

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: P559542

Luminaire Tested: FSR-12-1-LD4-2STD-50-UNV-80-87-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559542  
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-80-87-EDD-90  
Description: 1X1 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM  
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

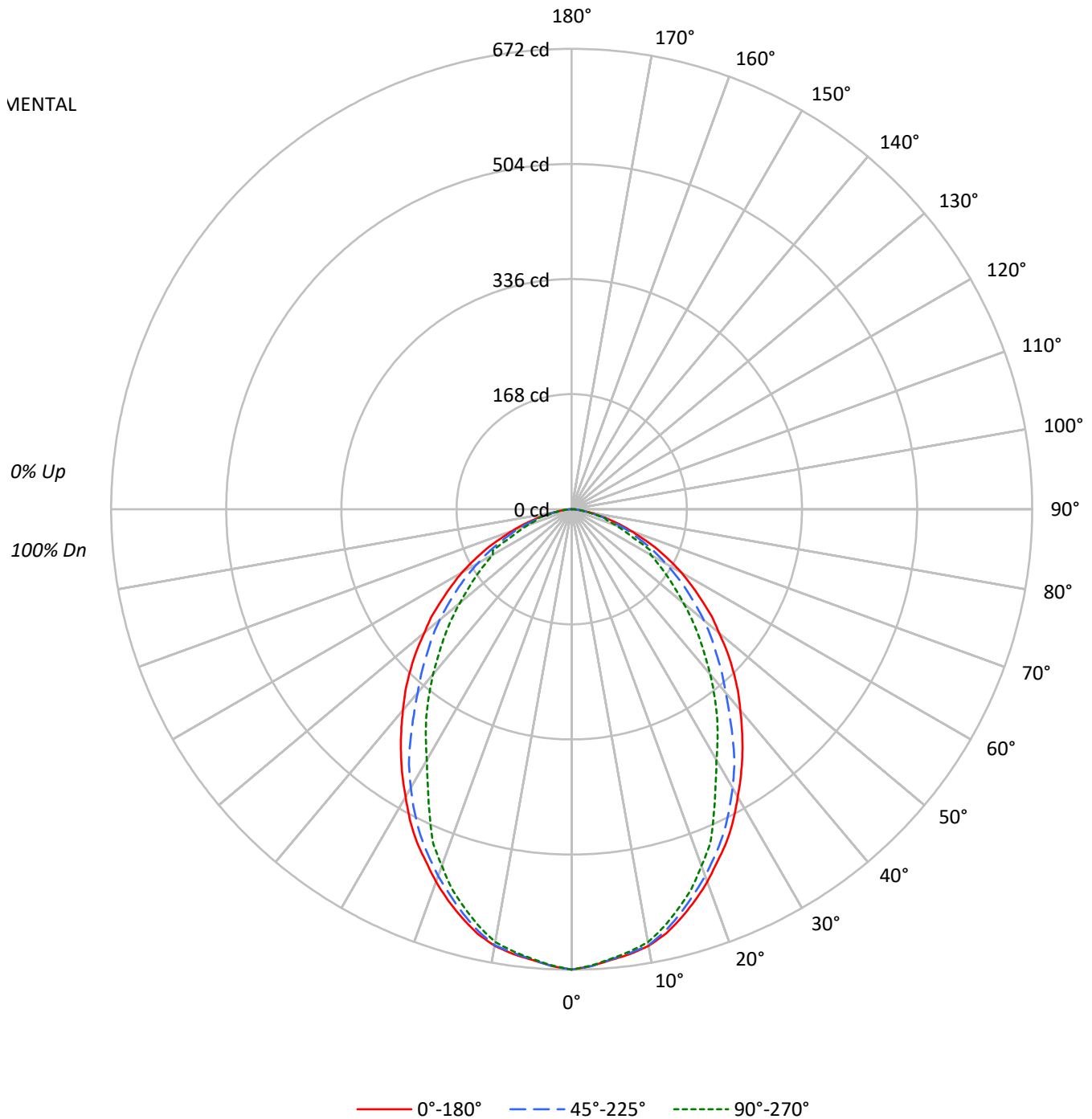
Lumens per Lamp: N/A  
Luminaire Lumens: 1319.0 lumens  
Efficiency: N/A  
Efficacy: 79.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	7232	7232	7232
5°	7133	7126	7117
10°	7072	7063	7013
15°	6881	6812	6717
20°	6629	6522	6344
25°	6356	6217	5830
30°	6024	5832	5251
35°	5706	5389	4858
40°	5380	4911	4421
45°	5072	4541	3996
50°	4695	4215	3563
55°	4344	3819	3192
60°	3980	3412	2859
65°	3502	2988	2532
70°	2886	2615	2153
75°	2292	2005	2100
80°	1543	1444	1345
85°	963	1149	1346

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5072 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.5	4.7
10°-20°	171.6	13.0
20°-30°	237.6	18.0
30°-40°	253.4	19.2
40°-50°	231.2	17.5
50°-60°	181.1	13.7
60°-70°	118.0	8.9
70°-80°	52.3	4.0
80°-90°	11.2	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°	471.8	35.8
0°-40°	725.2	55.0
0°-60°	1137.5	86.2
0°-90°	1319.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1319.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	672	672	672	672	672	
5°	660	660	660	659	659	63
15°	618	618	611	605	603	174
25°	535	532	524	505	491	246
35°	434	431	410	379	370	271
45°	333	326	298	273	262	257
55°	232	224	204	179	170	208
65°	138	130	117	120	99	135
75°	55	51	48	46	50	59
85°	8	8	9	10	11	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	671.9	671.9	671.9	671.9	671.9
2.5°	667.2	667.2	667.2	666.4	666.4
5°	660.2	659.5	659.5	658.7	658.7
7.5°	654.8	654.0	653.2	652.5	650.9
10°	647.0	647.0	646.2	642.4	641.6
12.5°	634.6	633.8	630.7	625.3	623.7
15°	617.5	617.5	611.3	605.1	602.8
17.5°	598.9	598.1	590.3	584.1	581.0
20°	578.7	577.1	569.4	559.3	553.8
22.5°	556.1	556.1	546.8	533.6	528.2
25°	535.2	532.1	523.5	504.9	490.9
27.5°	511.1	506.4	497.1	470.7	454.4
30°	484.7	482.4	469.2	435.0	422.5
32.5°	459.8	455.9	442.0	406.2	396.1
35°	434.2	431.1	410.1	379.0	369.7
37.5°	408.6	404.7	378.3	353.4	341.8
40°	382.9	378.3	349.5	327.0	314.6
42.5°	358.9	352.6	324.7	300.6	286.6
45°	333.2	326.2	298.3	273.4	262.5
47.5°	307.6	301.4	275.7	250.1	237.7
50°	280.4	275.0	251.7	226.0	212.8
52.5°	257.9	249.3	226.8	201.2	190.3
55°	231.5	224.5	203.5	179.4	170.1
57.5°	207.4	200.4	181.0	158.5	150.7
60°	184.9	174.8	158.5	139.0	132.8
62.5°	160.0	152.2	138.3	121.9	129.7
65°	137.5	129.7	117.3	119.6	99.4
67.5°	112.6	108.7	97.9	87.0	83.9
70°	91.7	87.0	83.1	71.5	68.4
72.5°	73.0	68.4	62.9	56.7	54.4
75°	55.1	51.3	48.2	45.8	50.5
77.5°	38.1	36.5	34.2	31.8	31.1
80°	24.9	24.1	23.3	22.5	21.7
82.5°	14.8	14.8	14.8	14.8	14.8
85°	7.8	8.5	9.3	10.1	10.9
87.5°	4.7	4.7	5.4	6.2	7.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)