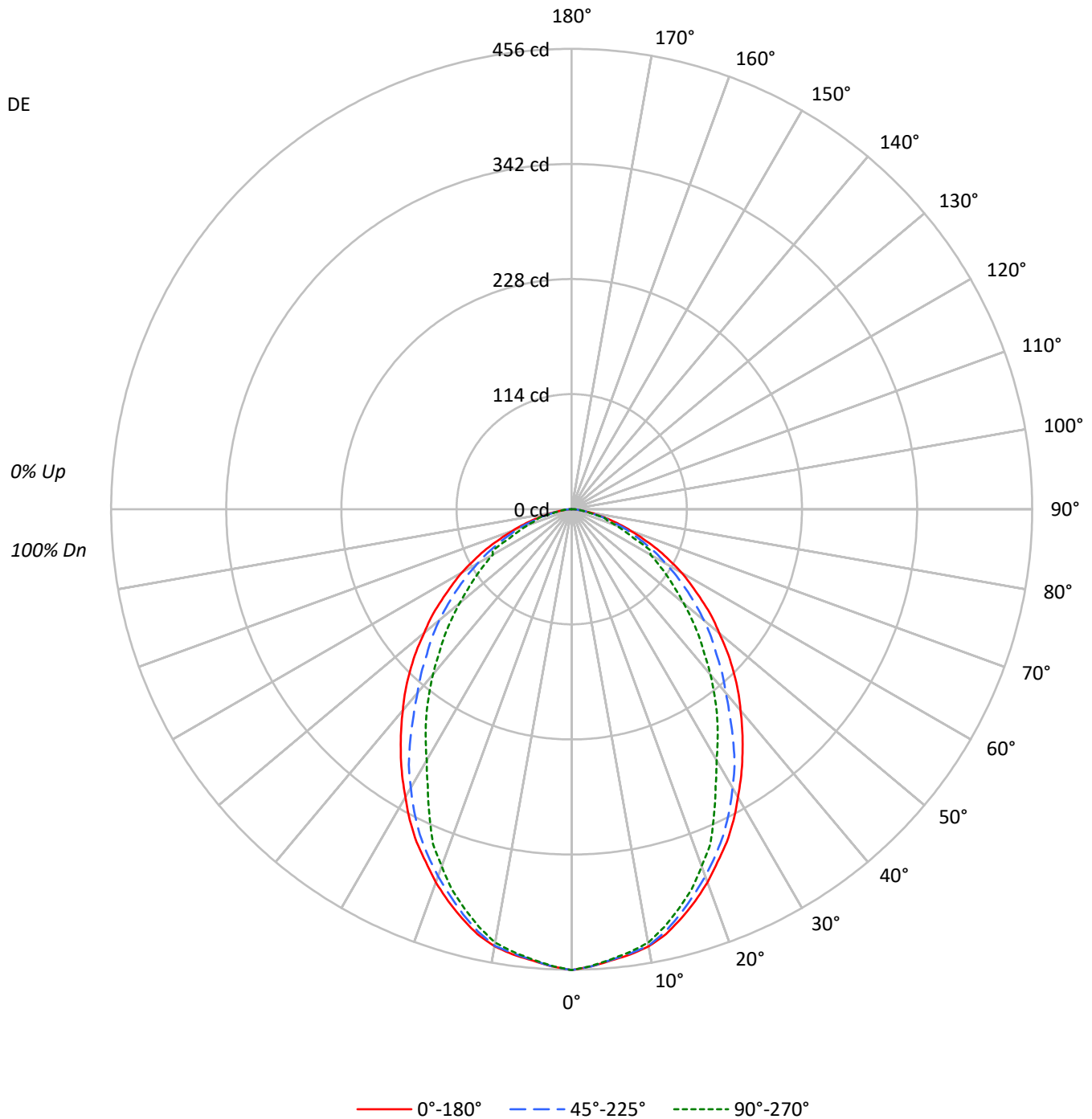
Lumens per Lamp: N/A  
Luminaire Lumens: 896.0 lumens  
Efficiency: N/A  
Efficacy: 76.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (A<sub>in</sub>): 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					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4913	4913	4913
5°	4846	4841	4834
10°	4804	4798	4763
15°	4675	4628	4563
20°	4503	4431	4309
25°	4317	4223	3961
30°	4092	3961	3567
35°	3876	3661	3301
40°	3655	3336	3003
45°	3446	3084	2714
50°	3190	2864	2421
55°	2950	2594	2169
60°	2704	2316	1942
65°	2379	2030	1719
70°	1961	1778	1460
75°	1560	1360	1426
80°	1048	979	917
85°	655	778	914

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3446 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.5	4.7
10°-20°	116.6	13.0
20°-30°	161.4	18.0
30°-40°	172.1	19.2
40°-50°	157.0	17.5
50°-60°	123.0	13.7
60°-70°	80.2	8.9
70°-80°	35.5	4.0
80°-90°	7.6	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°	320.5	35.8
0°-40°	492.6	55.0
0°-60°	772.7	86.2
0°-90°	896.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	896.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	456	456	456	456	456	
5°	448	448	448	447	447	43
15°	420	420	415	411	410	118
25°	364	361	356	343	334	167
35°	295	293	279	258	251	184
45°	226	222	203	186	178	174
55°	157	152	138	122	116	141
65°	93	88	80	81	68	92
75°	38	35	33	31	34	40
85°	5	6	6	7	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	456.4	456.4	456.4	456.4	456.4
2.5°	453.2	453.2	453.2	452.7	452.7
5°	448.5	448.0	448.0	447.4	447.4
7.5°	444.8	444.3	443.7	443.2	442.2
10°	439.5	439.5	439.0	436.4	435.8
12.5°	431.1	430.6	428.4	424.8	423.7
15°	419.5	419.5	415.3	411.0	409.5
17.5°	406.8	406.3	401.0	396.8	394.7
20°	393.1	392.0	386.8	379.9	376.2
22.5°	377.8	377.8	371.5	362.5	358.8
25°	363.5	361.4	355.6	343.0	333.5
27.5°	347.2	344.0	337.7	319.8	308.7
30°	329.2	327.7	318.7	295.5	287.0
32.5°	312.4	309.7	300.2	276.0	269.1
35°	295.0	292.8	278.6	257.5	251.2
37.5°	277.5	274.9	257.0	240.1	232.2
40°	260.1	257.0	237.4	222.1	213.7
42.5°	243.8	239.5	220.6	204.2	194.7
45°	226.4	221.6	202.6	185.7	178.3
47.5°	208.9	204.7	187.3	169.9	161.5
50°	190.5	186.8	171.0	153.5	144.6
52.5°	175.2	169.4	154.1	136.7	129.3
55°	157.2	152.5	138.2	121.9	115.6
57.5°	140.9	136.1	122.9	107.6	102.4
60°	125.6	118.7	107.6	94.4	90.2
62.5°	108.7	103.4	93.9	82.8	88.1
65°	93.4	88.1	79.7	81.3	67.5
67.5°	76.5	73.9	66.5	59.1	57.0
70°	62.3	59.1	56.5	48.5	46.4
72.5°	49.6	46.4	42.7	38.5	36.9
75°	37.5	34.8	32.7	31.1	34.3
77.5°	25.9	24.8	23.2	21.6	21.1
80°	16.9	16.4	15.8	15.3	14.8
82.5°	10.0	10.0	10.0	10.0	10.0
85°	5.3	5.8	6.3	6.9	7.4
87.5°	3.2	3.2	3.7	4.2	4.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)