

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: P559399

Luminaire Tested: FSR-12-1-LD4-2LO-50-UNV-93-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559399  
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-50-UNV-93-87-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

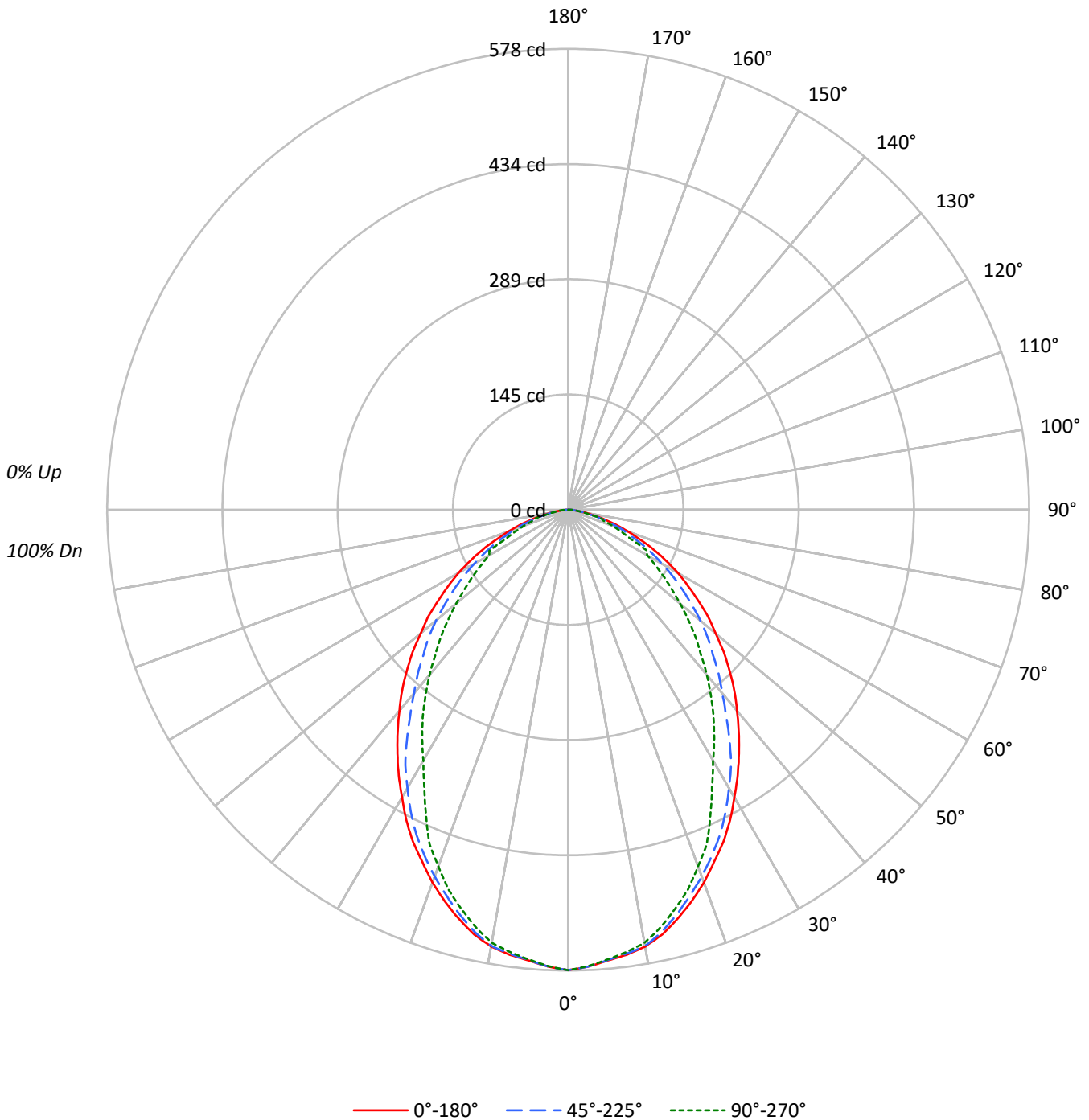
Lumens per Lamp: N/A  
Luminaire Lumens: 1134.0 lumens  
Efficiency: N/A  
Efficacy: 96.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	6217	6217	6217
5°	6133	6126	6119
10°	6080	6073	6029
15°	5916	5857	5775
20°	5699	5607	5454
25°	5464	5346	5012
30°	5179	5013	4515
35°	4905	4633	4177
40°	4626	4222	3801
45°	4361	3903	3436
50°	4037	3624	3064
55°	3734	3284	2744
60°	3421	2932	2458
65°	3011	2567	2178
70°	2480	2250	1851
75°	1971	1722	1805
80°	1327	1240	1159
85°	827	988	1149

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4361 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.8	4.7
10°-20°	147.6	13.0
20°-30°	204.3	18.0
30°-40°	217.8	19.2
40°-50°	198.7	17.5
50°-60°	155.7	13.7
60°-70°	101.5	8.9
70°-80°	45.0	4.0
80°-90°	9.7	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°	405.6	35.8
0°-40°	623.5	55.0
0°-60°	977.9	86.2
0°-90°	1134.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1134.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	578	578	578	578	578	
5°	568	567	567	566	566	54
15°	531	531	526	520	518	149
25°	460	457	450	434	422	211
35°	373	371	353	326	318	233
45°	286	280	256	235	226	221
55°	199	193	175	154	146	178
65°	118	112	101	103	86	116
75°	47	44	41	39	43	51
85°	7	7	8	9	9	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	577.6	577.6	577.6	577.6	577.6
2.5°	573.6	573.6	573.6	573.0	573.0
5°	567.6	567.0	567.0	566.3	566.3
7.5°	563.0	562.3	561.6	560.9	559.6
10°	556.3	556.3	555.6	552.3	551.6
12.5°	545.6	544.9	542.3	537.6	536.2
15°	530.9	530.9	525.6	520.2	518.2
17.5°	514.9	514.2	507.5	502.2	499.5
20°	497.5	496.2	489.5	480.8	476.1
22.5°	478.1	478.1	470.1	458.8	454.1
25°	460.1	457.4	450.1	434.1	422.0
27.5°	439.4	435.4	427.4	404.7	390.7
30°	416.7	414.7	403.3	374.0	363.3
32.5°	395.3	392.0	380.0	349.3	340.6
35°	373.3	370.6	352.6	325.9	317.9
37.5°	351.3	347.9	325.2	303.8	293.8
40°	329.2	325.2	300.5	281.1	270.5
42.5°	308.5	303.2	279.1	258.4	246.4
45°	286.5	280.5	256.4	235.1	225.7
47.5°	264.4	259.1	237.1	215.0	204.3
50°	241.1	236.4	216.4	194.3	183.0
52.5°	221.7	214.4	195.0	173.0	163.6
55°	199.0	193.0	175.0	154.3	146.2
57.5°	178.3	172.3	155.6	136.2	129.6
60°	158.9	150.3	136.2	119.5	114.2
62.5°	137.6	130.9	118.9	104.8	111.5
65°	118.2	111.5	100.8	102.8	85.5
67.5°	96.8	93.5	84.1	74.8	72.1
70°	78.8	74.8	71.5	61.4	58.8
72.5°	62.8	58.8	54.1	48.7	46.7
75°	47.4	44.1	41.4	39.4	43.4
77.5°	32.7	31.4	29.4	27.4	26.7
80°	21.4	20.7	20.0	19.4	18.7
82.5°	12.7	12.7	12.7	12.7	12.7
85°	6.7	7.3	8.0	8.7	9.3
87.5°	4.0	4.0	4.7	5.3	6.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)