

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: P560537

Luminaire Tested: FSR-12-2-LD4-2LO-50-UNV-82-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560537  
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-50-UNV-82-88-EDD  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

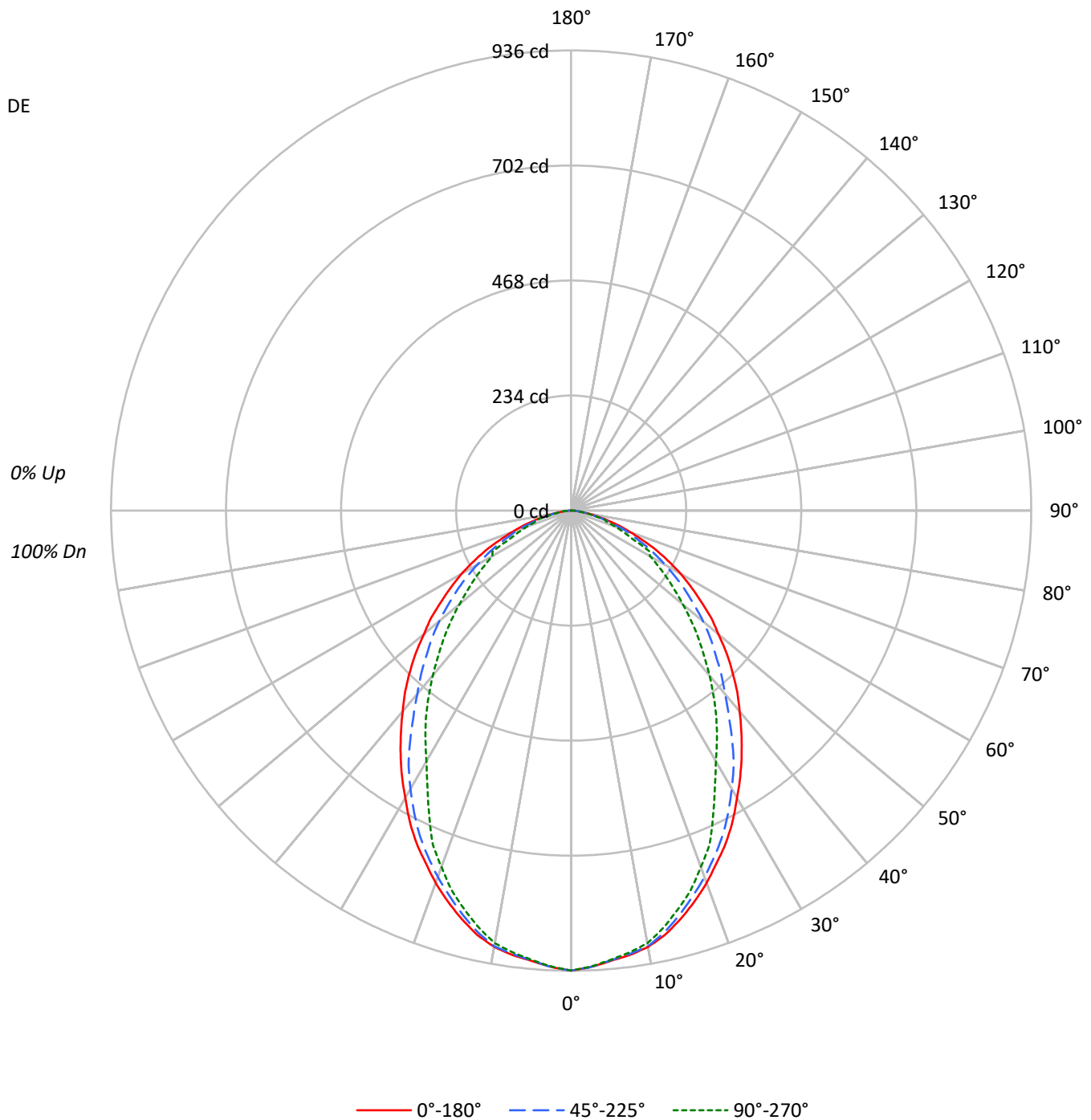
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1837.0 lumens  
Efficiency: N/A  
Efficacy: 78.5 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	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°	5036	5036	5036
5°	4968	4962	4956
10°	4924	4918	4884
15°	4792	4744	4678
20°	4616	4541	4418
25°	4426	4330	4060
30°	4195	4061	3657
35°	3973	3753	3383
40°	3747	3420	3078
45°	3532	3162	2783
50°	3270	2935	2482
55°	3025	2659	2223
60°	2772	2376	1991
65°	2439	2080	1764
70°	2009	1822	1498
75°	1597	1395	1462
80°	1072	1007	939
85°	667	803	932

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3532 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.1	4.7
10°-20°	239.1	13.0
20°-30°	331.0	18.0
30°-40°	352.9	19.2
40°-50°	321.9	17.5
50°-60°	252.2	13.7
60°-70°	164.4	8.9
70°-80°	72.8	4.0
80°-90°	15.7	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°	657.1	35.8
0°-40°	1010.0	55.0
0°-60°	1584.2	86.2
0°-90°	1837.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1837.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	936	936	936	936	936	
5°	920	918	918	917	917	87
15°	860	860	851	843	840	242
25°	745	741	729	703	684	342
35°	605	600	571	528	515	378
45°	464	454	415	381	366	357
55°	322	313	283	250	237	289
65°	192	181	163	167	138	189
75°	77	71	67	64	70	82
85°	11	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°	935.7	935.7	935.7	935.7	935.7
2.5°	929.3	929.3	929.3	928.2	928.2
5°	919.5	918.4	918.4	917.4	917.4
7.5°	911.9	910.9	909.8	908.7	906.5
10°	901.1	901.1	900.0	894.6	893.6
12.5°	883.8	882.7	878.4	870.8	868.7
15°	860.0	860.0	851.4	842.7	839.5
17.5°	834.1	833.0	822.2	813.5	809.2
20°	805.9	803.8	792.9	778.9	771.3
22.5°	774.6	774.6	761.6	743.2	735.6
25°	745.3	741.0	729.1	703.2	683.7
27.5°	711.8	705.3	692.3	655.6	632.8
30°	675.0	671.8	653.4	605.8	588.5
32.5°	640.4	635.0	615.5	565.8	551.7
35°	604.7	600.4	571.2	527.9	514.9
37.5°	569.0	563.6	526.8	492.2	476.0
40°	533.3	526.8	486.8	455.4	438.1
42.5°	499.8	491.1	452.2	418.7	399.2
45°	464.1	454.3	415.4	380.8	365.6
47.5°	428.4	419.7	384.0	348.3	331.0
50°	390.5	383.0	350.5	314.8	296.4
52.5°	359.2	347.3	315.9	280.2	265.0
55°	322.4	312.6	283.4	249.9	236.9
57.5°	288.8	279.1	252.1	220.7	209.9
60°	257.5	243.4	220.7	193.6	185.0
62.5°	222.8	212.0	192.6	169.8	180.7
65°	191.5	180.7	163.3	166.6	138.5
67.5°	156.9	151.4	136.3	121.2	116.8
70°	127.7	121.2	115.8	99.5	95.2
72.5°	101.7	95.2	87.6	79.0	75.7
75°	76.8	71.4	67.1	63.8	70.3
77.5°	53.0	50.8	47.6	44.4	43.3
80°	34.6	33.5	32.5	31.4	30.3
82.5°	20.6	20.6	20.6	20.6	20.6
85°	10.8	11.9	13.0	14.1	15.1
87.5°	6.5	6.5	7.6	8.7	9.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)