

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: P559255

Luminaire Tested: FSR-12-1-LD4-2LO-35-UNV-82-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559255  
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-82-87-EDD  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

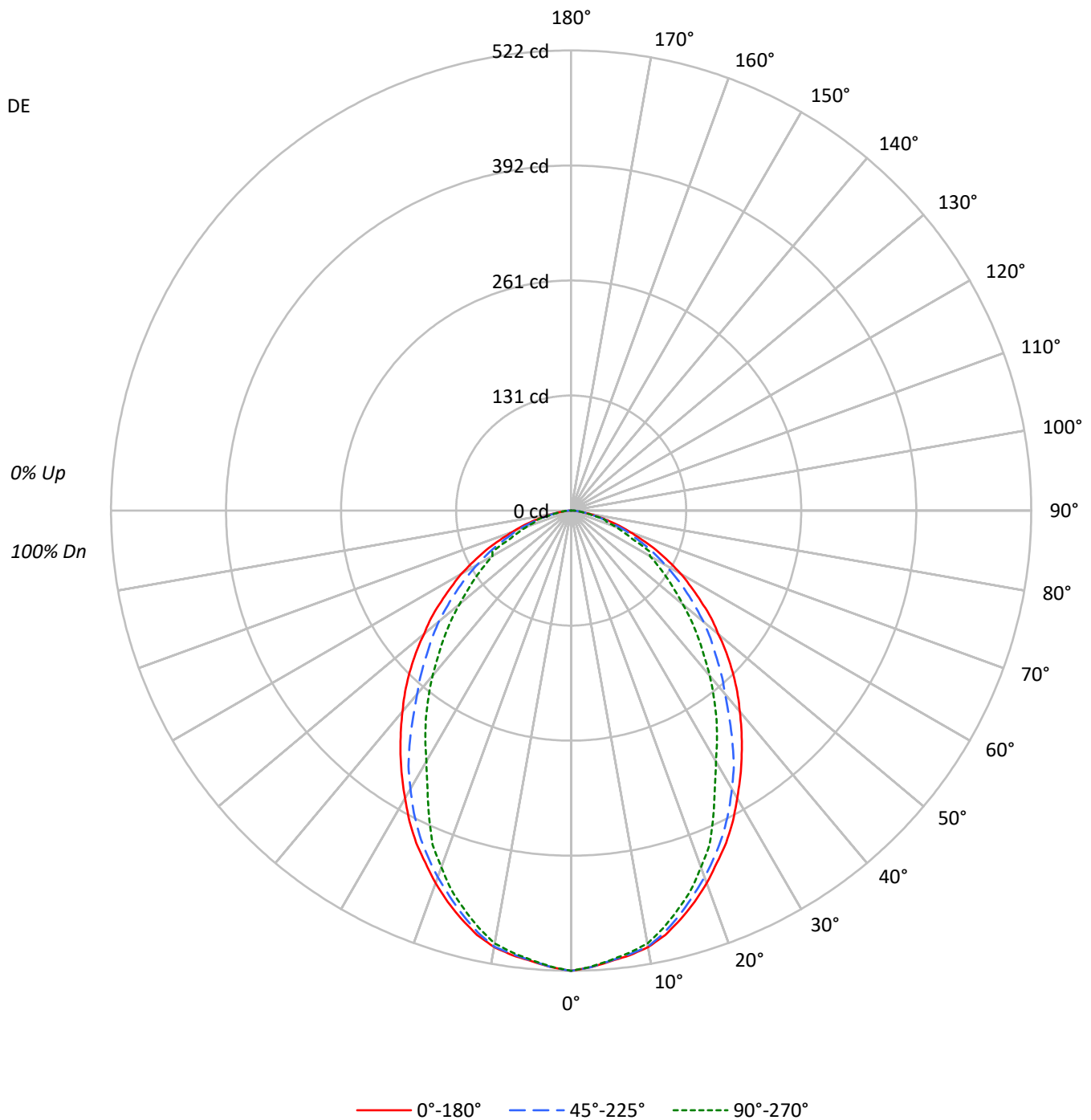
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1025.0 lumens  
Efficiency: N/A  
Efficacy: 87.6 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 (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																			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°	5620	5620	5620
5°	5544	5538	5531
10°	5496	5489	5450
15°	5348	5293	5220
20°	5151	5068	4930
25°	4940	4831	4531
30°	4682	4532	4082
35°	4434	4188	3775
40°	4182	3816	3436
45°	3941	3529	3105
50°	3649	3275	2770
55°	3376	2967	2481
60°	3094	2650	2222
65°	2720	2320	1969
70°	2241	2033	1671
75°	1784	1555	1630
80°	1196	1122	1048
85°	741	889	1050

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3941 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.6	4.7
10°-20°	133.4	13.0
20°-30°	184.7	18.0
30°-40°	196.9	19.2
40°-50°	179.6	17.5
50°-60°	140.7	13.7
60°-70°	91.7	8.9
70°-80°	40.6	4.0
80°-90°	8.7	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°	366.7	35.8
0°-40°	563.6	55.0
0°-60°	883.9	86.2
0°-90°	1025.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1025.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	522	522	522	522	522	
5°	513	512	512	512	512	49
15°	480	480	475	470	468	135
25°	416	414	407	392	382	191
35°	337	335	319	295	287	211
45°	259	254	232	212	204	199
55°	180	174	158	139	132	161
65°	107	101	91	93	77	105
75°	43	40	37	36	39	46
85°	6	7	7	8	8	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	522.1	522.1	522.1	522.1	522.1
2.5°	518.5	518.5	518.5	517.9	517.9
5°	513.1	512.5	512.5	511.9	511.9
7.5°	508.8	508.2	507.6	507.0	505.8
10°	502.8	502.8	502.2	499.2	498.6
12.5°	493.1	492.5	490.1	485.9	484.7
15°	479.9	479.9	475.0	470.2	468.4
17.5°	465.4	464.8	458.7	453.9	451.5
20°	449.7	448.5	442.4	434.6	430.4
22.5°	432.2	432.2	424.9	414.7	410.5
25°	415.9	413.5	406.8	392.3	381.5
27.5°	397.2	393.6	386.3	365.8	353.1
30°	376.7	374.8	364.6	338.0	328.4
32.5°	357.3	354.3	343.5	315.7	307.8
35°	337.4	335.0	318.7	294.6	287.3
37.5°	317.5	314.5	294.0	274.6	265.6
40°	297.6	294.0	271.6	254.1	244.5
42.5°	278.9	274.0	252.3	233.6	222.7
45°	258.9	253.5	231.8	212.5	204.0
47.5°	239.0	234.2	214.3	194.4	184.7
50°	217.9	213.7	195.6	175.7	165.4
52.5°	200.4	193.8	176.3	156.3	147.9
55°	179.9	174.4	158.1	139.4	132.2
57.5°	161.2	155.7	140.6	123.1	117.1
60°	143.7	135.8	123.1	108.0	103.2
62.5°	124.3	118.3	107.4	94.8	100.8
65°	106.8	100.8	91.1	93.0	77.3
67.5°	87.5	84.5	76.1	67.6	65.2
70°	71.2	67.6	64.6	55.5	53.1
72.5°	56.7	53.1	48.9	44.1	42.3
75°	42.9	39.8	37.4	35.6	39.2
77.5°	29.6	28.4	26.6	24.7	24.1
80°	19.3	18.7	18.1	17.5	16.9
82.5°	11.5	11.5	11.5	11.5	11.5
85°	6.0	6.6	7.2	7.8	8.5
87.5°	3.6	3.6	4.2	4.8	5.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)