

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: P559566

Luminaire Tested: FSR-12-1-LD4-2STD-50-UNV-81-97-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559566  
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-81-97-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

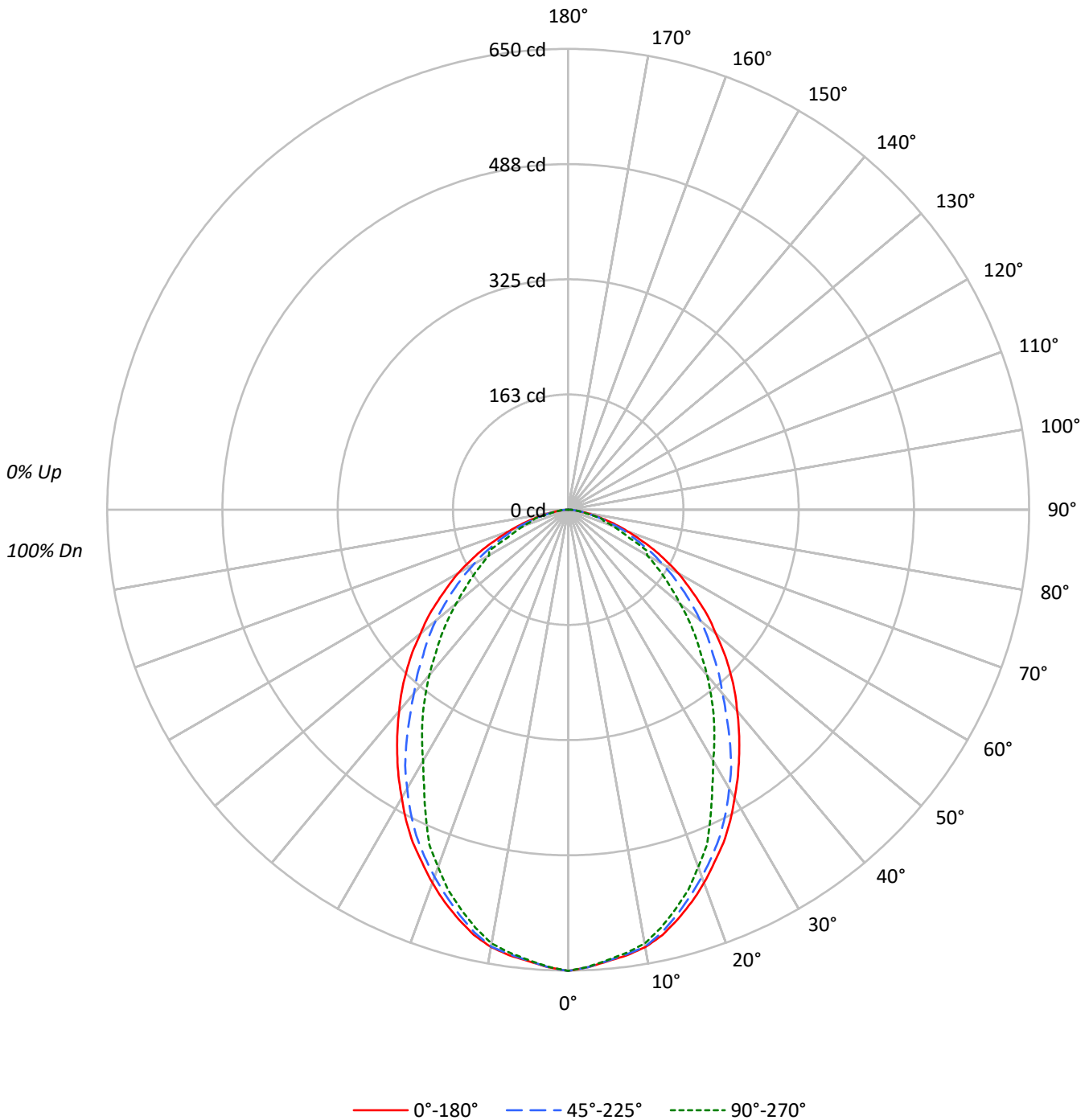
Lumens per Lamp: N/A  
Luminaire Lumens: 1277.0 lumens  
Efficiency: N/A  
Efficacy: 76.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77					75				
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67					65				
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58					56				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52					50				
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46					44				
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42					40				
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38					36				
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34					33				
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32					30				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7002	7002	7002
5°	6907	6899	6890
10°	6847	6839	6790
15°	6662	6595	6503
20°	6417	6314	6142
25°	6153	6020	5645
30°	5833	5645	5085
35°	5524	5218	4704
40°	5209	4755	4280
45°	4911	4396	3870
50°	4546	4081	3451
55°	4206	3697	3091
60°	3853	3302	2768
65°	3390	2893	2453
70°	2792	2533	2083
75°	2221	1938	2034
80°	1494	1401	1308
85°	926	1112	1297

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4911 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.6	4.7
10°-20°	166.2	13.0
20°-30°	230.1	18.0
30°-40°	245.3	19.2
40°-50°	223.8	17.5
50°-60°	175.3	13.7
60°-70°	114.3	8.9
70°-80°	50.6	4.0
80°-90°	10.9	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°	456.8	35.8
0°-40°	702.1	55.0
0°-60°	1101.2	86.2
0°-90°	1277.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1277.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	650	650	650	650	650	
5°	639	638	638	638	638	61
15°	598	598	592	586	584	168
25°	518	515	507	489	475	238
35°	420	417	397	367	358	263
45°	323	316	289	265	254	248
55°	224	217	197	174	165	201
65°	133	126	114	116	96	131
75°	53	50	47	44	49	57
85°	8	8	9	10	10	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	650.5	650.5	650.5	650.5	650.5
2.5°	646.0	646.0	646.0	645.2	645.2
5°	639.2	638.5	638.5	637.7	637.7
7.5°	633.9	633.2	632.4	631.7	630.2
10°	626.4	626.4	625.7	621.9	621.2
12.5°	614.4	613.6	610.6	605.4	603.9
15°	597.8	597.8	591.8	585.8	583.6
17.5°	579.8	579.0	571.5	565.5	562.5
20°	560.2	558.7	551.2	541.4	536.2
22.5°	538.4	538.4	529.4	516.6	511.4
25°	518.1	515.1	506.9	488.8	475.3
27.5°	494.8	490.3	481.3	455.7	439.9
30°	469.3	467.0	454.2	421.1	409.1
32.5°	445.2	441.4	427.9	393.3	383.5
35°	420.4	417.4	397.1	367.0	358.0
37.5°	395.6	391.8	366.2	342.2	330.9
40°	370.7	366.2	338.4	316.6	304.6
42.5°	347.4	341.4	314.3	291.0	277.5
45°	322.6	315.8	288.8	264.7	254.2
47.5°	297.8	291.8	267.0	242.1	230.1
50°	271.5	266.2	243.7	218.8	206.1
52.5°	249.7	241.4	219.6	194.8	184.2
55°	224.1	217.3	197.0	173.7	164.7
57.5°	200.8	194.0	175.2	153.4	145.9
60°	179.0	169.2	153.4	134.6	128.6
62.5°	154.9	147.4	133.9	118.1	125.6
65°	133.1	125.6	113.6	115.8	96.3
67.5°	109.0	105.3	94.8	84.2	81.2
70°	88.7	84.2	80.5	69.2	66.2
72.5°	70.7	66.2	60.9	54.9	52.6
75°	53.4	49.6	46.6	44.4	48.9
77.5°	36.8	35.3	33.1	30.8	30.1
80°	24.1	23.3	22.6	21.8	21.1
82.5°	14.3	14.3	14.3	14.3	14.3
85°	7.5	8.3	9.0	9.8	10.5
87.5°	4.5	4.5	5.3	6.0	6.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)