

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: P559432

Luminaire Tested: FSR-12-1-LD4-2STD-35-UNV-81-88-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559432  
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-LD4-2STD-35-UNV-81-88-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

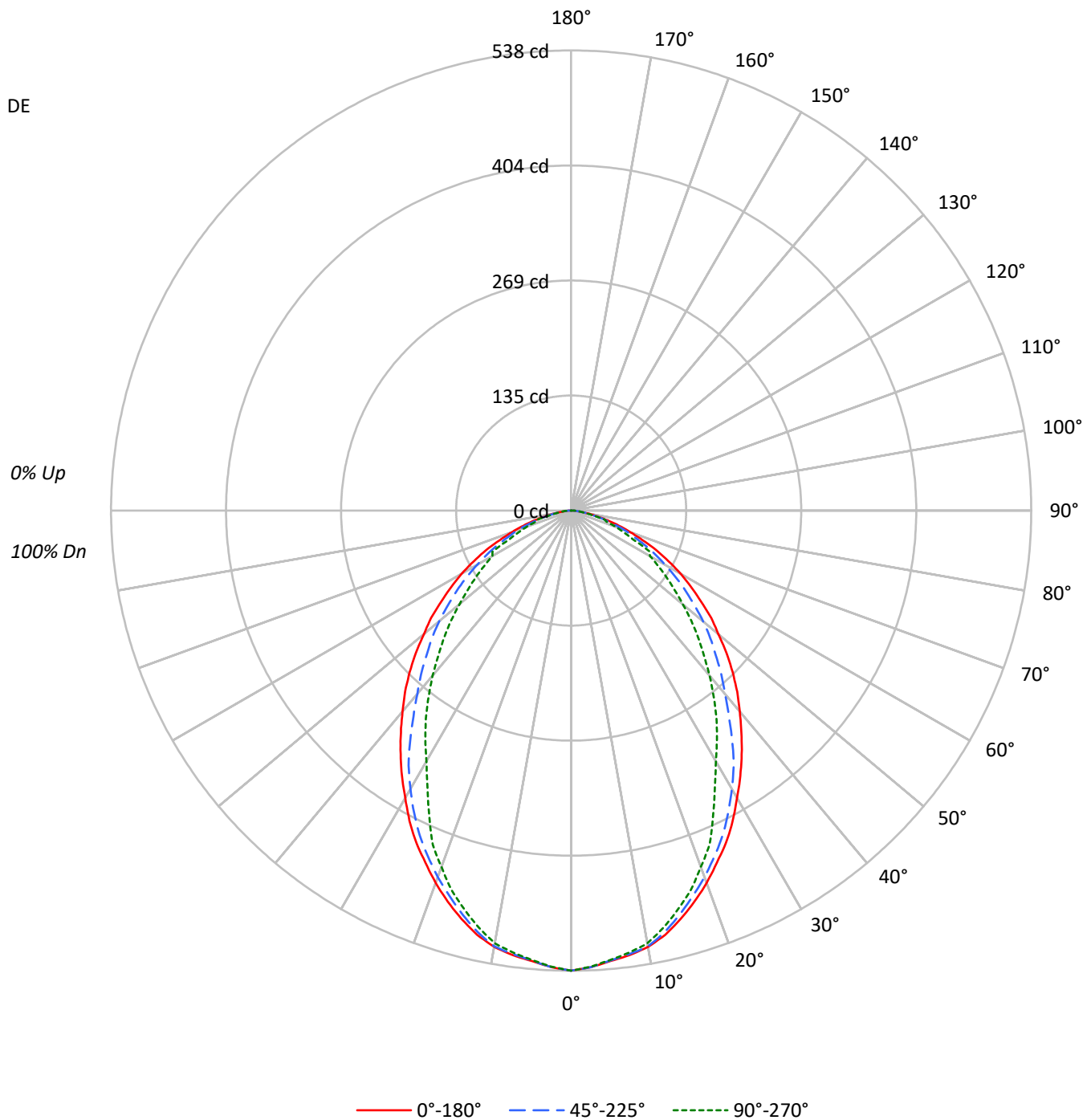
Lumens per Lamp: N/A  
Luminaire Lumens: 1056.0 lumens  
Efficiency: N/A  
Efficacy: 63.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	5790	5790	5790
5°	5712	5705	5697
10°	5662	5655	5615
15°	5509	5454	5378
20°	5307	5221	5079
25°	5089	4978	4668
30°	4822	4668	4205
35°	4568	4314	3890
40°	4308	3932	3540
45°	4061	3635	3200
50°	3759	3374	2853
55°	3477	3057	2556
60°	3186	2732	2288
65°	2804	2392	2027
70°	2310	2093	1721
75°	1838	1605	1680
80°	1234	1159	1079
85°	766	926	1074

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4061 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.1	4.7
10°-20°	137.4	13.0
20°-30°	190.2	18.0
30°-40°	202.8	19.2
40°-50°	185.1	17.5
50°-60°	145.0	13.7
60°-70°	94.5	8.9
70°-80°	41.9	4.0
80°-90°	9.0	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°	377.7	35.8
0°-40°	580.6	55.0
0°-60°	910.6	86.2
0°-90°	1056.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1056.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	538	538	538	538	538	
5°	529	528	528	527	527	50
15°	494	494	489	484	483	139
25°	428	426	419	404	393	197
35°	348	345	328	304	296	217
45°	267	261	239	219	210	206
55°	185	180	163	144	136	166
65°	110	104	94	96	80	108
75°	44	41	39	37	40	47
85°	6	7	8	8	9	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	537.9	537.9	537.9	537.9	537.9
2.5°	534.2	534.2	534.2	533.6	533.6
5°	528.6	528.0	528.0	527.3	527.3
7.5°	524.2	523.6	523.0	522.4	521.1
10°	518.0	518.0	517.4	514.3	513.7
12.5°	508.1	507.4	505.0	500.6	499.4
15°	494.4	494.4	489.4	484.4	482.6
17.5°	479.5	478.8	472.6	467.6	465.2
20°	463.3	462.0	455.8	447.7	443.4
22.5°	445.3	445.3	437.8	427.2	422.9
25°	428.5	426.0	419.1	404.2	393.0
27.5°	409.2	405.5	398.0	376.8	363.8
30°	388.0	386.2	375.6	348.2	338.3
32.5°	368.1	365.0	353.8	325.2	317.2
35°	347.6	345.1	328.3	303.5	296.0
37.5°	327.1	324.0	302.8	282.9	273.6
40°	306.6	302.8	279.8	261.8	251.9
42.5°	287.3	282.3	259.9	240.7	229.5
45°	266.8	261.2	238.8	218.9	210.2
47.5°	246.3	241.3	220.8	200.2	190.3
50°	224.5	220.1	201.5	181.0	170.4
52.5°	206.5	199.6	181.6	161.1	152.4
55°	185.3	179.7	162.9	143.7	136.2
57.5°	166.0	160.4	144.9	126.9	120.6
60°	148.0	139.9	126.9	111.3	106.3
62.5°	128.1	121.9	110.7	97.6	103.9
65°	110.1	103.9	93.9	95.8	79.6
67.5°	90.2	87.1	78.4	69.6	67.2
70°	73.4	69.6	66.5	57.2	54.7
72.5°	58.5	54.7	50.4	45.4	43.5
75°	44.2	41.0	38.6	36.7	40.4
77.5°	30.5	29.2	27.4	25.5	24.9
80°	19.9	19.3	18.7	18.0	17.4
82.5°	11.8	11.8	11.8	11.8	11.8
85°	6.2	6.8	7.5	8.1	8.7
87.5°	3.7	3.7	4.4	5.0	5.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)