

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: P558978

Luminaire Tested: FSR-12-1-LD4-1STD-50-UNV-81-85-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558978  
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-LD4-1STD-50-UNV-81-85-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

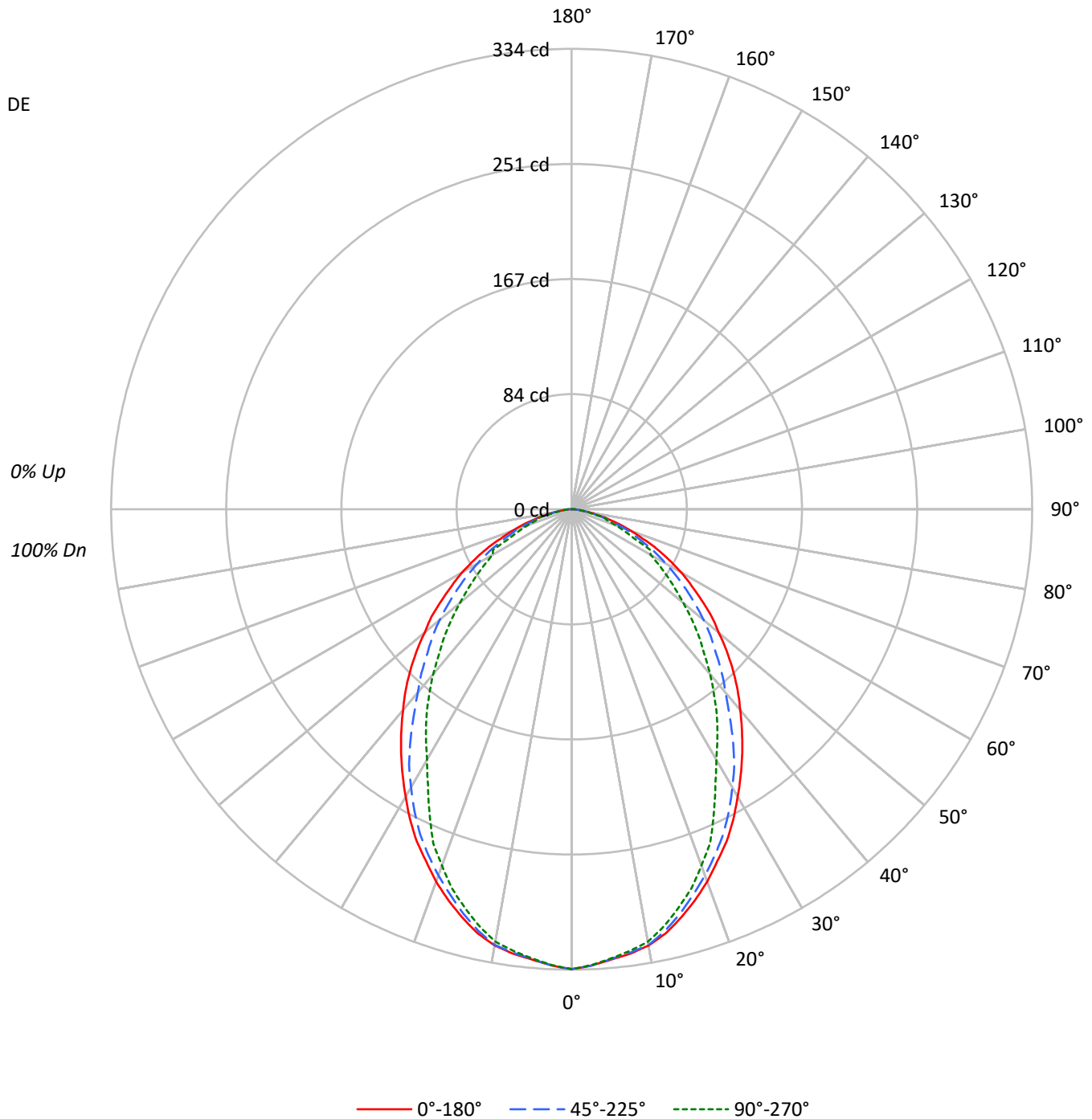
Lumens per Lamp: N/A  
Luminaire Lumens: 655.0 lumens  
Efficiency: N/A  
Efficacy: 78.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	3591	3591	3591
5°	3543	3539	3534
10°	3512	3507	3482
15°	3417	3383	3335
20°	3292	3238	3150
25°	3157	3088	2896
30°	2992	2896	2608
35°	2833	2677	2413
40°	2673	2439	2195
45°	2519	2254	1985
50°	2331	2093	1770
55°	2156	1897	1586
60°	1976	1694	1421
65°	1740	1482	1258
70°	1432	1300	1067
75°	1140	994	1044
80°	762	719	669
85°	482	568	667

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2519 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.1	4.7
10°-20°	85.2	13.0
20°-30°	118.0	18.0
30°-40°	125.8	19.2
40°-50°	114.8	17.5
50°-60°	89.9	13.7
60°-70°	58.6	8.9
70°-80°	26.0	4.0
80°-90°	5.6	0.8
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°	234.3	35.8
0°-40°	360.1	55.0
0°-60°	564.8	86.2
0°-90°	655.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	655.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	334	334	334	334	334	
5°	328	328	328	327	327	31
15°	307	307	304	300	299	86
25°	266	264	260	251	244	122
35°	216	214	204	188	184	135
45°	166	162	148	136	130	127
55°	115	112	101	89	84	103
65°	68	64	58	59	49	67
75°	27	26	24	23	25	29
85°	4	4	5	5	5	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	333.6	333.6	333.6	333.6	333.6
2.5°	331.3	331.3	331.3	330.9	330.9
5°	327.9	327.5	327.5	327.1	327.1
7.5°	325.2	324.8	324.4	324.0	323.2
10°	321.3	321.3	320.9	319.0	318.6
12.5°	315.1	314.7	313.2	310.5	309.7
15°	306.6	306.6	303.6	300.5	299.3
17.5°	297.4	297.0	293.1	290.1	288.5
20°	287.4	286.6	282.7	277.7	275.0
22.5°	276.2	276.2	271.5	265.0	262.3
25°	265.8	264.2	260.0	250.7	243.8
27.5°	253.8	251.5	246.9	233.7	225.6
30°	240.7	239.5	233.0	216.0	209.8
32.5°	228.3	226.4	219.5	201.7	196.7
35°	215.6	214.1	203.7	188.2	183.6
37.5°	202.9	201.0	187.8	175.5	169.7
40°	190.2	187.8	173.6	162.4	156.2
42.5°	178.2	175.1	161.2	149.3	142.3
45°	165.5	162.0	148.1	135.8	130.4
47.5°	152.7	149.7	136.9	124.2	118.0
50°	139.2	136.5	125.0	112.2	105.7
52.5°	128.1	123.8	112.6	99.9	94.5
55°	114.9	111.5	101.1	89.1	84.5
57.5°	103.0	99.5	89.9	78.7	74.8
60°	91.8	86.8	78.7	69.0	66.0
62.5°	79.5	75.6	68.7	60.6	64.4
65°	68.3	64.4	58.2	59.4	49.4
67.5°	55.9	54.0	48.6	43.2	41.7
70°	45.5	43.2	41.3	35.5	33.9
72.5°	36.3	33.9	31.2	28.2	27.0
75°	27.4	25.5	23.9	22.8	25.1
77.5°	18.9	18.1	17.0	15.8	15.4
80°	12.3	12.0	11.6	11.2	10.8
82.5°	7.3	7.3	7.3	7.3	7.3
85°	3.9	4.2	4.6	5.0	5.4
87.5°	2.3	2.3	2.7	3.1	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)