

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: P559239

Luminaire Tested: FSR-12-1-LD4-2LO-35-UNV-81-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559239  
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-12-1-LD4-2LO-35-UNV-81-87-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

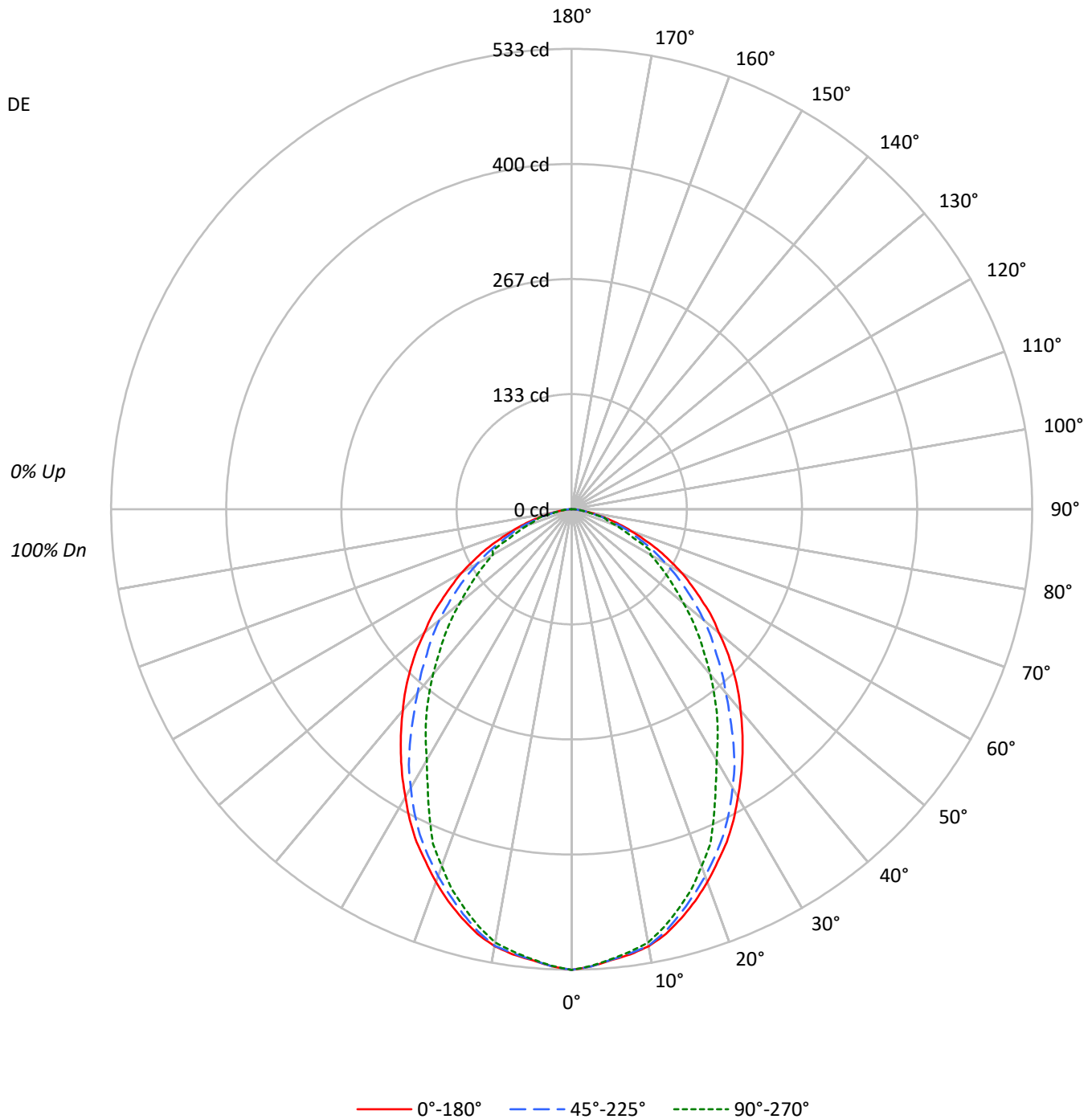
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1047.0 lumens  
Efficiency: N/A  
Efficacy: 89.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
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: P559239  
CATALOG NUMBER: FSR-12-1-LD4-2LO-35-UNV-81-87-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P559239

CATALOG NUMBER: FSR-12-1-LD4-2LO-35-UNV-81-87-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°	5740	5740	5740
5°	5663	5656	5649
10°	5614	5607	5567
15°	5463	5407	5332
20°	5261	5176	5035
25°	5045	4936	4628
30°	4781	4629	4169
35°	4529	4277	3857
40°	4272	3899	3509
45°	4026	3605	3172
50°	3728	3346	2828
55°	3447	3031	2533
60°	3158	2708	2269
65°	2779	2371	2010
70°	2291	2077	1709
75°	1822	1589	1668
80°	1221	1147	1072
85°	766	914	1062

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4026 cd/sqm



TEST NUMBER: P559239

CATALOG NUMBER: FSR-12-1-LD4-2LO-35-UNV-81-87-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.6	4.7
10°-20°	136.2	13.0
20°-30°	188.6	18.0
30°-40°	201.1	19.2
40°-50°	183.5	17.5
50°-60°	143.7	13.7
60°-70°	93.7	8.9
70°-80°	41.5	4.0
80°-90°	8.9	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°	374.5	35.8
0°-40°	575.7	55.0
0°-60°	902.9	86.2
0°-90°	1047.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1047.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	533	533	533	533	533	
5°	524	524	524	523	523	50
15°	490	490	485	480	478	138
25°	425	422	416	401	390	195
35°	345	342	326	301	294	215
45°	264	259	237	217	208	204
55°	184	178	162	142	135	165
65°	109	103	93	95	79	108
75°	44	41	38	36	40	47
85°	6	7	7	8	9	9
90°	0	0	0	0	0	



TEST NUMBER: P559239

CATALOG NUMBER: FSR-12-1-LD4-2LO-35-UNV-81-87-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	533.3	533.3	533.3	533.3	533.3
2.5°	529.6	529.6	529.6	529.0	529.0
5°	524.1	523.5	523.5	522.8	522.8
7.5°	519.8	519.1	518.5	517.9	516.7
10°	513.6	513.6	513.0	509.9	509.3
12.5°	503.7	503.1	500.6	496.3	495.1
15°	490.2	490.2	485.2	480.3	478.5
17.5°	475.4	474.8	468.6	463.7	461.2
20°	459.3	458.1	451.9	443.9	439.6
22.5°	441.5	441.5	434.1	423.6	419.3
25°	424.8	422.3	415.6	400.8	389.7
27.5°	405.7	402.0	394.6	373.6	360.7
30°	384.7	382.9	372.4	345.3	335.4
32.5°	365.0	361.9	350.8	322.5	314.4
35°	344.7	342.2	325.5	300.9	293.5
37.5°	324.3	321.2	300.3	280.5	271.3
40°	304.0	300.3	277.5	259.6	249.7
42.5°	284.9	279.9	257.7	238.6	227.5
45°	264.5	259.0	236.8	217.0	208.4
47.5°	244.2	239.2	218.9	198.5	188.7
50°	222.6	218.3	199.8	179.4	168.9
52.5°	204.7	197.9	180.0	159.7	151.1
55°	183.7	178.2	161.5	142.4	135.0
57.5°	164.6	159.1	143.7	125.8	119.6
60°	146.7	138.7	125.8	110.4	105.4
62.5°	127.0	120.8	109.7	96.8	103.0
65°	109.1	103.0	93.1	95.0	78.9
67.5°	89.4	86.3	77.7	69.1	66.6
70°	72.8	69.1	66.0	56.7	54.3
72.5°	58.0	54.3	49.9	45.0	43.2
75°	43.8	40.7	38.2	36.4	40.1
77.5°	30.2	29.0	27.1	25.3	24.7
80°	19.7	19.1	18.5	17.9	17.3
82.5°	11.7	11.7	11.7	11.7	11.7
85°	6.2	6.8	7.4	8.0	8.6
87.5°	3.7	3.7	4.3	4.9	5.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)