

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: P558956

Luminaire Tested: FSR-12-1-LD4-1STD-40-UNV-93-96-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558956  
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-40-UNV-93-96-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER  
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

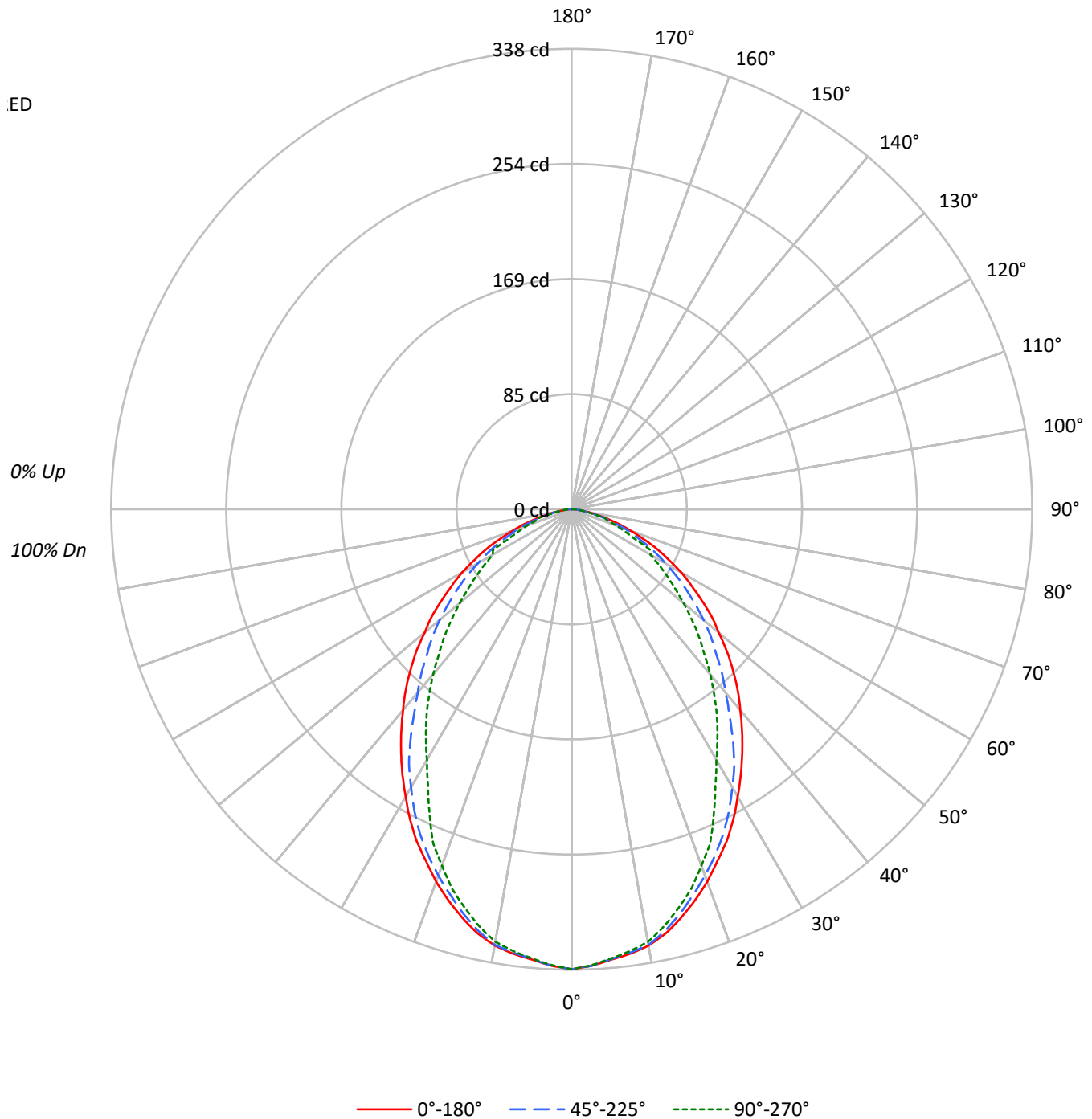
Lumens per Lamp: N/A  
Luminaire Lumens: 663.0 lumens  
Efficiency: N/A  
Efficacy: 79.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	3635	3635	3635
5°	3586	3582	3578
10°	3554	3550	3525
15°	3459	3424	3377
20°	3332	3278	3189
25°	3195	3126	2931
30°	3028	2931	2640
35°	2869	2708	2441
40°	2705	2469	2222
45°	2550	2282	2009
50°	2359	2118	1792
55°	2183	1920	1605
60°	2000	1714	1438
65°	1760	1503	1273
70°	1451	1316	1083
75°	1152	1006	1056
80°	775	725	676
85°	482	580	679

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2550 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.4	4.7
10°-20°	86.3	13.0
20°-30°	119.4	18.0
30°-40°	127.4	19.2
40°-50°	116.2	17.5
50°-60°	91.0	13.7
60°-70°	59.3	8.9
70°-80°	26.3	4.0
80°-90°	5.6	0.8
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°	237.2	35.8
0°-40°	364.5	55.0
0°-60°	571.7	86.2
0°-90°	663.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	663.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	338	338	338	338	338	
5°	332	332	332	331	331	32
15°	310	310	307	304	303	87
25°	269	267	263	254	247	123
35°	218	217	206	190	186	136
45°	168	164	150	137	132	129
55°	116	113	102	90	86	104
65°	69	65	59	60	50	68
75°	28	26	24	23	25	30
85°	4	4	5	5	6	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	337.7	337.7	337.7	337.7	337.7
2.5°	335.4	335.4	335.4	335.0	335.0
5°	331.9	331.5	331.5	331.1	331.1
7.5°	329.1	328.7	328.4	328.0	327.2
10°	325.2	325.2	324.8	322.9	322.5
12.5°	319.0	318.6	317.0	314.3	313.5
15°	310.4	310.4	307.3	304.1	303.0
17.5°	301.0	300.6	296.7	293.6	292.0
20°	290.9	290.1	286.2	281.1	278.4
22.5°	279.5	279.5	274.9	268.2	265.5
25°	269.0	267.4	263.2	253.8	246.8
27.5°	256.9	254.6	249.9	236.6	228.4
30°	243.6	242.5	235.8	218.6	212.4
32.5°	231.1	229.2	222.2	204.2	199.1
35°	218.3	216.7	206.1	190.5	185.8
37.5°	205.4	203.4	190.1	177.6	171.8
40°	192.5	190.1	175.7	164.4	158.1
42.5°	180.4	177.3	163.2	151.1	144.1
45°	167.5	164.0	149.9	137.4	132.0
47.5°	154.6	151.5	138.6	125.7	119.5
50°	140.9	138.2	126.5	113.6	107.0
52.5°	129.6	125.3	114.0	101.1	95.7
55°	116.3	112.8	102.3	90.2	85.5
57.5°	104.2	100.7	91.0	79.6	75.7
60°	92.9	87.8	79.6	69.9	66.8
62.5°	80.4	76.5	69.5	61.3	65.2
65°	69.1	65.2	59.0	60.1	50.0
67.5°	56.6	54.7	49.2	43.7	42.2
70°	46.1	43.7	41.8	35.9	34.4
72.5°	36.7	34.4	31.6	28.5	27.3
75°	27.7	25.8	24.2	23.0	25.4
77.5°	19.1	18.4	17.2	16.0	15.6
80°	12.5	12.1	11.7	11.3	10.9
82.5°	7.4	7.4	7.4	7.4	7.4
85°	3.9	4.3	4.7	5.1	5.5
87.5°	2.3	2.3	2.7	3.1	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)