

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: P560409

Luminaire Tested: FSR-12-2-LD4-2LO-35-UNV-82-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560409  
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-82-88-EDD  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

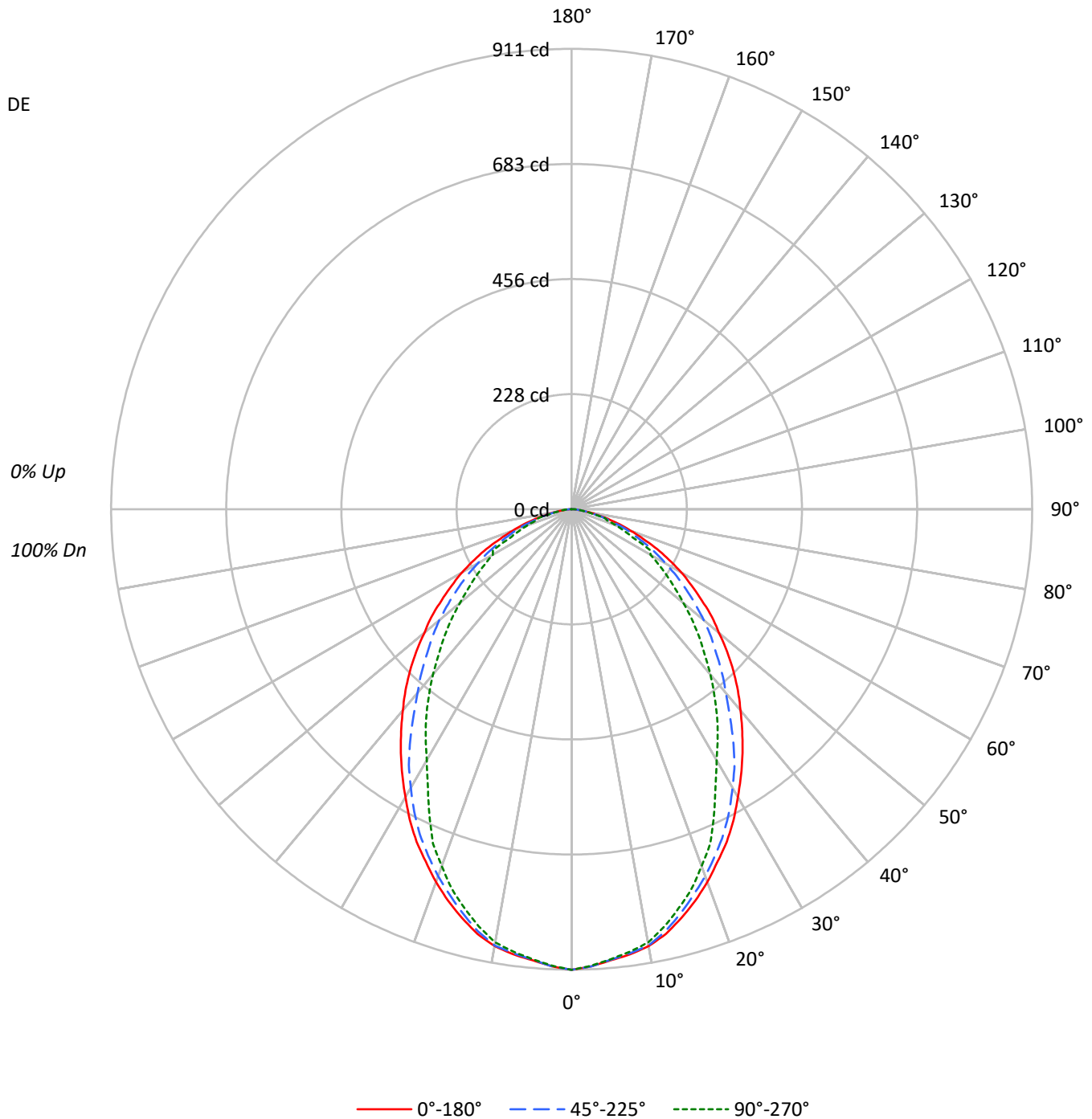
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1789.0 lumens  
Efficiency: N/A  
Efficacy: 76.5 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	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°	4905	4905	4905
5°	4838	4832	4827
10°	4796	4790	4756
15°	4666	4620	4555
20°	4495	4423	4302
25°	4311	4217	3954
30°	4085	3954	3562
35°	3869	3655	3295
40°	3649	3331	2998
45°	3440	3080	2710
50°	3184	2858	2417
55°	2945	2590	2165
60°	2699	2313	1940
65°	2375	2026	1718
70°	1956	1773	1459
75°	1555	1358	1424
80°	1044	979	914
85°	648	778	908

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3440 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.8	4.7
10°-20°	232.8	13.0
20°-30°	322.3	18.0
30°-40°	343.7	19.2
40°-50°	313.5	17.5
50°-60°	245.6	13.7
60°-70°	160.1	8.9
70°-80°	70.9	4.0
80°-90°	15.2	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°	639.9	35.8
0°-40°	983.6	55.0
0°-60°	1542.8	86.2
0°-90°	1789.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1789.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	911	911	911	911	911	
5°	896	894	894	893	893	85
15°	838	838	829	821	818	235
25°	726	722	710	685	666	333
35°	589	585	556	514	502	368
45°	452	442	405	371	356	348
55°	314	304	276	243	231	282
65°	186	176	159	162	135	184
75°	75	70	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°	911.3	911.3	911.3	911.3	911.3
2.5°	905.0	905.0	905.0	903.9	903.9
5°	895.5	894.4	894.4	893.4	893.4
7.5°	888.1	887.1	886.0	885.0	882.8
10°	877.6	877.6	876.5	871.3	870.2
12.5°	860.7	859.7	855.5	848.1	846.0
15°	837.5	837.5	829.1	820.7	817.5
17.5°	812.3	811.2	800.7	792.2	788.0
20°	784.9	782.8	772.2	758.5	751.2
22.5°	754.3	754.3	741.7	723.8	716.4
25°	725.9	721.7	710.1	684.8	665.8
27.5°	693.2	686.9	674.3	638.4	616.3
30°	657.4	654.2	636.3	590.0	573.1
32.5°	623.7	618.4	599.5	551.0	537.3
35°	588.9	584.7	556.3	514.1	501.5
37.5°	554.2	548.9	513.1	479.4	463.5
40°	519.4	513.1	474.1	443.5	426.7
42.5°	486.7	478.3	440.4	407.7	388.7
45°	452.0	442.5	404.6	370.8	356.1
47.5°	417.2	408.8	374.0	339.2	322.4
50°	380.3	372.9	341.3	306.6	288.7
52.5°	349.8	338.2	307.6	272.9	258.1
55°	313.9	304.5	276.0	243.4	230.7
57.5°	281.3	271.8	245.5	214.9	204.4
60°	250.7	237.0	214.9	188.6	180.2
62.5°	217.0	206.5	187.5	165.4	175.9
65°	186.5	175.9	159.1	162.2	134.9
67.5°	152.8	147.5	132.7	118.0	113.8
70°	124.3	118.0	112.7	96.9	92.7
72.5°	99.0	92.7	85.3	76.9	73.7
75°	74.8	69.5	65.3	62.2	68.5
77.5°	51.6	49.5	46.4	43.2	42.1
80°	33.7	32.7	31.6	30.6	29.5
82.5°	20.0	20.0	20.0	20.0	20.0
85°	10.5	11.6	12.6	13.7	14.7
87.5°	6.3	6.3	7.4	8.4	9.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)