

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: P559446

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

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559446  
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-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**

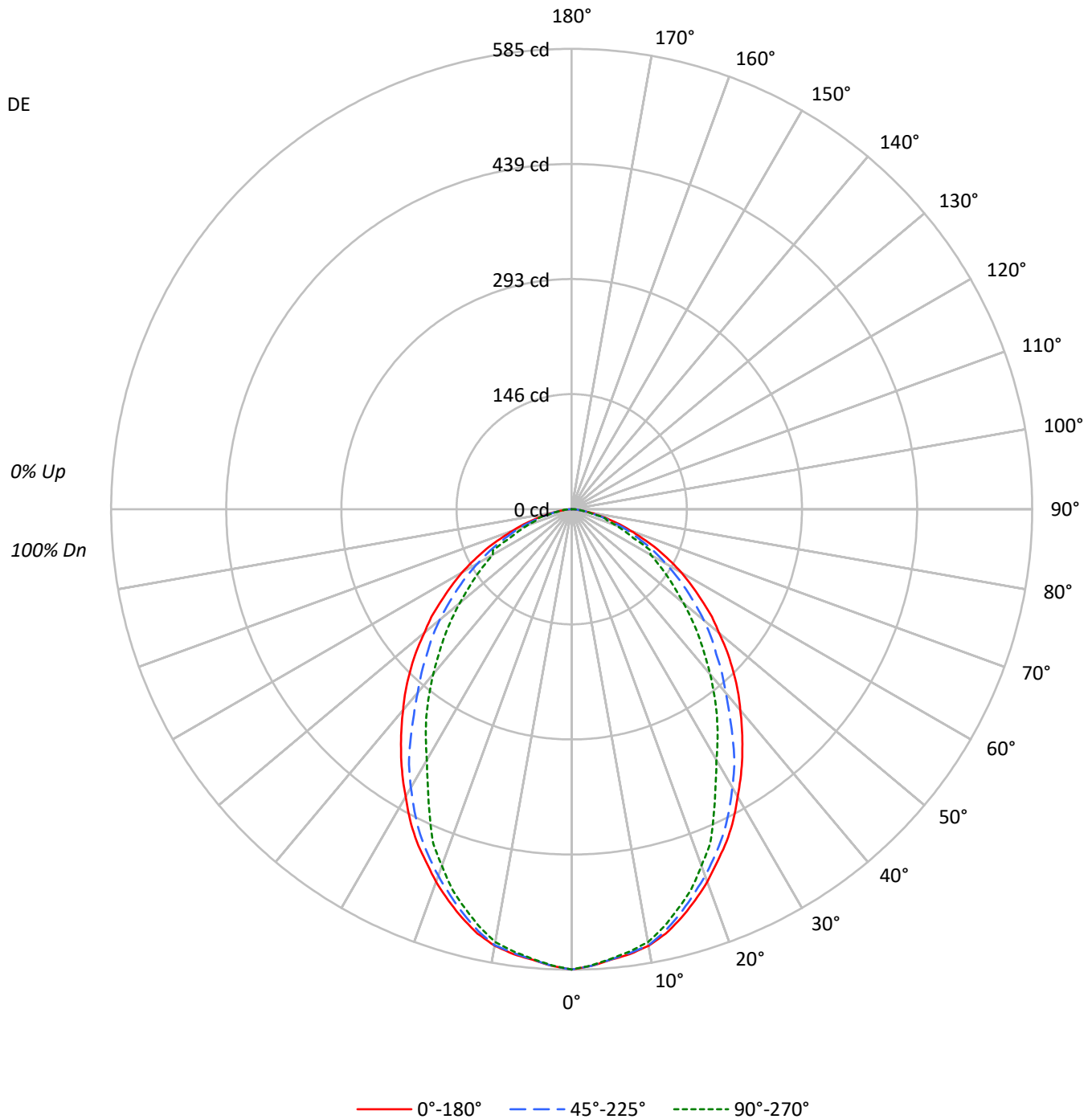
Lumens per Lamp: N/A  
Luminaire Lumens: 1148.0 lumens  
Efficiency: N/A  
Efficacy: 69.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	6295	6295	6295
5°	6209	6202	6195
10°	6155	6148	6103
15°	5990	5928	5846
20°	5770	5676	5521
25°	5532	5412	5075
30°	5243	5075	4571
35°	4966	4690	4229
40°	4683	4274	3847
45°	4415	3952	3478
50°	4088	3667	3101
55°	3781	3324	2779
60°	3464	2969	2489
65°	3049	2600	2203
70°	2511	2275	1873
75°	1996	1743	1826
80°	1339	1258	1172
85°	840	1000	1173

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4415 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.4	4.7
10°-20°	149.4	13.0
20°-30°	206.8	18.0
30°-40°	220.5	19.2
40°-50°	201.2	17.5
50°-60°	157.6	13.7
60°-70°	102.7	8.9
70°-80°	45.5	4.0
80°-90°	9.8	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°	410.6	35.8
0°-40°	631.2	55.0
0°-60°	990.0	86.2
0°-90°	1148.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1148.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	585	585	585	585	585	
5°	575	574	574	573	573	55
15°	538	538	532	527	525	151
25°	466	463	456	439	427	214
35°	378	375	357	330	322	236
45°	290	284	260	238	228	223
55°	202	195	177	156	148	181
65°	120	113	102	104	86	118
75°	48	45	42	40	44	51
85°	7	7	8	9	10	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	584.8	584.8	584.8	584.8	584.8
2.5°	580.7	580.7	580.7	580.0	580.0
5°	574.6	574.0	574.0	573.3	573.3
7.5°	569.9	569.2	568.6	567.9	566.5
10°	563.1	563.1	562.5	559.1	558.4
12.5°	552.3	551.6	548.9	544.2	542.9
15°	537.5	537.5	532.0	526.6	524.6
17.5°	521.2	520.6	513.8	508.4	505.7
20°	503.7	502.3	495.5	486.7	482.0
22.5°	484.0	484.0	475.9	464.4	459.7
25°	465.8	463.1	455.7	439.4	427.3
27.5°	444.8	440.8	432.7	409.7	395.5
30°	421.8	419.8	408.3	378.6	367.8
32.5°	400.2	396.8	384.7	353.6	344.8
35°	377.9	375.2	356.9	329.9	321.8
37.5°	355.6	352.2	329.2	307.6	297.5
40°	333.3	329.2	304.2	284.6	273.8
42.5°	312.3	306.9	282.6	261.6	249.5
45°	290.0	283.9	259.6	238.0	228.5
47.5°	267.7	262.3	240.0	217.7	206.9
50°	244.1	239.3	219.0	196.7	185.2
52.5°	224.4	217.0	197.4	175.1	165.6
55°	201.5	195.4	177.1	156.2	148.1
57.5°	180.5	174.4	157.5	137.9	131.2
60°	160.9	152.1	137.9	121.0	115.6
62.5°	139.3	132.5	120.3	106.1	112.9
65°	119.7	112.9	102.1	104.1	86.5
67.5°	98.0	94.6	85.2	75.7	73.0
70°	79.8	75.7	72.3	62.2	59.5
72.5°	63.5	59.5	54.8	49.4	47.3
75°	48.0	44.6	41.9	39.9	43.9
77.5°	33.1	31.8	29.7	27.7	27.0
80°	21.6	21.0	20.3	19.6	18.9
82.5°	12.8	12.8	12.8	12.8	12.8
85°	6.8	7.4	8.1	8.8	9.5
87.5°	4.1	4.1	4.7	5.4	6.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)