

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: P558982

Luminaire Tested: FSR-12-1-LD4-1STD-50-UNV-81-87-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558982  
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-81-87-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

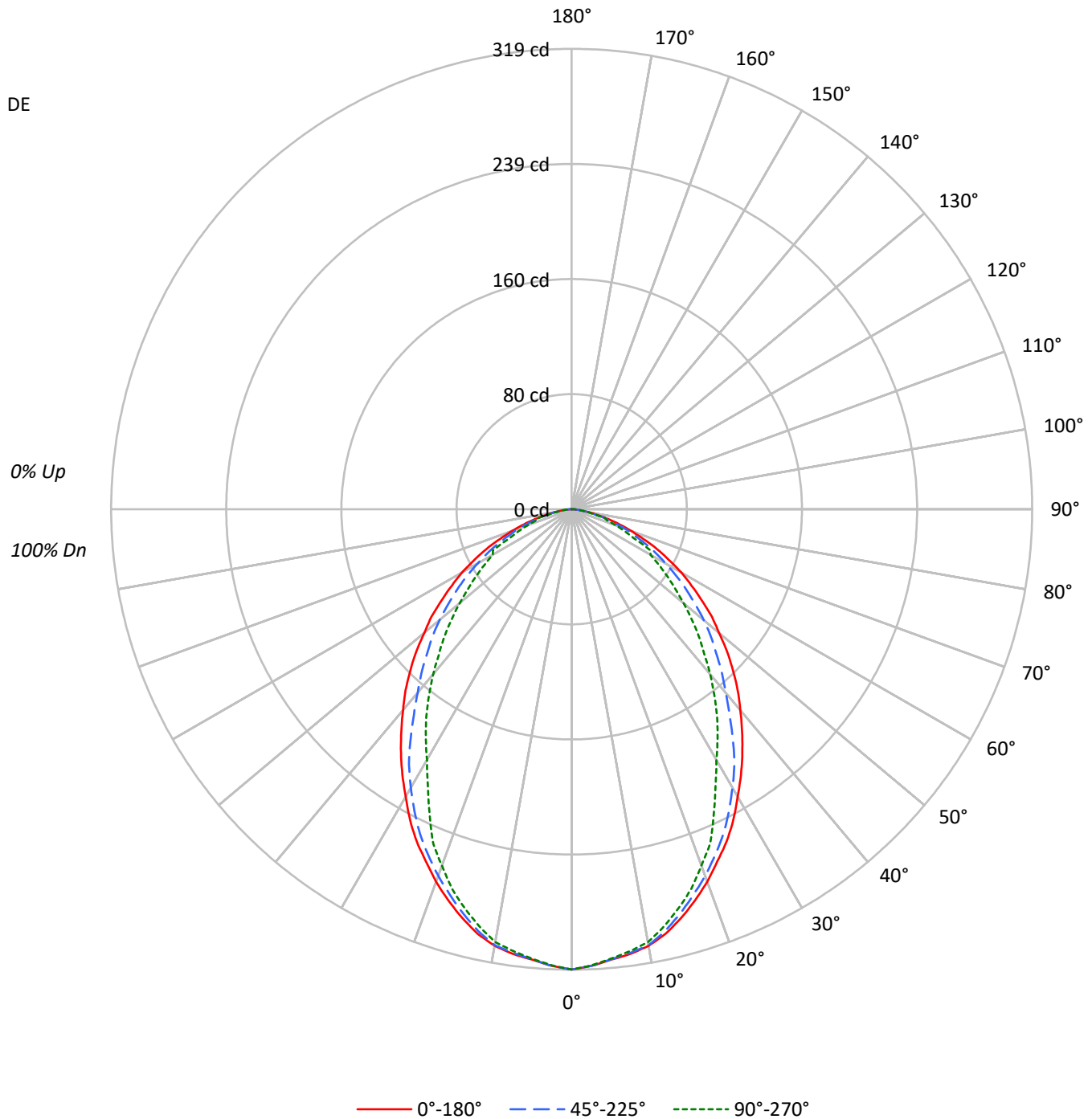
Lumens per Lamp: N/A  
Luminaire Lumens: 626.0 lumens  
Efficiency: N/A  
Efficacy: 75.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	3433	3433	3433
5°	3385	3382	3378
10°	3357	3352	3328
15°	3266	3233	3188
20°	3145	3095	3010
25°	3017	2951	2767
30°	2859	2768	2492
35°	2708	2557	2306
40°	2553	2331	2098
45°	2407	2156	1897
50°	2229	1999	1691
55°	2062	1813	1514
60°	1888	1619	1356
65°	1661	1419	1202
70°	1369	1240	1020
75°	1090	952	998
80°	731	688	638
85°	457	543	642

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2407 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.7	4.7
10°-20°	81.5	13.0
20°-30°	112.8	18.0
30°-40°	120.3	19.2
40°-50°	109.7	17.5
50°-60°	85.9	13.7
60°-70°	56.0	8.9
70°-80°	24.8	4.0
80°-90°	5.3	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°	223.9	35.8
0°-40°	344.2	55.0
0°-60°	539.8	86.2
0°-90°	626.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	626.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	319	319	319	319	319	
5°	313	313	313	313	313	30
15°	293	293	290	287	286	82
25°	254	252	248	240	233	117
35°	206	205	195	180	176	129
45°	158	155	142	130	125	122
55°	110	106	97	85	81	99
65°	65	62	56	57	47	64
75°	26	24	23	22	24	28
85°	4	4	4	5	5	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	318.9	318.9	318.9	318.9	318.9
2.5°	316.7	316.7	316.7	316.3	316.3
5°	313.3	313.0	313.0	312.6	312.6
7.5°	310.8	310.4	310.0	309.7	308.9
10°	307.1	307.1	306.7	304.9	304.5
12.5°	301.2	300.8	299.3	296.8	296.0
15°	293.1	293.1	290.1	287.2	286.1
17.5°	284.2	283.9	280.2	277.2	275.7
20°	274.6	273.9	270.2	265.4	262.8
22.5°	263.9	263.9	259.5	253.3	250.7
25°	254.0	252.5	248.5	239.6	233.0
27.5°	242.6	240.4	235.9	223.4	215.7
30°	230.0	228.9	222.7	206.4	200.5
32.5°	218.2	216.4	209.8	192.8	188.0
35°	206.1	204.6	194.6	179.9	175.5
37.5°	193.9	192.1	179.5	167.7	162.2
40°	181.7	179.5	165.9	155.2	149.3
42.5°	170.3	167.4	154.1	142.7	136.0
45°	158.1	154.8	141.6	129.8	124.6
47.5°	146.0	143.0	130.9	118.7	112.8
50°	133.1	130.5	119.4	107.3	101.0
52.5°	122.4	118.3	107.6	95.5	90.3
55°	109.9	106.5	96.6	85.2	80.7
57.5°	98.4	95.1	85.9	75.2	71.5
60°	87.7	82.9	75.2	66.0	63.0
62.5°	75.9	72.3	65.6	57.9	61.6
65°	65.2	61.6	55.7	56.8	47.2
67.5°	53.5	51.6	46.4	41.3	39.8
70°	43.5	41.3	39.4	33.9	32.4
72.5°	34.7	32.4	29.9	26.9	25.8
75°	26.2	24.3	22.9	21.7	24.0
77.5°	18.1	17.3	16.2	15.1	14.7
80°	11.8	11.4	11.1	10.7	10.3
82.5°	7.0	7.0	7.0	7.0	7.0
85°	3.7	4.1	4.4	4.8	5.2
87.5°	2.2	2.2	2.6	2.9	3.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)