

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: P560476

Luminaire Tested: FSR-12-2-LD4-2LO-40-UNV-82-96-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560476  
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-LD4-2LO-40-UNV-82-96-EDD-90  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

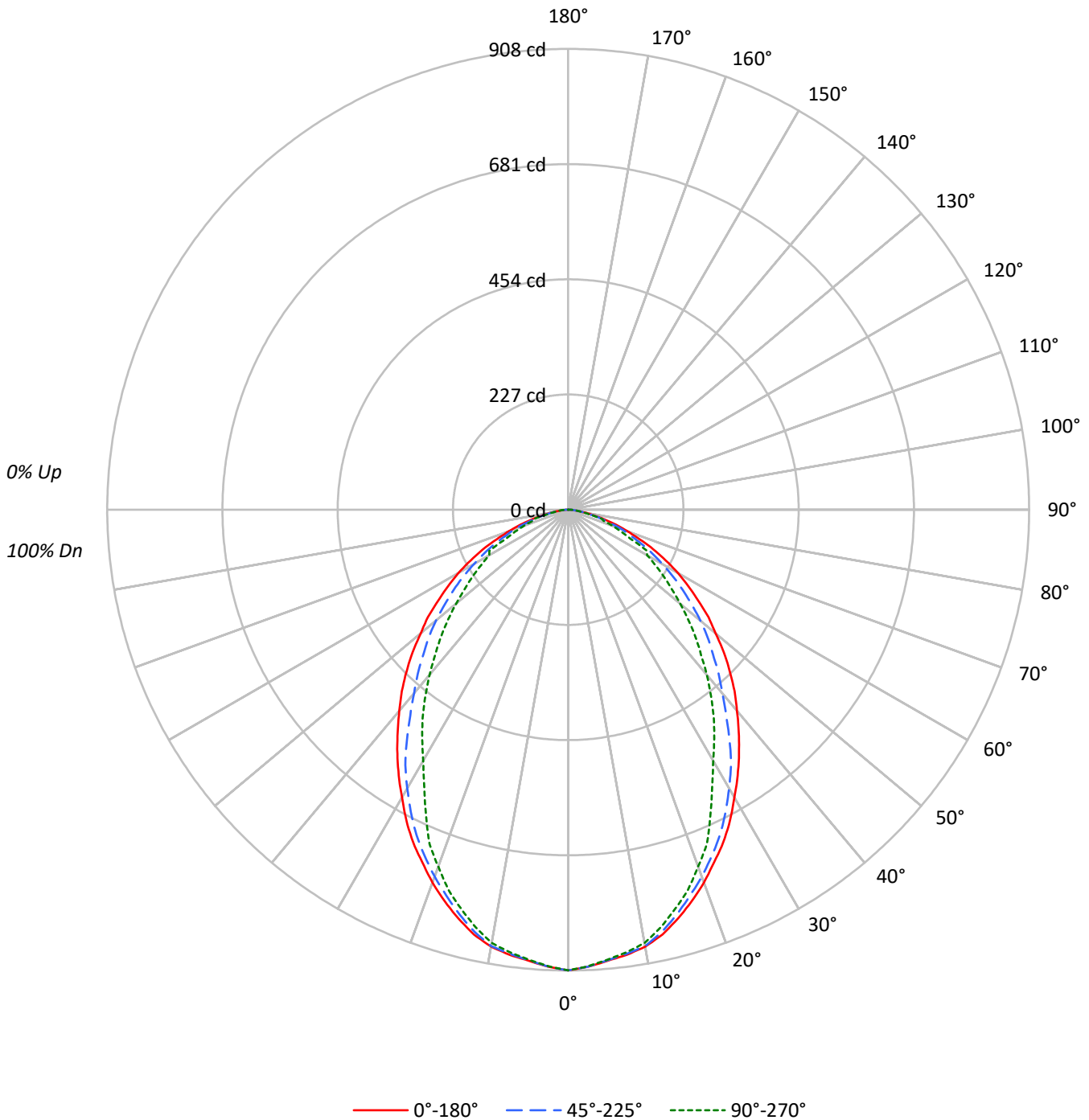
Lumens per Lamp: N/A  
Luminaire Lumens: 1782.0 lumens  
Efficiency: N/A  
Efficacy: 76.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.4  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	4885	4885	4885
5°	4819	4813	4808
10°	4777	4771	4737
15°	4649	4602	4537
20°	4478	4405	4285
25°	4293	4200	3938
30°	4069	3939	3548
35°	3854	3641	3282
40°	3635	3318	2986
45°	3427	3067	2700
50°	3172	2847	2407
55°	2934	2579	2156
60°	2689	2305	1931
65°	2365	2018	1710
70°	1948	1767	1452
75°	1549	1354	1418
80°	1041	976	911
85°	648	778	908

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3427 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.5	4.7
10°-20°	231.9	13.0
20°-30°	321.0	18.0
30°-40°	342.3	19.2
40°-50°	312.3	17.5
50°-60°	244.7	13.7
60°-70°	159.5	8.9
70°-80°	70.6	4.0
80°-90°	15.1	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°	637.4	35.8
0°-40°	979.8	55.0
0°-60°	1536.7	86.2
0°-90°	1782.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1782.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	908	908	908	908	908	
5°	892	891	891	890	890	85
15°	834	834	826	818	814	235
25°	723	719	707	682	663	332
35°	587	582	554	512	500	367
45°	450	441	403	369	355	347
55°	313	303	275	242	230	280
65°	186	175	158	162	134	183
75°	74	69	65	62	68	80
85°	10	12	13	14	15	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	907.7	907.7	907.7	907.7	907.7
2.5°	901.4	901.4	901.4	900.4	900.4
5°	892.0	890.9	890.9	889.9	889.9
7.5°	884.6	883.6	882.5	881.5	879.4
10°	874.1	874.1	873.1	867.8	866.8
12.5°	857.4	856.3	852.1	844.8	842.7
15°	834.3	834.3	825.9	817.5	814.3
17.5°	809.1	808.0	797.5	789.1	784.9
20°	781.8	779.7	769.2	755.6	748.2
22.5°	751.4	751.4	738.8	720.9	713.6
25°	723.0	718.8	707.3	682.1	663.2
27.5°	690.5	684.2	671.6	635.9	613.9
30°	654.8	651.7	633.8	587.7	570.9
32.5°	621.2	616.0	597.1	548.8	535.2
35°	586.6	582.4	554.1	512.1	499.5
37.5°	552.0	546.7	511.1	477.5	461.7
40°	517.4	511.1	472.2	441.8	425.0
42.5°	484.8	476.4	438.6	406.1	387.2
45°	450.2	440.7	403.0	369.4	354.7
47.5°	415.6	407.2	372.5	337.9	321.1
50°	378.8	371.5	340.0	305.4	287.5
52.5°	348.4	336.9	306.4	271.8	257.1
55°	312.7	303.3	274.9	242.4	229.8
57.5°	280.2	270.7	244.5	214.1	203.6
60°	249.8	236.1	214.1	187.8	179.4
62.5°	216.2	205.7	186.8	164.8	175.2
65°	185.7	175.2	158.5	161.6	134.3
67.5°	152.2	146.9	132.2	117.5	113.3
70°	123.8	117.5	112.3	96.5	92.3
72.5°	98.6	92.3	85.0	76.6	73.5
75°	74.5	69.3	65.1	61.9	68.2
77.5°	51.4	49.3	46.2	43.0	42.0
80°	33.6	32.5	31.5	30.4	29.4
82.5°	19.9	19.9	19.9	19.9	19.9
85°	10.5	11.5	12.6	13.6	14.7
87.5°	6.3	6.3	7.3	8.4	9.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)