

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: P558693

Luminaire Tested: FSR-12-1-LD4-1LO-35-UNV-93-86-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558693  
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-LD4-1LO-35-UNV-93-86-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

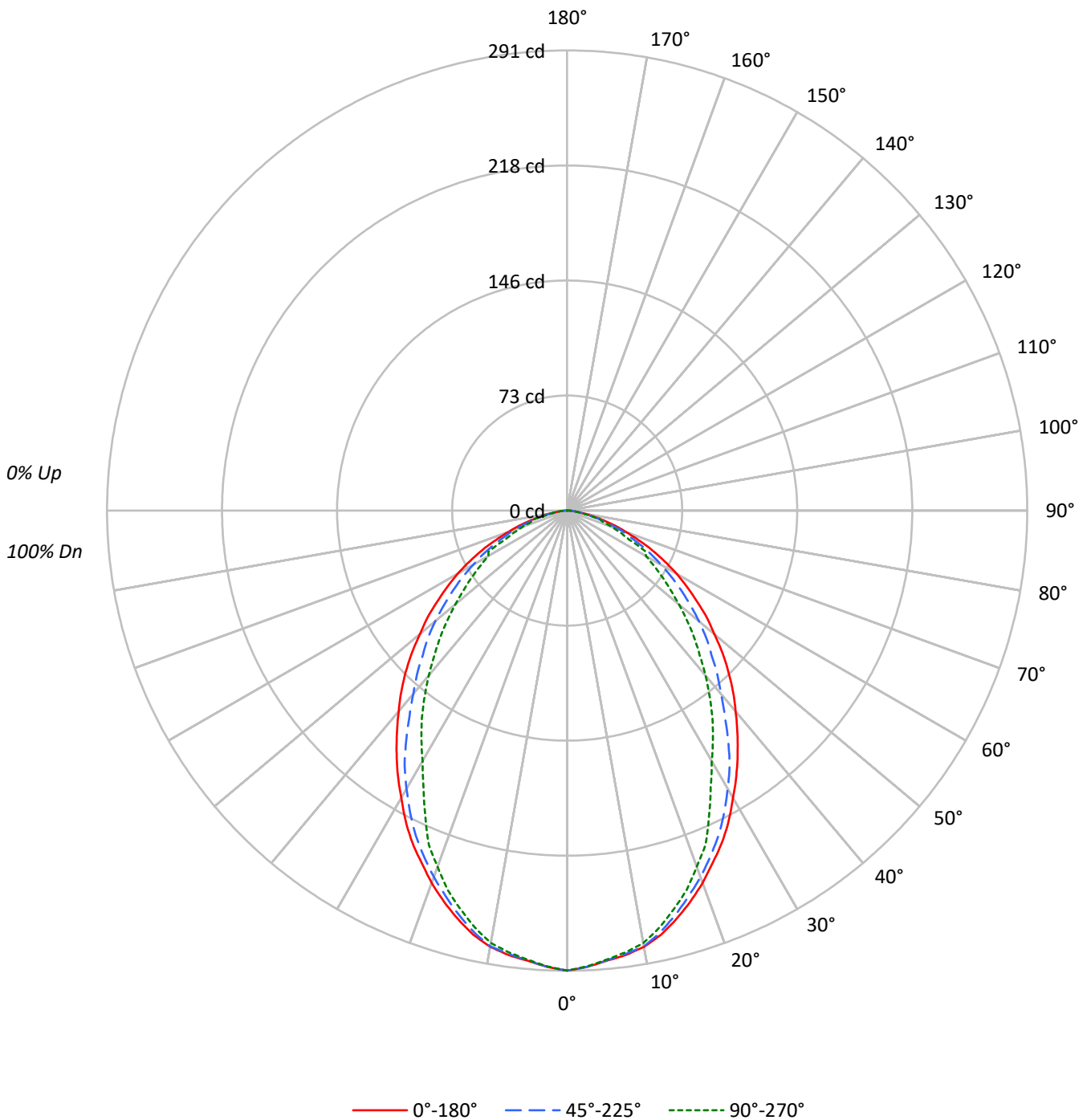
Lumens per Lamp: N/A  
Luminaire Lumens: 571.0 lumens  
Efficiency: N/A  
Efficacy: 98.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 5.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	47	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°	3131	3131	3131
5°	3088	3085	3081
10°	3061	3058	3035
15°	2979	2949	2907
20°	2869	2824	2746
25°	2752	2691	2524
30°	2608	2524	2273
35°	2470	2332	2104
40°	2330	2126	1914
45°	2197	1965	1731
50°	2033	1824	1542
55°	1880	1653	1381
60°	1722	1477	1238
65°	1515	1294	1095
70°	1249	1133	932
75°	994	865	911
80°	669	626	583
85°	420	494	580

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2197 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	27.1	4.7
10°-20°	74.3	13.0
20°-30°	102.9	18.0
30°-40°	109.7	19.2
40°-50°	100.1	17.5
50°-60°	78.4	13.7
60°-70°	51.1	9.0
70°-80°	22.6	4.0
80°-90°	4.9	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°	204.3	35.8
0°-40°	313.9	55.0
0°-60°	492.4	86.2
0°-90°	571.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	571.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	291	291	291	291	291	
5°	286	286	286	285	285	27
15°	267	267	265	262	261	75
25°	232	230	227	219	212	106
35°	188	187	178	164	160	118
45°	144	141	129	118	114	111
55°	100	97	88	78	74	90
65°	60	56	51	52	43	59
75°	24	22	21	20	22	26
85°	3	4	4	4	5	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	290.9	290.9	290.9	290.9	290.9
2.5°	288.8	288.8	288.8	288.5	288.5
5°	285.8	285.5	285.5	285.1	285.1
7.5°	283.5	283.1	282.8	282.5	281.8
10°	280.1	280.1	279.8	278.1	277.7
12.5°	274.7	274.4	273.0	270.7	270.0
15°	267.3	267.3	264.6	261.9	260.9
17.5°	259.3	258.9	255.6	252.9	251.5
20°	250.5	249.8	246.5	242.1	239.7
22.5°	240.8	240.8	236.7	231.0	228.7
25°	231.7	230.3	226.6	218.6	212.5
27.5°	221.3	219.2	215.2	203.8	196.7
30°	209.8	208.8	203.1	188.3	182.9
32.5°	199.1	197.4	191.3	175.9	171.5
35°	188.0	186.6	177.5	164.1	160.1
37.5°	176.9	175.2	163.8	153.0	148.0
40°	165.8	163.8	151.3	141.6	136.2
42.5°	155.3	152.7	140.6	130.1	124.1
45°	144.3	141.2	129.1	118.4	113.7
47.5°	133.2	130.5	119.4	108.3	102.9
50°	121.4	119.0	108.9	97.8	92.1
52.5°	111.6	107.9	98.2	87.1	82.4
55°	100.2	97.2	88.1	77.7	73.6
57.5°	89.8	86.8	78.3	68.6	65.2
60°	80.0	75.7	68.6	60.2	57.5
62.5°	69.3	65.9	59.9	52.8	56.2
65°	59.5	56.2	50.8	51.8	43.0
67.5°	48.8	47.1	42.4	37.7	36.3
70°	39.7	37.7	36.0	30.9	29.6
72.5°	31.6	29.6	27.2	24.5	23.5
75°	23.9	22.2	20.8	19.8	21.9
77.5°	16.5	15.8	14.8	13.8	13.5
80°	10.8	10.4	10.1	9.8	9.4
82.5°	6.4	6.4	6.4	6.4	6.4
85°	3.4	3.7	4.0	4.4	4.7
87.5°	2.0	2.0	2.4	2.7	3.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)