

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: P559428

Luminaire Tested: FSR-12-1-LD4-2STD-35-UNV-81-86-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559428  
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-81-86-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

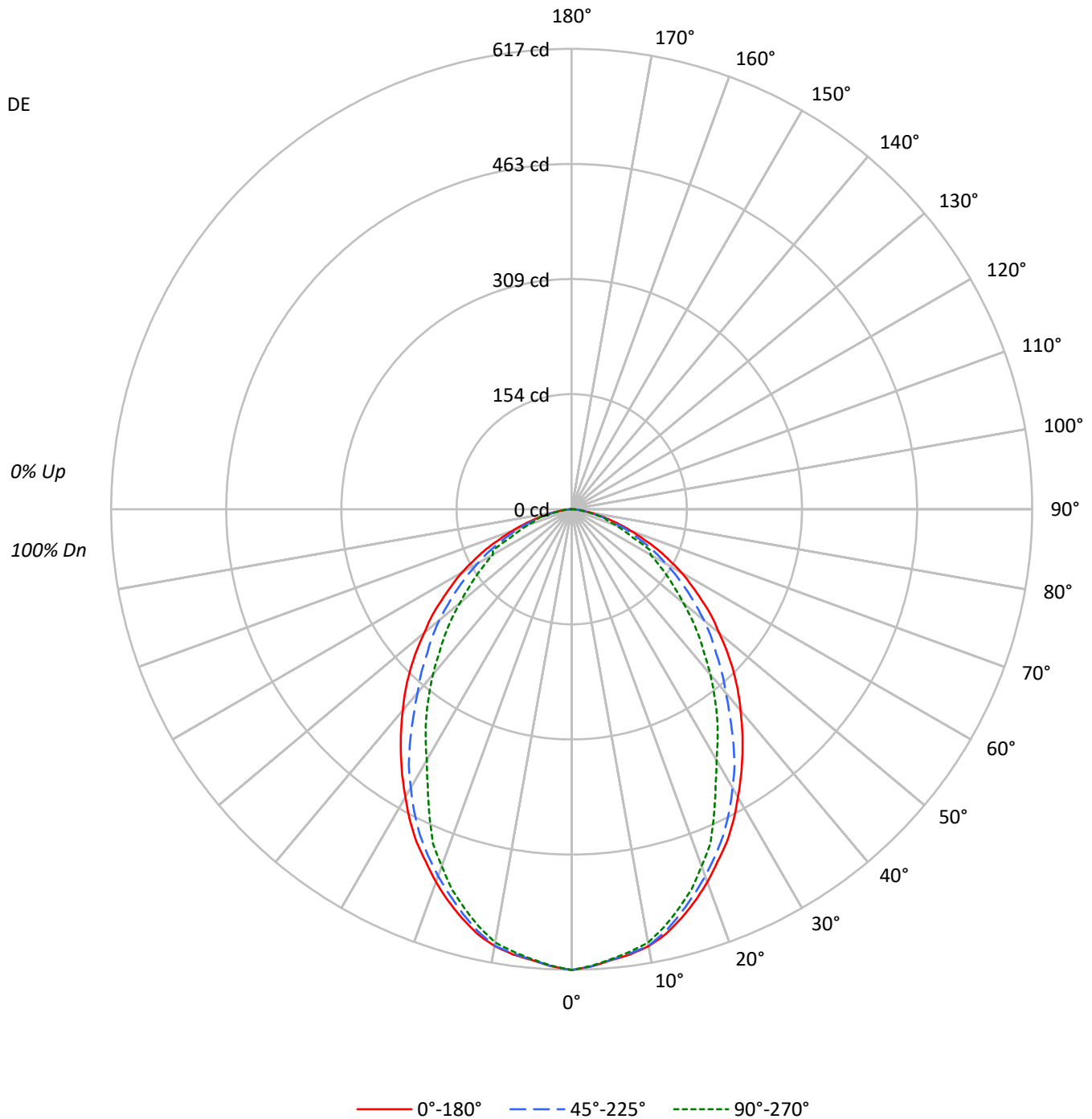
Lumens per Lamp: N/A  
Luminaire Lumens: 1212.0 lumens  
Efficiency: N/A  
Efficacy: 73.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	6646	6646	6646
5°	6555	6548	6539
10°	6498	6490	6443
15°	6323	6259	6172
20°	6090	5993	5829
25°	5841	5714	5358
30°	5536	5358	4826
35°	5243	4951	4464
40°	4945	4513	4062
45°	4661	4172	3672
50°	4315	3872	3275
55°	3992	3509	2933
60°	3658	3134	2626
65°	3217	2746	2328
70°	2650	2404	1976
75°	2109	1842	1930
80°	1413	1327	1240
85°	877	1062	1235

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4661 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.5	4.7
10°-20°	157.7	13.0
20°-30°	218.4	18.0
30°-40°	232.8	19.2
40°-50°	212.4	17.5
50°-60°	166.4	13.7
60°-70°	108.5	8.9
70°-80°	48.1	4.0
80°-90°	10.3	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°	433.5	35.8
0°-40°	666.4	55.0
0°-60°	1045.2	86.2
0°-90°	1212.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1212.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	617	617	617	617	617	
5°	607	606	606	605	605	58
15°	567	567	562	556	554	160
25°	492	489	481	464	451	226
35°	399	396	377	348	340	249
45°	306	300	274	251	241	236
55°	213	206	187	165	156	191
65°	126	119	108	110	91	124
75°	51	47	44	42	46	54
85°	7	8	9	9	10	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	617.4	617.4	617.4	617.4	617.4
2.5°	613.1	613.1	613.1	612.4	612.4
5°	606.7	606.0	606.0	605.2	605.2
7.5°	601.7	601.0	600.2	599.5	598.1
10°	594.5	594.5	593.8	590.3	589.5
12.5°	583.1	582.4	579.5	574.6	573.1
15°	567.4	567.4	561.7	556.0	553.9
17.5°	550.3	549.6	542.4	536.7	533.9
20°	531.7	530.3	523.2	513.9	508.9
22.5°	511.0	511.0	502.5	490.3	485.3
25°	491.8	488.9	481.1	463.9	451.1
27.5°	469.6	465.4	456.8	432.5	417.5
30°	445.4	443.2	431.1	399.7	388.3
32.5°	422.5	419.0	406.1	373.3	364.0
35°	399.0	396.1	376.8	348.3	339.7
37.5°	375.4	371.9	347.6	324.7	314.0
40°	351.9	347.6	321.2	300.5	289.1
42.5°	329.7	324.0	298.3	276.2	263.4
45°	306.2	299.8	274.1	251.2	241.2
47.5°	282.6	276.9	253.4	229.8	218.4
50°	257.7	252.7	231.2	207.7	195.6
52.5°	237.0	229.1	208.4	184.9	174.9
55°	212.7	206.3	187.0	164.9	156.3
57.5°	190.6	184.1	166.3	145.6	138.5
60°	169.9	160.6	145.6	127.8	122.0
62.5°	147.0	139.9	127.0	112.1	119.2
65°	126.3	119.2	107.8	109.9	91.4
67.5°	103.5	99.9	89.9	79.9	77.1
70°	84.2	79.9	76.4	65.7	62.8
72.5°	67.1	62.8	57.8	52.1	50.0
75°	50.7	47.1	44.3	42.1	46.4
77.5°	35.0	33.5	31.4	29.3	28.5
80°	22.8	22.1	21.4	20.7	20.0
82.5°	13.6	13.6	13.6	13.6	13.6
85°	7.1	7.9	8.6	9.3	10.0
87.5°	4.3	4.3	5.0	5.7	6.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)