

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: P560529

Luminaire Tested: FSR-12-2-LD4-2LO-50-UNV-82-84-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560529  
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-82-84-EDD  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

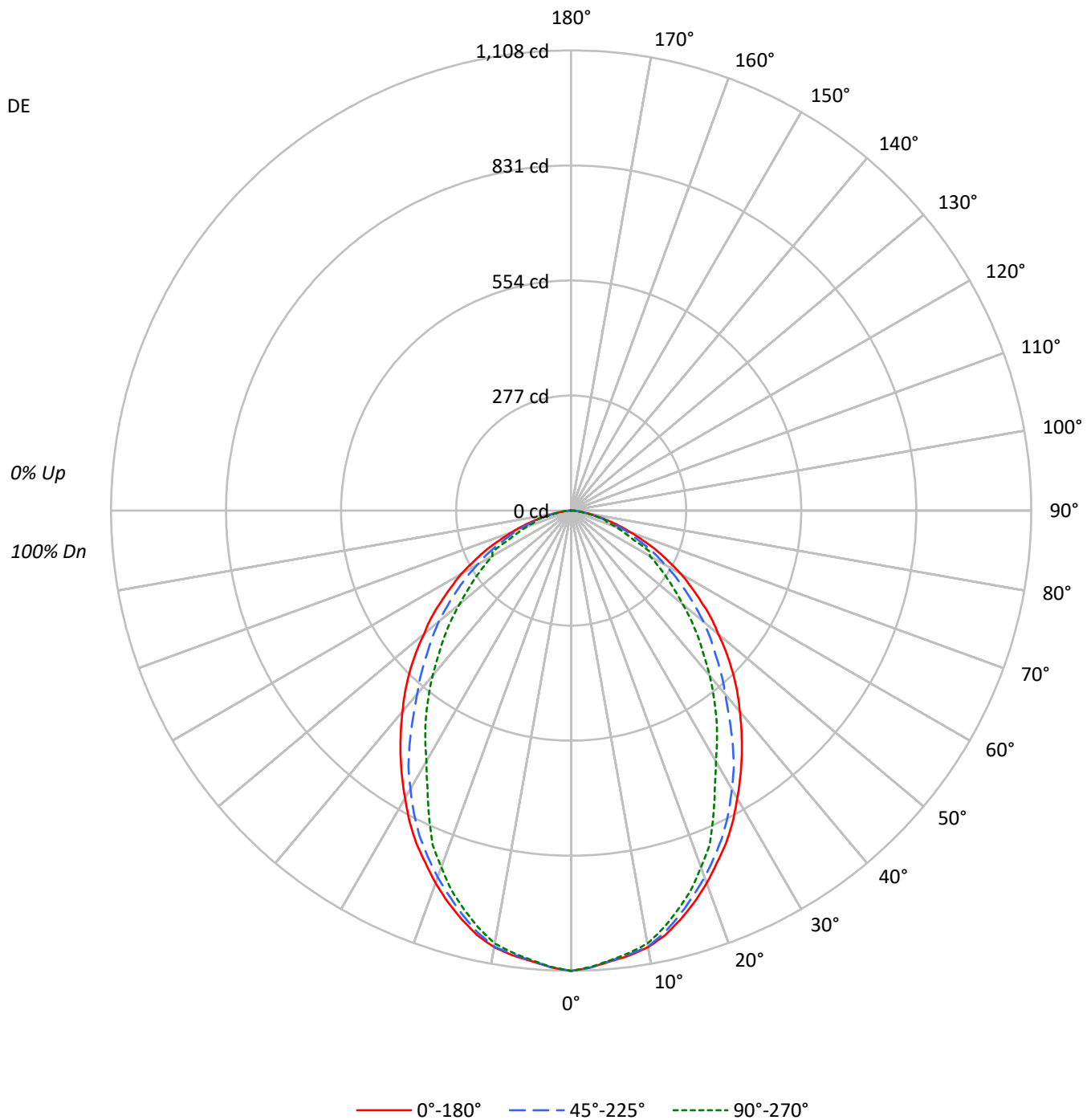
Lumens per Lamp: N/A  
Luminaire Lumens: 2176.0 lumens  
Efficiency: N/A  
Efficacy: 93.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.4  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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



TEST NUMBER: P560529

CATALOG NUMBER: FSR-12-2-LD4-2LO-50-UNV-82-84-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P560529

CATALOG NUMBER: FSR-12-2-LD4-2LO-50-UNV-82-84-EDD

**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	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°	5965	5965	5965
5°	5884	5877	5870
10°	5833	5826	5785
15°	5676	5619	5541
20°	5468	5380	5233
25°	5243	5129	4809
30°	4969	4810	4332
35°	4706	4445	4008
40°	4438	4051	3646
45°	4184	3745	3296
50°	3873	3476	2940
55°	3583	3150	2633
60°	3283	2814	2358
65°	2888	2464	2089
70°	2379	2157	1775
75°	1892	1651	1732
80°	1271	1190	1113
85°	790	951	1105

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4184 cd/sqm



TEST NUMBER: P560529

CATALOG NUMBER: FSR-12-2-LD4-2LO-50-UNV-82-84-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.2	4.7
10°-20°	283.2	13.0
20°-30°	392.0	18.0
30°-40°	418.0	19.2
40°-50°	381.3	17.5
50°-60°	298.8	13.7
60°-70°	194.7	8.9
70°-80°	86.3	4.0
80°-90°	18.5	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°	778.4	35.8
0°-40°	1196.4	55.0
0°-60°	1876.5	86.2
0°-90°	2176.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2176.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1108	1108	1108	1108	1108	
5°	1089	1088	1088	1087	1087	103
15°	1019	1019	1008	998	994	286
25°	883	878	864	833	810	405
35°	716	711	677	625	610	448
45°	550	538	492	451	433	423
55°	382	370	336	296	281	342
65°	227	214	194	197	164	224
75°	91	85	79	76	83	98
85°	13	14	15	17	18	18
90°	0	0	0	0	0	



TEST NUMBER: P560529

CATALOG NUMBER: FSR-12-2-LD4-2LO-50-UNV-82-84-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1108.4	1108.4	1108.4	1108.4	1108.4
2.5°	1100.7	1100.7	1100.7	1099.5	1099.5
5°	1089.2	1087.9	1087.9	1086.6	1086.6
7.5°	1080.2	1079.0	1077.7	1076.4	1073.8
10°	1067.4	1067.4	1066.1	1059.7	1058.5
12.5°	1046.9	1045.6	1040.5	1031.5	1029.0
15°	1018.7	1018.7	1008.5	998.2	994.4
17.5°	988.0	986.7	973.9	963.6	958.5
20°	954.7	952.1	939.3	922.6	913.7
22.5°	917.5	917.5	902.1	880.3	871.4
25°	882.9	877.8	863.7	832.9	809.9
27.5°	843.2	835.5	820.1	776.5	749.6
30°	799.6	795.8	774.0	717.6	697.1
32.5°	758.6	752.2	729.1	670.2	653.5
35°	716.3	711.2	676.6	625.3	610.0
37.5°	674.0	667.6	624.0	583.0	563.8
40°	631.7	624.0	576.6	539.5	519.0
42.5°	592.0	581.8	535.6	495.9	472.8
45°	549.7	538.2	492.1	451.1	433.1
47.5°	507.4	497.2	454.9	412.6	392.1
50°	462.6	453.6	415.2	372.9	351.1
52.5°	425.4	411.3	374.2	331.9	313.9
55°	381.9	370.3	335.7	296.0	280.6
57.5°	342.1	330.6	298.6	261.4	248.6
60°	305.0	288.3	261.4	229.4	219.1
62.5°	264.0	251.2	228.1	201.2	214.0
65°	226.8	214.0	193.5	197.3	164.0
67.5°	185.8	179.4	161.5	143.5	138.4
70°	151.2	143.5	137.1	117.9	112.8
72.5°	120.5	112.8	103.8	93.5	89.7
75°	91.0	84.6	79.4	75.6	83.3
77.5°	62.8	60.2	56.4	52.5	51.3
80°	41.0	39.7	38.4	37.2	35.9
82.5°	24.3	24.3	24.3	24.3	24.3
85°	12.8	14.1	15.4	16.7	17.9
87.5°	7.7	7.7	9.0	10.3	11.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)