

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: P558983

Luminaire Tested: FSR-12-1-LD4-1STD-50-UNV-81-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558983  
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-50-UNV-81-87-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

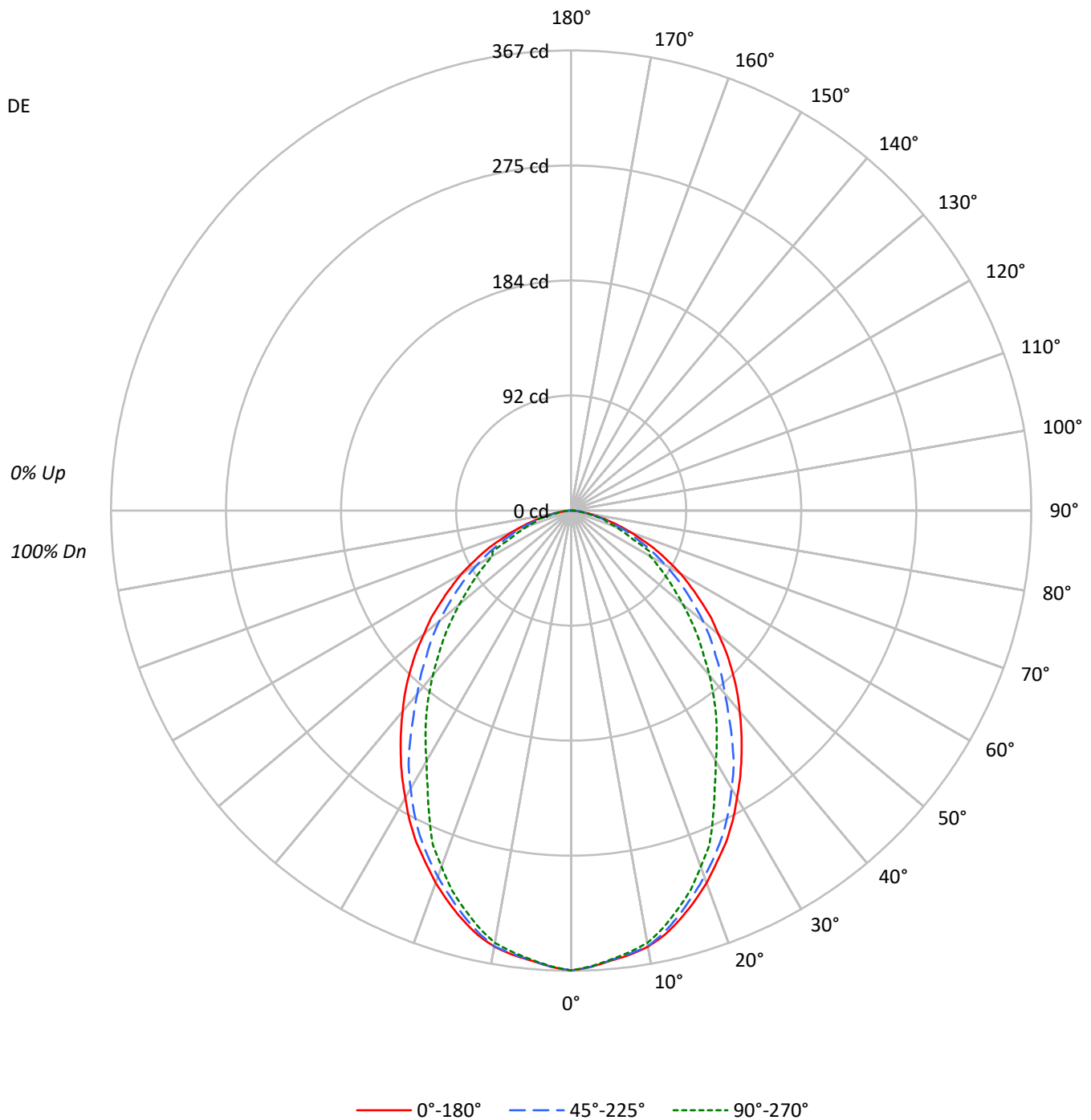
Lumens per Lamp: N/A  
Luminaire Lumens: 720.0 lumens  
Efficiency: N/A  
Efficacy: 86.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	3948	3948	3948
5°	3894	3890	3885
10°	3860	3856	3828
15°	3757	3719	3666
20°	3619	3560	3463
25°	3469	3394	3183
30°	3289	3183	2867
35°	3114	2942	2652
40°	2937	2681	2413
45°	2769	2478	2181
50°	2564	2301	1946
55°	2372	2085	1743
60°	2172	1862	1561
65°	1910	1630	1383
70°	1574	1429	1174
75°	1252	1094	1148
80°	843	787	738
85°	519	630	729

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2769 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.1	4.7
10°-20°	93.7	13.0
20°-30°	129.7	18.0
30°-40°	138.3	19.2
40°-50°	126.2	17.5
50°-60°	98.9	13.7
60°-70°	64.4	8.9
70°-80°	28.6	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°	257.5	35.8
0°-40°	395.9	55.0
0°-60°	620.9	86.2
0°-90°	720.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	720.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	367	367	367	367	367	
5°	360	360	360	360	360	34
15°	337	337	334	330	329	95
25°	292	290	286	276	268	134
35°	237	235	224	207	202	148
45°	182	178	163	149	143	140
55°	126	122	111	98	93	113
65°	75	71	64	65	54	74
75°	30	28	26	25	28	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°	366.8	366.8	366.8	366.8	366.8
2.5°	364.2	364.2	364.2	363.8	363.8
5°	360.4	360.0	360.0	359.6	359.6
7.5°	357.4	357.0	356.6	356.2	355.3
10°	353.2	353.2	352.8	350.6	350.2
12.5°	346.4	346.0	344.3	341.3	340.5
15°	337.1	337.1	333.7	330.3	329.0
17.5°	326.9	326.5	322.2	318.8	317.2
20°	315.9	315.0	310.8	305.3	302.3
22.5°	303.6	303.6	298.5	291.3	288.3
25°	292.1	290.4	285.8	275.6	268.0
27.5°	279.0	276.4	271.4	256.9	248.0
30°	264.6	263.3	256.1	237.4	230.7
32.5°	251.0	248.9	241.3	221.8	216.2
35°	237.0	235.3	223.9	206.9	201.8
37.5°	223.0	220.9	206.5	192.9	186.6
40°	209.0	206.5	190.8	178.5	171.7
42.5°	195.9	192.5	177.2	164.1	156.5
45°	181.9	178.1	162.8	149.2	143.3
47.5°	167.9	164.5	150.5	136.5	129.7
50°	153.1	150.1	137.4	123.4	116.2
52.5°	140.8	136.1	123.8	109.8	103.9
55°	126.4	122.5	111.1	97.9	92.9
57.5°	113.2	109.4	98.8	86.5	82.3
60°	100.9	95.4	86.5	75.9	72.5
62.5°	87.3	83.1	75.5	66.6	70.8
65°	75.0	70.8	64.0	65.3	54.3
67.5°	61.5	59.4	53.4	47.5	45.8
70°	50.0	47.5	45.4	39.0	37.3
72.5°	39.9	37.3	34.3	31.0	29.7
75°	30.1	28.0	26.3	25.0	27.6
77.5°	20.8	19.9	18.7	17.4	17.0
80°	13.6	13.1	12.7	12.3	11.9
82.5°	8.1	8.1	8.1	8.1	8.1
85°	4.2	4.7	5.1	5.5	5.9
87.5°	2.5	2.5	3.0	3.4	3.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)