

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: P560138

Luminaire Tested: FSR-12-2-LD4-1STD-50-UNV-81-94-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560138  
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-12-2-LD4-1STD-50-UNV-81-94-EDD-90  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

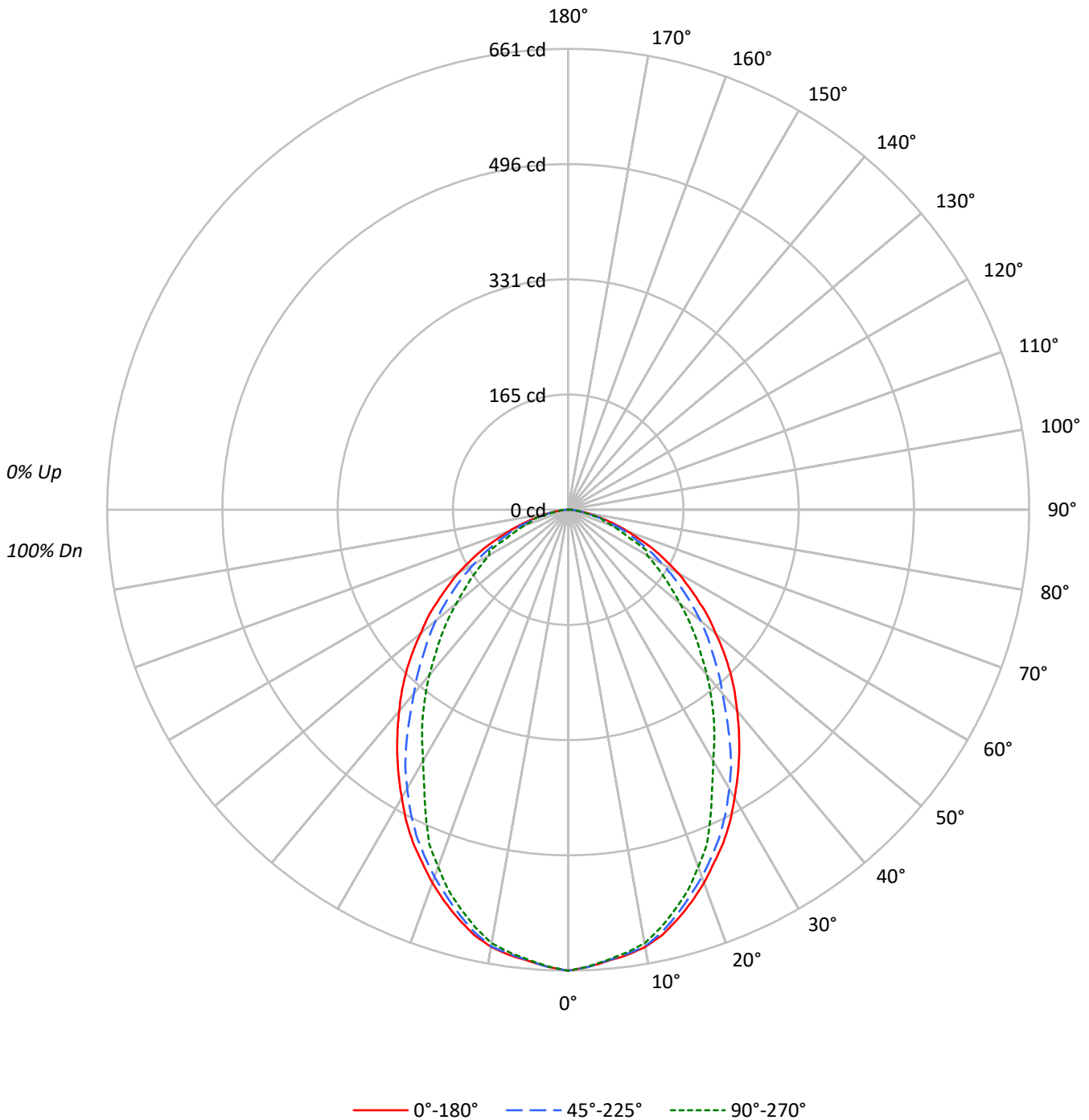
Lumens per Lamp: N/A  
Luminaire Lumens: 1298.0 lumens  
Efficiency: N/A  
Efficacy: 78.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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																												
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°	3559	3559	3559
5°	3510	3506	3502
10°	3480	3476	3451
15°	3386	3352	3305
20°	3262	3209	3121
25°	3128	3059	2869
30°	2964	2869	2584
35°	2807	2652	2390
40°	2647	2417	2175
45°	2496	2234	1967
50°	2310	2074	1753
55°	2137	1879	1571
60°	1958	1678	1407
65°	1723	1470	1245
70°	1419	1287	1059
75°	1129	986	1033
80°	759	710	663
85°	469	568	661

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2496 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.5	4.7
10°-20°	168.9	13.0
20°-30°	233.8	18.0
30°-40°	249.3	19.2
40°-50°	227.5	17.5
50°-60°	178.2	13.7
60°-70°	116.1	8.9
70°-80°	51.5	4.0
80°-90°	11.0	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°	464.3	35.8
0°-40°	713.7	55.0
0°-60°	1119.4	86.2
0°-90°	1298.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1298.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	661	661	661	661	661	
5°	650	649	649	648	648	62
15°	608	608	602	595	593	171
25°	527	524	515	497	483	242
35°	427	424	404	373	364	267
45°	328	321	294	269	258	253
55°	228	221	200	177	167	204
65°	135	128	115	118	98	133
75°	54	50	47	45	50	58
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°	661.2	661.2	661.2	661.2	661.2
2.5°	656.6	656.6	656.6	655.8	655.8
5°	649.7	649.0	649.0	648.2	648.2
7.5°	644.4	643.6	642.8	642.1	640.5
10°	636.7	636.7	636.0	632.1	631.4
12.5°	624.5	623.7	620.7	615.3	613.8
15°	607.7	607.7	601.6	595.4	593.2
17.5°	589.3	588.6	580.9	574.8	571.8
20°	569.5	567.9	560.3	550.3	545.0
22.5°	547.3	547.3	538.1	525.1	519.8
25°	526.7	523.6	515.2	496.8	483.1
27.5°	503.0	498.4	489.2	463.2	447.2
30°	477.0	474.7	461.7	428.0	415.8
32.5°	452.5	448.7	434.9	399.8	389.8
35°	427.3	424.2	403.6	373.0	363.8
37.5°	402.1	398.2	372.3	347.8	336.3
40°	376.8	372.3	344.0	321.8	309.6
42.5°	353.1	347.0	319.5	295.8	282.1
45°	327.9	321.0	293.5	269.1	258.4
47.5°	302.7	296.6	271.4	246.1	233.9
50°	275.9	270.6	247.7	222.4	209.4
52.5°	253.8	245.4	223.2	198.0	187.3
55°	227.8	220.9	200.3	176.6	167.4
57.5°	204.1	197.2	178.1	155.9	148.3
60°	181.9	172.0	155.9	136.8	130.7
62.5°	157.5	149.8	136.1	120.0	127.7
65°	135.3	127.7	115.4	117.7	97.8
67.5°	110.8	107.0	96.3	85.6	82.6
70°	90.2	85.6	81.8	70.3	67.3
72.5°	71.9	67.3	61.9	55.8	53.5
75°	54.3	50.4	47.4	45.1	49.7
77.5°	37.5	35.9	33.6	31.3	30.6
80°	24.5	23.7	22.9	22.2	21.4
82.5°	14.5	14.5	14.5	14.5	14.5
85°	7.6	8.4	9.2	9.9	10.7
87.5°	4.6	4.6	5.4	6.1	6.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)