

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: P559254

Luminaire Tested: FSR-12-1-LD4-2LO-35-UNV-82-87-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559254  
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-82-87-EDD-90  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

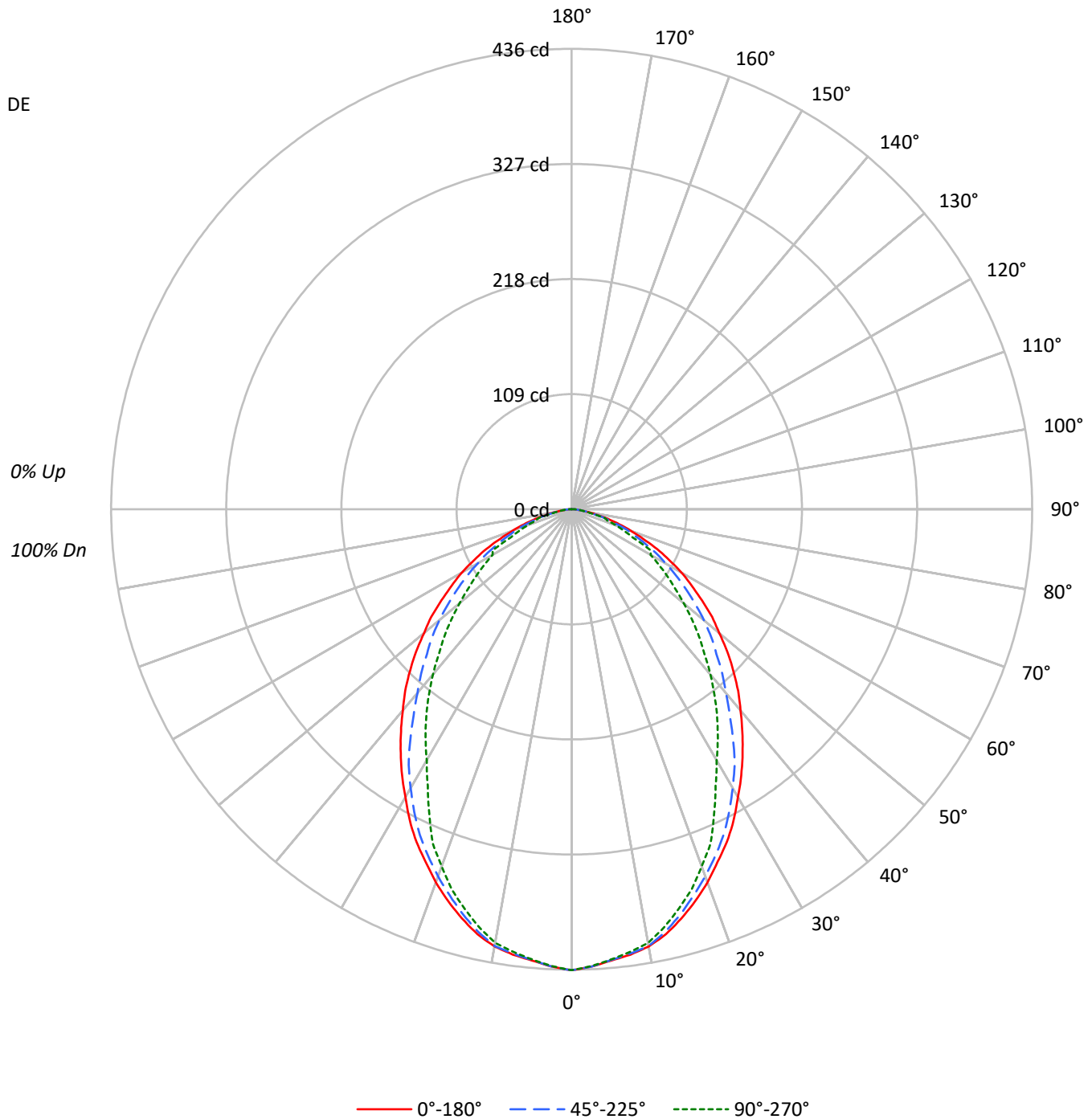
Lumens per Lamp: N/A  
Luminaire Lumens: 857.0 lumens  
Efficiency: N/A  
Efficacy: 73.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4698	4698	4698
5°	4635	4630	4625
10°	4595	4589	4557
15°	4471	4426	4364
20°	4307	4237	4121
25°	4130	4040	3789
30°	3914	3788	3412
35°	3707	3502	3156
40°	3496	3191	2872
45°	3296	2950	2597
50°	3051	2738	2316
55°	2822	2481	2074
60°	2585	2217	1858
65°	2274	1941	1645
70°	1876	1699	1397
75°	1489	1302	1364
80°	998	936	874
85°	618	753	877

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3296 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.6	4.7
10°-20°	111.5	13.0
20°-30°	154.4	18.0
30°-40°	164.6	19.2
40°-50°	150.2	17.5
50°-60°	117.7	13.7
60°-70°	76.7	8.9
70°-80°	34.0	4.0
80°-90°	7.3	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°	306.6	35.8
0°-40°	471.2	55.0
0°-60°	739.1	86.2
0°-90°	857.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	857.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	436	436	436	436	436	
5°	429	428	428	428	428	41
15°	401	401	397	393	392	113
25°	348	346	340	328	319	160
35°	282	280	266	246	240	176
45°	216	212	194	178	171	167
55°	150	146	132	117	110	135
65°	89	84	76	78	65	88
75°	36	33	31	30	33	38
85°	5	6	6	7	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	436.5	436.5	436.5	436.5	436.5
2.5°	433.5	433.5	433.5	433.0	433.0
5°	429.0	428.5	428.5	428.0	428.0
7.5°	425.4	424.9	424.4	423.9	422.9
10°	420.4	420.4	419.9	417.4	416.9
12.5°	412.3	411.8	409.8	406.3	405.3
15°	401.2	401.2	397.2	393.1	391.6
17.5°	389.1	388.6	383.6	379.5	377.5
20°	376.0	375.0	369.9	363.4	359.8
22.5°	361.3	361.3	355.3	346.7	343.2
25°	347.7	345.7	340.2	328.0	319.0
27.5°	332.1	329.0	323.0	305.8	295.2
30°	314.9	313.4	304.8	282.6	274.5
32.5°	298.8	296.2	287.2	263.9	257.4
35°	282.1	280.1	266.5	246.3	240.2
37.5°	265.5	262.9	245.8	229.6	222.1
40°	248.8	245.8	227.1	212.5	204.4
42.5°	233.2	229.1	211.0	195.3	186.2
45°	216.5	212.0	193.8	177.6	170.6
47.5°	199.9	195.8	179.2	162.5	154.4
50°	182.2	178.7	163.5	146.9	138.3
52.5°	167.6	162.0	147.4	130.7	123.6
55°	150.4	145.9	132.2	116.6	110.5
57.5°	134.7	130.2	117.6	103.0	97.9
60°	120.1	113.6	103.0	90.3	86.3
62.5°	104.0	98.9	89.8	79.2	84.3
65°	89.3	84.3	76.2	77.7	64.6
67.5°	73.2	70.7	63.6	56.5	54.5
70°	59.6	56.5	54.0	46.4	44.4
72.5°	47.4	44.4	40.9	36.8	35.3
75°	35.8	33.3	31.3	29.8	32.8
77.5°	24.7	23.7	22.2	20.7	20.2
80°	16.1	15.6	15.1	14.6	14.1
82.5°	9.6	9.6	9.6	9.6	9.6
85°	5.0	5.6	6.1	6.6	7.1
87.5°	3.0	3.0	3.5	4.0	4.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)