

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: P559233

Luminaire Tested: FSR-12-1-LD4-2LO-35-UNV-81-84-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559233  
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-35-UNV-81-84-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

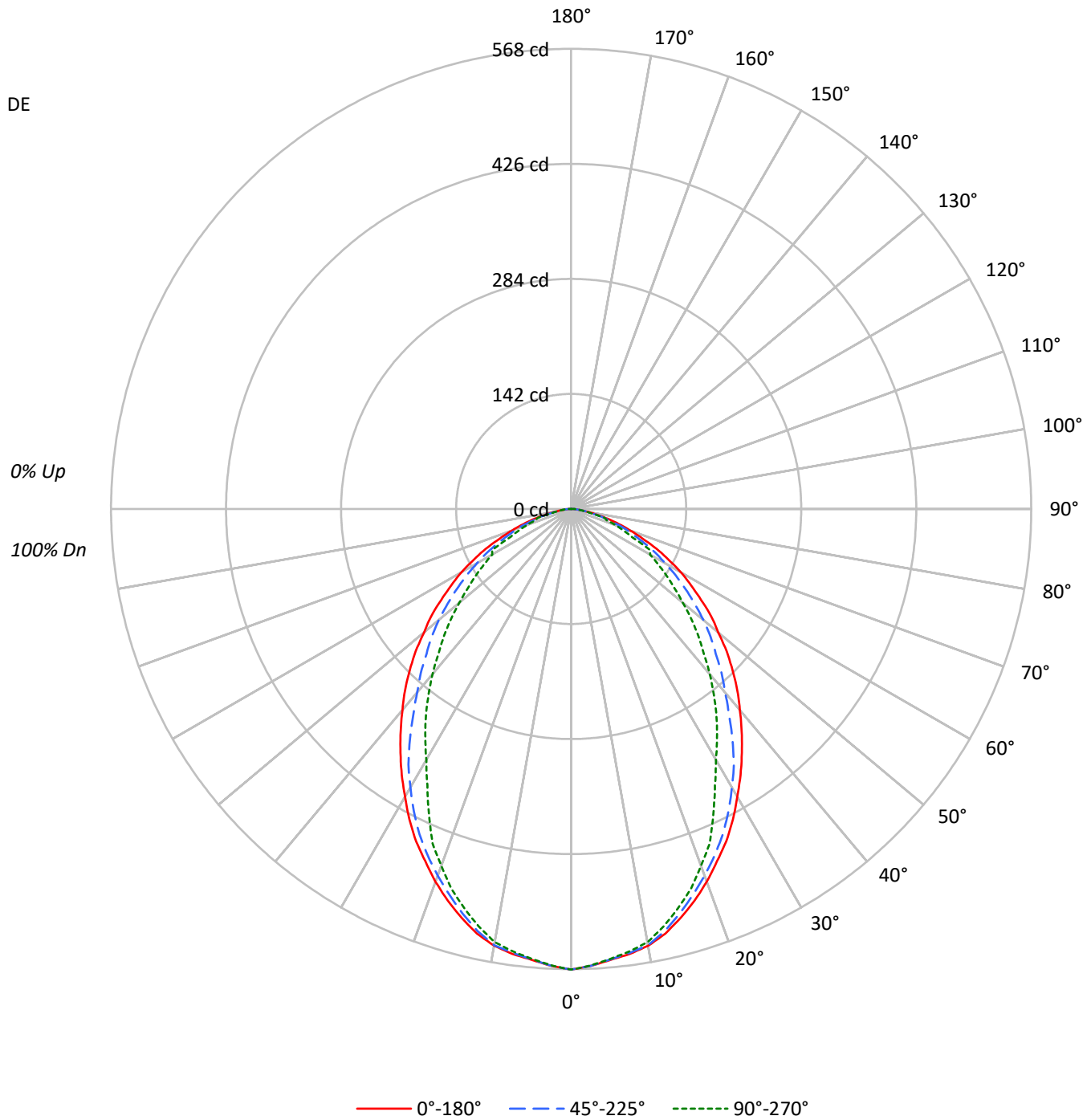
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1116.0 lumens  
Efficiency: N/A  
Efficacy: 95.4 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°	6119	6119	6119
5°	6036	6029	6022
10°	5983	5977	5933
15°	5823	5763	5683
20°	5608	5518	5368
25°	5378	5261	4932
30°	5097	4933	4443
35°	4828	4560	4110
40°	4553	4155	3740
45°	4291	3842	3381
50°	3972	3565	3016
55°	3674	3232	2700
60°	3367	2887	2420
65°	2962	2527	2142
70°	2439	2212	1819
75°	1942	1693	1776
80°	1302	1221	1141
85°	815	976	1136

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4291 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.9	4.7
10°-20°	145.2	13.0
20°-30°	201.1	18.0
30°-40°	214.4	19.2
40°-50°	195.6	17.5
50°-60°	153.2	13.7
60°-70°	99.9	8.9
70°-80°	44.2	4.0
80°-90°	9.5	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°	399.2	35.8
0°-40°	613.6	55.0
0°-60°	962.4	86.2
0°-90°	1116.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1116.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	568	568	568	568	568	
5°	559	558	558	557	557	53
15°	522	522	517	512	510	147
25°	453	450	443	427	415	208
35°	367	365	347	321	313	230
45°	282	276	252	231	222	217
55°	196	190	172	152	144	176
65°	116	110	99	101	84	115
75°	47	43	41	39	43	50
85°	7	7	8	8	9	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	568.5	568.5	568.5	568.5	568.5
2.5°	564.5	564.5	564.5	563.9	563.9
5°	558.6	558.0	558.0	557.3	557.3
7.5°	554.0	553.4	552.7	552.0	550.7
10°	547.4	547.4	546.8	543.5	542.8
12.5°	536.9	536.3	533.6	529.0	527.7
15°	522.5	522.5	517.2	512.0	510.0
17.5°	506.7	506.0	499.5	494.2	491.6
20°	489.6	488.3	481.7	473.2	468.6
22.5°	470.6	470.6	462.7	451.5	446.9
25°	452.8	450.2	443.0	427.2	415.3
27.5°	432.4	428.5	420.6	398.3	384.5
30°	410.1	408.1	396.9	368.0	357.5
32.5°	389.1	385.8	373.9	343.7	335.2
35°	367.4	364.7	347.0	320.7	312.8
37.5°	345.7	342.4	320.1	299.0	289.2
40°	324.0	320.1	295.7	276.7	266.2
42.5°	303.6	298.4	274.7	254.3	242.5
45°	281.9	276.0	252.4	231.3	222.1
47.5°	260.3	255.0	233.3	211.6	201.1
50°	237.2	232.6	212.9	191.2	180.1
52.5°	218.2	211.0	191.9	170.2	161.0
55°	195.8	189.9	172.2	151.8	143.9
57.5°	175.5	169.6	153.1	134.1	127.5
60°	156.4	147.9	134.1	117.6	112.4
62.5°	135.4	128.8	117.0	103.2	109.8
65°	116.3	109.8	99.2	101.2	84.1
67.5°	95.3	92.0	82.8	73.6	71.0
70°	77.5	73.6	70.3	60.5	57.8
72.5°	61.8	57.8	53.2	48.0	46.0
75°	46.7	43.4	40.7	38.8	42.7
77.5°	32.2	30.9	28.9	26.9	26.3
80°	21.0	20.4	19.7	19.1	18.4
82.5°	12.5	12.5	12.5	12.5	12.5
85°	6.6	7.2	7.9	8.5	9.2
87.5°	3.9	3.9	4.6	5.3	5.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)