

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: P559241

Luminaire Tested: FSR-12-1-LD4-2LO-35-UNV-81-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559241  
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-81-88-EDD  
Description: 1X1 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**

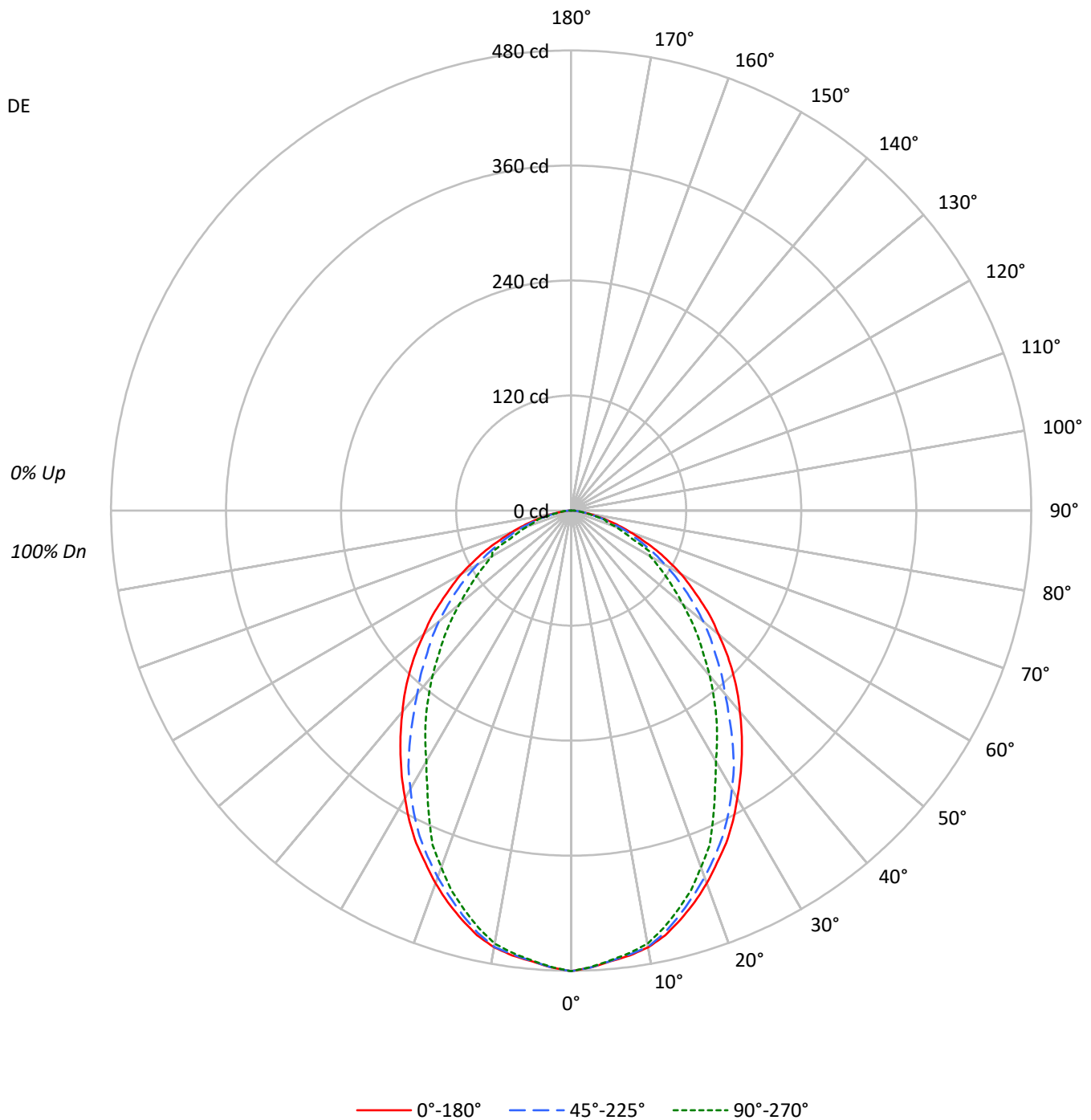
Lumens per Lamp: N/A  
Luminaire Lumens: 943.0 lumens  
Efficiency: N/A  
Efficacy: 80.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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



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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	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°	5171	5171	5171
5°	5100	5095	5088
10°	5056	5050	5014
15°	4920	4870	4802
20°	4739	4662	4535
25°	4544	4445	4169
30°	4307	4169	3755
35°	4079	3853	3473
40°	3847	3511	3160
45°	3626	3245	2857
50°	3358	3013	2549
55°	3106	2730	2282
60°	2846	2439	2045
65°	2504	2137	1811
70°	2061	1869	1539
75°	1639	1431	1501
80°	1103	1035	961
85°	692	827	963

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3626 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.7	4.7
10°-20°	122.7	13.0
20°-30°	169.9	18.0
30°-40°	181.1	19.2
40°-50°	165.3	17.5
50°-60°	129.5	13.7
60°-70°	84.4	8.9
70°-80°	37.4	4.0
80°-90°	8.0	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°	337.3	35.8
0°-40°	518.5	55.0
0°-60°	813.2	86.2
0°-90°	943.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	943.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	480	480	480	480	480	
5°	472	472	472	471	471	45
15°	442	442	437	433	431	124
25°	383	380	374	361	351	176
35°	310	308	293	271	264	194
45°	238	233	213	196	188	184
55°	166	160	146	128	122	148
65°	98	93	84	86	71	97
75°	39	37	34	33	36	42
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	480.4	480.4	480.4	480.4	480.4
2.5°	477.0	477.0	477.0	476.5	476.5
5°	472.0	471.5	471.5	470.9	470.9
7.5°	468.1	467.6	467.0	466.5	465.4
10°	462.6	462.6	462.0	459.2	458.7
12.5°	453.7	453.1	450.9	447.0	445.9
15°	441.5	441.5	437.0	432.6	430.9
17.5°	428.2	427.6	422.0	417.6	415.4
20°	413.7	412.6	407.0	399.8	395.9
22.5°	397.6	397.6	390.9	381.5	377.6
25°	382.6	380.4	374.3	361.0	351.0
27.5°	365.4	362.1	355.4	336.5	324.9
30°	346.5	344.9	335.4	311.0	302.1
32.5°	328.7	326.0	316.0	290.4	283.2
35°	310.4	308.2	293.2	271.0	264.3
37.5°	292.1	289.3	270.4	252.7	244.3
40°	273.8	270.4	249.9	233.8	224.9
42.5°	256.6	252.1	232.1	214.9	204.9
45°	238.2	233.2	213.2	195.5	187.7
47.5°	219.9	215.5	197.1	178.8	169.9
50°	200.5	196.6	179.9	161.6	152.2
52.5°	184.4	178.3	162.2	143.8	136.1
55°	165.5	160.5	145.5	128.3	121.6
57.5°	148.3	143.3	129.4	113.3	107.7
60°	132.2	124.9	113.3	99.4	95.0
62.5°	114.4	108.8	98.8	87.2	92.7
65°	98.3	92.7	83.9	85.5	71.1
67.5°	80.5	77.7	70.0	62.2	60.0
70°	65.5	62.2	59.4	51.1	48.9
72.5°	52.2	48.9	45.0	40.5	38.9
75°	39.4	36.7	34.4	32.8	36.1
77.5°	27.2	26.1	24.4	22.8	22.2
80°	17.8	17.2	16.7	16.1	15.5
82.5°	10.6	10.6	10.6	10.6	10.6
85°	5.6	6.1	6.7	7.2	7.8
87.5°	3.3	3.3	3.9	4.4	5.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)