

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: P559560

Luminaire Tested: FSR-12-1-LD4-2STD-50-UNV-81-88-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559560  
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-LD4-2STD-50-UNV-81-88-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

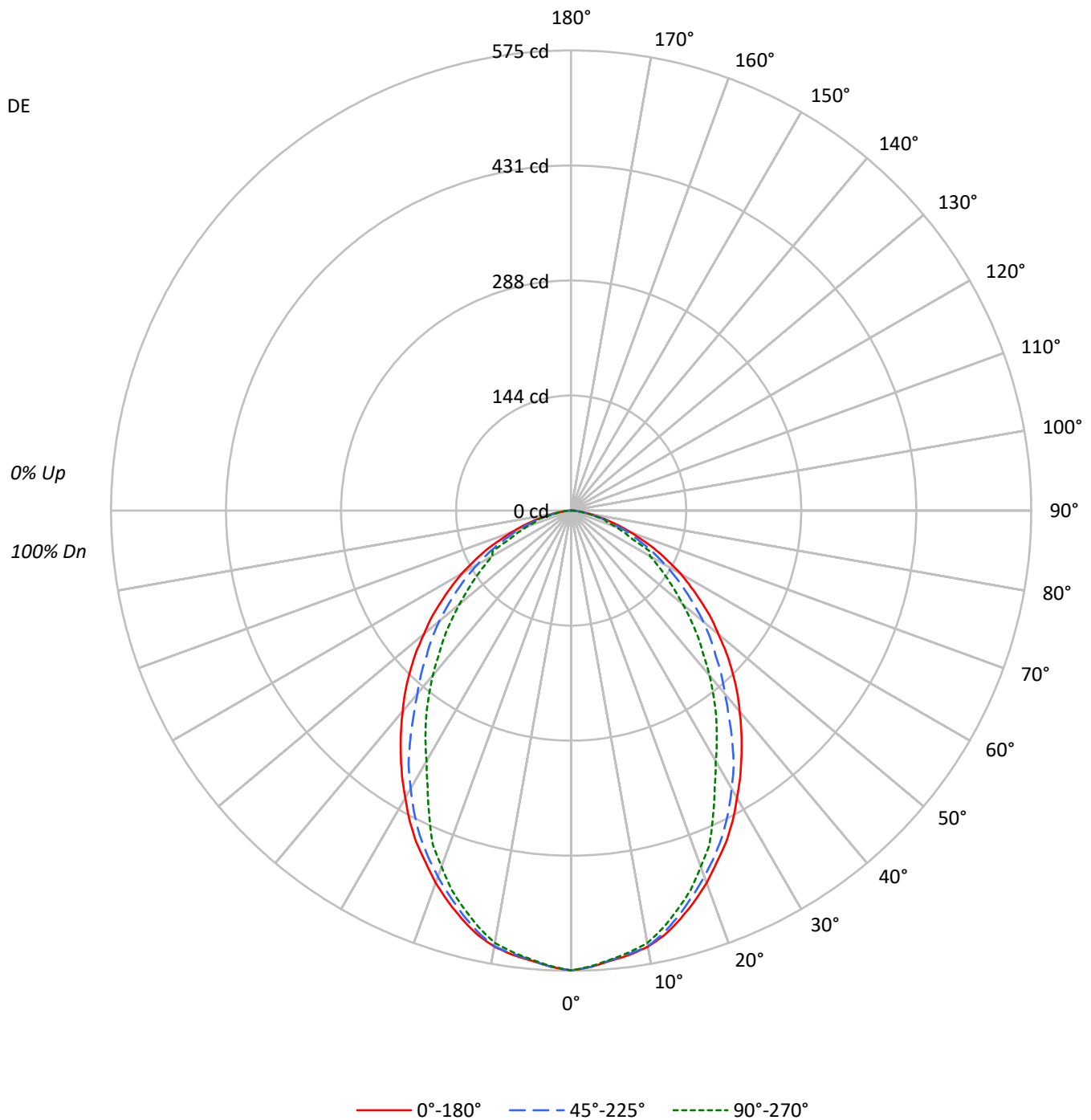
Lumens per Lamp: N/A  
Luminaire Lumens: 1128.0 lumens  
Efficiency: N/A  
Efficacy: 68.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	6185	6185	6185
5°	6101	6094	6086
10°	6048	6041	5997
15°	5885	5826	5745
20°	5669	5577	5425
25°	5436	5317	4986
30°	5152	4987	4492
35°	4879	4608	4155
40°	4602	4200	3780
45°	4338	3883	3417
50°	4016	3604	3048
55°	3716	3265	2730
60°	3404	2917	2446
65°	2995	2555	2165
70°	2467	2238	1841
75°	1963	1713	1797
80°	1320	1234	1153
85°	815	988	1149

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4338 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.5	4.7
10°-20°	146.8	13.0
20°-30°	203.2	18.0
30°-40°	216.7	19.2
40°-50°	197.7	17.5
50°-60°	154.9	13.7
60°-70°	100.9	8.9
70°-80°	44.7	4.0
80°-90°	9.6	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°	403.5	35.8
0°-40°	620.2	55.0
0°-60°	972.7	86.2
0°-90°	1128.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1128.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	575	575	575	575	575	
5°	565	564	564	563	563	54
15°	528	528	523	518	516	148
25°	458	455	448	432	420	210
35°	371	369	351	324	316	232
45°	285	279	255	234	224	220
55°	198	192	174	153	146	178
65°	118	111	100	102	85	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°	574.6	574.6	574.6	574.6	574.6
2.5°	570.6	570.6	570.6	569.9	569.9
5°	564.6	564.0	564.0	563.3	563.3
7.5°	560.0	559.3	558.6	558.0	556.7
10°	553.3	553.3	552.7	549.3	548.7
12.5°	542.7	542.0	539.4	534.7	533.4
15°	528.1	528.1	522.8	517.5	515.5
17.5°	512.1	511.5	504.8	499.5	496.9
20°	494.9	493.5	486.9	478.3	473.6
22.5°	475.6	475.6	467.6	456.3	451.7
25°	457.7	455.0	447.7	431.8	419.8
27.5°	437.1	433.1	425.1	402.5	388.6
30°	414.5	412.5	401.2	372.0	361.4
32.5°	393.2	389.9	378.0	347.4	338.8
35°	371.3	368.7	350.7	324.2	316.2
37.5°	349.4	346.1	323.5	302.2	292.3
40°	327.5	323.5	298.9	279.7	269.0
42.5°	306.9	301.6	277.7	257.1	245.1
45°	285.0	279.0	255.1	233.8	224.5
47.5°	263.0	257.7	235.8	213.9	203.3
50°	239.8	235.1	215.2	193.3	182.0
52.5°	220.5	213.2	194.0	172.0	162.7
55°	198.0	192.0	174.0	153.4	145.5
57.5°	177.4	171.4	154.8	135.5	128.9
60°	158.1	149.5	135.5	118.9	113.6
62.5°	136.8	130.2	118.2	104.3	110.9
65°	117.6	110.9	100.3	102.3	85.0
67.5°	96.3	93.0	83.7	74.4	71.7
70°	78.4	74.4	71.1	61.1	58.5
72.5°	62.4	58.5	53.8	48.5	46.5
75°	47.2	43.8	41.2	39.2	43.2
77.5°	32.5	31.2	29.2	27.2	26.6
80°	21.3	20.6	19.9	19.3	18.6
82.5°	12.6	12.6	12.6	12.6	12.6
85°	6.6	7.3	8.0	8.6	9.3
87.5°	4.0	4.0	4.6	5.3	6.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)