

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: P560393

Luminaire Tested: FSR-12-2-LD4-2LO-35-UNV-81-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560393  
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-35-UNV-81-88-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

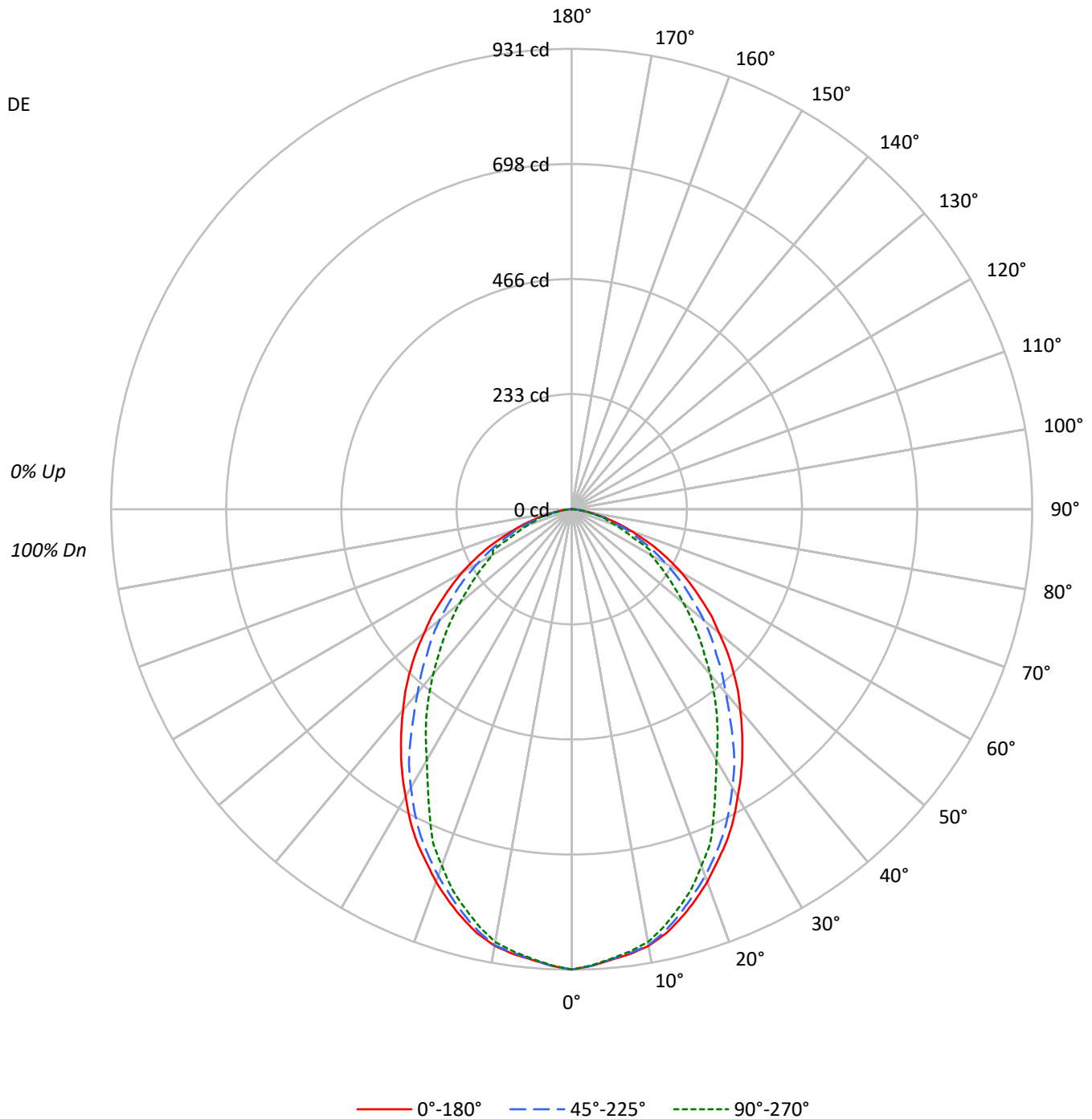
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1827.0 lumens  
Efficiency: N/A  
Efficacy: 78.1 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																		
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°	5008	5008	5008
5°	4941	4935	4929
10°	4898	4892	4857
15°	4766	4718	4652
20°	4590	4517	4393
25°	4402	4306	4038
30°	4172	4038	3637
35°	3951	3733	3365
40°	3726	3402	3061
45°	3513	3144	2768
50°	3252	2919	2468
55°	3008	2645	2211
60°	2757	2363	1981
65°	2425	2069	1754
70°	1998	1811	1490
75°	1589	1387	1454
80°	1066	1001	933
85°	667	797	932

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3513 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.6	4.7
10°-20°	237.7	13.0
20°-30°	329.1	18.0
30°-40°	351.0	19.2
40°-50°	320.2	17.5
50°-60°	250.9	13.7
60°-70°	163.5	8.9
70°-80°	72.4	4.0
80°-90°	15.5	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°	653.5	35.8
0°-40°	1004.5	55.0
0°-60°	1575.5	86.2
0°-90°	1827.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1827.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	931	931	931	931	931	
5°	914	913	913	912	912	87
15°	855	855	847	838	835	240
25°	741	737	725	699	680	340
35°	601	597	568	525	512	376
45°	462	452	413	379	364	356
55°	321	311	282	248	236	288
65°	190	180	162	166	138	188
75°	76	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°	930.6	930.6	930.6	930.6	930.6
2.5°	924.2	924.2	924.2	923.1	923.1
5°	914.5	913.4	913.4	912.4	912.4
7.5°	907.0	905.9	904.8	903.8	901.6
10°	896.2	896.2	895.1	889.8	888.7
12.5°	879.0	877.9	873.6	866.1	863.9
15°	855.3	855.3	846.7	838.1	834.9
17.5°	829.5	828.4	817.7	809.1	804.8
20°	801.5	799.4	788.6	774.6	767.1
22.5°	770.3	770.3	757.4	739.1	731.6
25°	741.3	737.0	725.2	699.3	680.0
27.5°	707.9	701.5	688.6	652.0	629.4
30°	671.4	668.1	649.8	602.5	585.3
32.5°	636.9	631.6	612.2	562.7	548.7
35°	601.4	597.1	568.1	525.0	512.1
37.5°	565.9	560.5	524.0	489.5	473.4
40°	530.4	524.0	484.2	453.0	435.7
42.5°	497.1	488.5	449.7	416.4	397.0
45°	461.6	451.9	413.1	378.7	363.7
47.5°	426.1	417.4	381.9	346.4	329.2
50°	388.4	380.9	348.6	313.1	294.8
52.5°	357.2	345.4	314.2	278.7	263.6
55°	320.6	310.9	281.9	248.5	235.6
57.5°	287.3	277.6	250.7	219.5	208.7
60°	256.1	242.1	219.5	192.6	184.0
62.5°	221.6	210.9	191.5	168.9	179.7
65°	190.4	179.7	162.5	165.7	137.7
67.5°	156.0	150.6	135.6	120.5	116.2
70°	127.0	120.5	115.1	99.0	94.7
72.5°	101.1	94.7	87.1	78.5	75.3
75°	76.4	71.0	66.7	63.5	69.9
77.5°	52.7	50.6	47.3	44.1	43.0
80°	34.4	33.4	32.3	31.2	30.1
82.5°	20.4	20.4	20.4	20.4	20.4
85°	10.8	11.8	12.9	14.0	15.1
87.5°	6.5	6.5	7.5	8.6	9.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)