

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: P558879

Luminaire Tested: FSR-12-1-LD4-1STD-35-UNV-82-97-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558879  
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-LD4-1STD-35-UNV-82-97-EDD  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

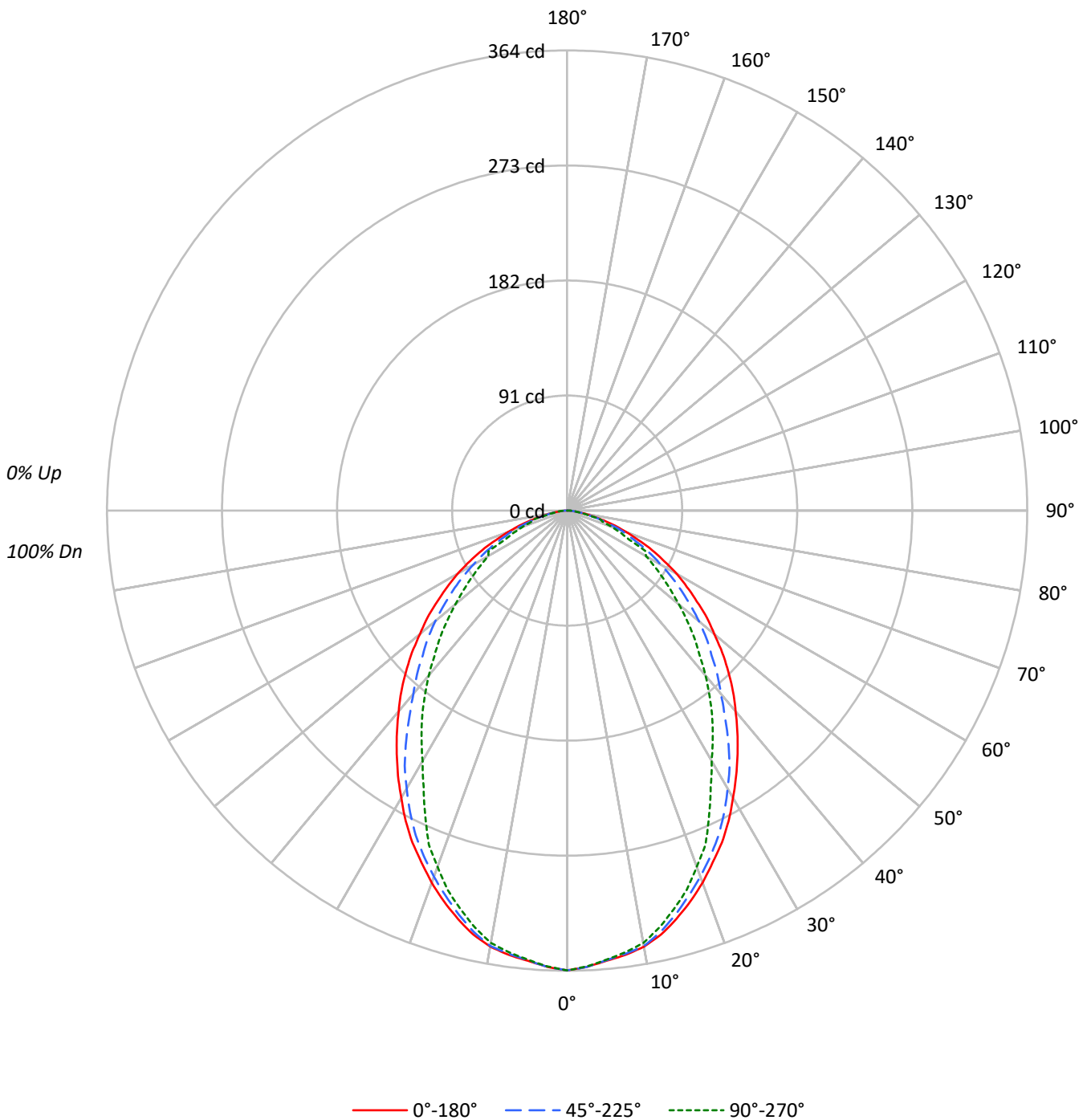
Lumens per Lamp: N/A  
Luminaire Lumens: 714.0 lumens  
Efficiency: N/A  
Efficacy: 86.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	3915	3915	3915
5°	3862	3857	3853
10°	3828	3823	3796
15°	3725	3687	3636
20°	3588	3530	3434
25°	3441	3366	3156
30°	3261	3157	2843
35°	3088	2917	2629
40°	2913	2659	2393
45°	2746	2458	2163
50°	2542	2281	1929
55°	2351	2068	1728
60°	2155	1847	1548
65°	1895	1617	1370
70°	1561	1416	1164
75°	1243	1085	1135
80°	837	781	731
85°	519	618	729

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2746 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.9	4.7
10°-20°	92.9	13.0
20°-30°	128.6	18.0
30°-40°	137.2	19.2
40°-50°	125.1	17.5
50°-60°	98.0	13.7
60°-70°	63.9	8.9
70°-80°	28.3	4.0
80°-90°	6.1	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°	255.4	35.8
0°-40°	392.6	55.0
0°-60°	615.7	86.2
0°-90°	714.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	714.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	364	364	364	364	364	
5°	357	357	357	357	357	34
15°	334	334	331	328	326	94
25°	290	288	283	273	266	133
35°	235	233	222	205	200	147
45°	180	177	162	148	142	139
55°	125	122	110	97	92	112
65°	74	70	64	65	54	73
75°	30	28	26	25	27	32
85°	4	5	5	6	6	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	363.7	363.7	363.7	363.7	363.7
2.5°	361.2	361.2	361.2	360.8	360.8
5°	357.4	357.0	357.0	356.6	356.6
7.5°	354.5	354.0	353.6	353.2	352.3
10°	350.2	350.2	349.8	347.7	347.3
12.5°	343.5	343.1	341.4	338.5	337.6
15°	334.3	334.3	330.9	327.5	326.3
17.5°	324.2	323.8	319.6	316.2	314.5
20°	313.2	312.4	308.2	302.7	299.8
22.5°	301.1	301.1	296.0	288.9	285.9
25°	289.7	288.0	283.4	273.3	265.7
27.5°	276.7	274.1	269.1	254.8	246.0
30°	262.4	261.1	254.0	235.5	228.7
32.5°	248.9	246.8	239.2	219.9	214.4
35°	235.0	233.4	222.0	205.2	200.1
37.5°	221.2	219.1	204.8	191.3	185.0
40°	207.3	204.8	189.2	177.0	170.3
42.5°	194.3	190.9	175.8	162.7	155.2
45°	180.4	176.6	161.5	148.0	142.1
47.5°	166.5	163.1	149.3	135.4	128.7
50°	151.8	148.8	136.2	122.4	115.2
52.5°	139.6	135.0	122.8	108.9	103.0
55°	125.3	121.5	110.2	97.1	92.1
57.5°	112.3	108.5	98.0	85.8	81.6
60°	100.1	94.6	85.8	75.3	71.9
62.5°	86.6	82.4	74.8	66.0	70.2
65°	74.4	70.2	63.5	64.8	53.8
67.5°	61.0	58.9	53.0	47.1	45.4
70°	49.6	47.1	45.0	38.7	37.0
72.5°	39.5	37.0	34.1	30.7	29.4
75°	29.9	27.8	26.1	24.8	27.3
77.5°	20.6	19.8	18.5	17.2	16.8
80°	13.5	13.0	12.6	12.2	11.8
82.5°	8.0	8.0	8.0	8.0	8.0
85°	4.2	4.6	5.0	5.5	5.9
87.5°	2.5	2.5	2.9	3.4	3.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)