

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: P558743

Luminaire Tested: FSR-12-1-LD4-1LO-40-UNV-82-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558743  
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-LD4-1LO-40-UNV-82-87-EDD  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

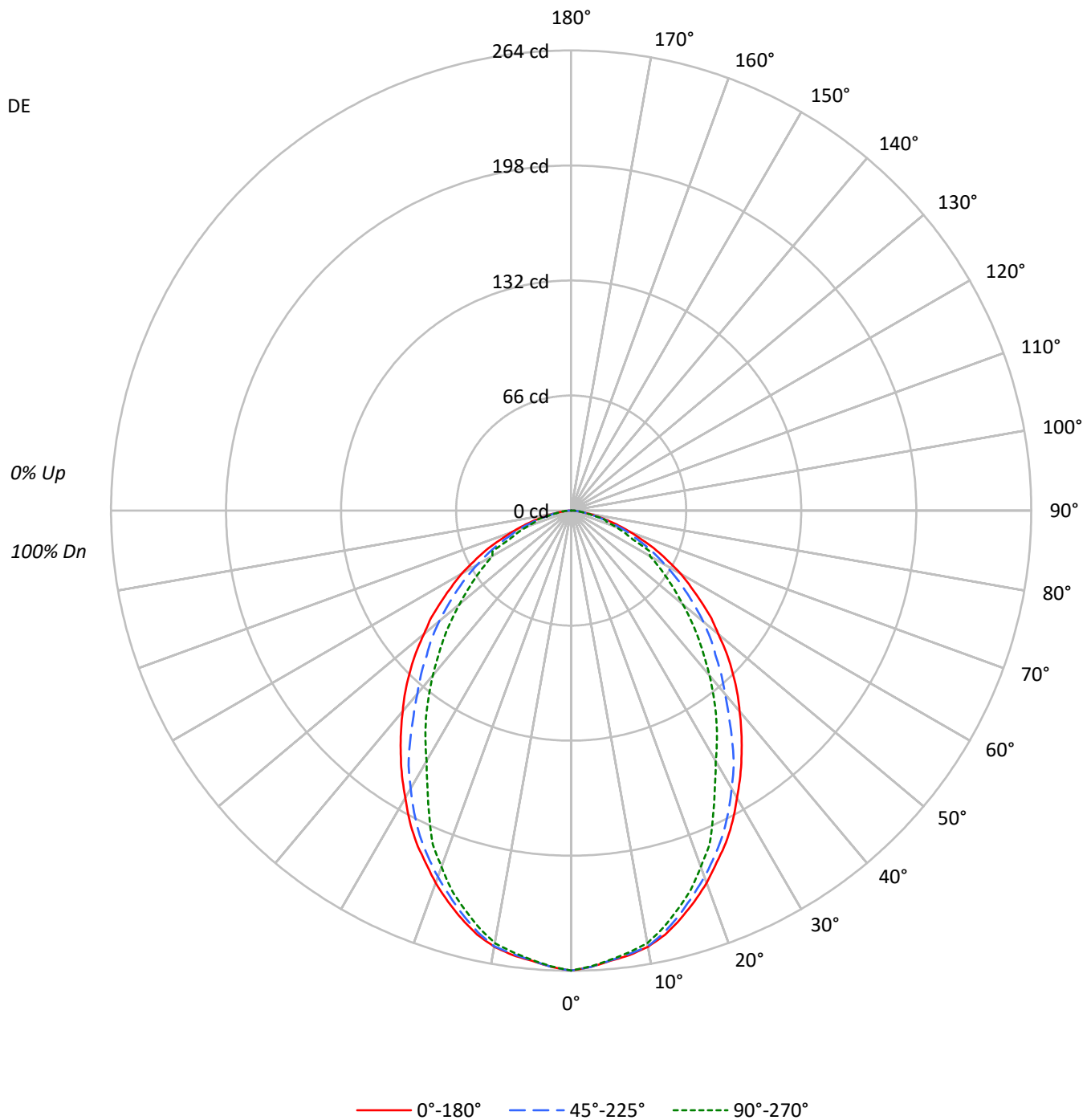
Lumens per Lamp: N/A  
Luminaire Lumens: 518.0 lumens  
Efficiency: N/A  
Efficacy: 89.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 5.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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



TEST NUMBER: P558743

CATALOG NUMBER: FSR-12-1-LD4-1LO-40-UNV-82-87-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P558743

CATALOG NUMBER: FSR-12-1-LD4-1LO-40-UNV-82-87-EDD

**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°	2841	2841	2841
5°	2802	2799	2795
10°	2777	2774	2754
15°	2702	2676	2638
20°	2604	2561	2491
25°	2496	2442	2290
30°	2365	2289	2062
35°	2240	2117	1908
40°	2113	1929	1735
45°	1993	1783	1569
50°	1844	1654	1400
55°	1706	1499	1254
60°	1563	1339	1124
65°	1375	1174	993
70°	1133	1026	843
75°	902	786	823
80°	607	570	527
85°	383	457	531

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1993 cd/sqm

TEST NUMBER: P558743

CATALOG NUMBER: FSR-12-1-LD4-1LO-40-UNV-82-87-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.6	4.7
10°-20°	67.4	13.0
20°-30°	93.3	18.0
30°-40°	99.5	19.2
40°-50°	90.8	17.5
50°-60°	71.1	13.7
60°-70°	46.3	8.9
70°-80°	20.5	4.0
80°-90°	4.4	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°	185.3	35.8
0°-40°	284.8	55.0
0°-60°	446.7	86.2
0°-90°	518.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	518.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	264	264	264	264	264	
5°	259	259	259	259	259	25
15°	242	242	240	238	237	68
25°	210	209	206	198	193	96
35°	170	169	161	149	145	107
45°	131	128	117	107	103	101
55°	91	88	80	70	67	82
65°	54	51	46	47	39	53
75°	22	20	19	18	20	23
85°	3	3	4	4	4	4
90°	0	0	0	0	0	



TEST NUMBER: P558743

CATALOG NUMBER: FSR-12-1-LD4-1LO-40-UNV-82-87-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	263.9	263.9	263.9	263.9	263.9
2.5°	262.0	262.0	262.0	261.7	261.7
5°	259.3	259.0	259.0	258.7	258.7
7.5°	257.2	256.8	256.5	256.2	255.6
10°	254.1	254.1	253.8	252.3	252.0
12.5°	249.2	248.9	247.7	245.6	244.9
15°	242.5	242.5	240.1	237.6	236.7
17.5°	235.2	234.9	231.8	229.4	228.2
20°	227.3	226.6	223.6	219.6	217.5
22.5°	218.4	218.4	214.8	209.6	207.4
25°	210.2	209.0	205.6	198.3	192.8
27.5°	200.7	198.9	195.2	184.9	178.5
30°	190.3	189.4	184.2	170.8	165.9
32.5°	180.6	179.1	173.6	159.5	155.6
35°	170.5	169.3	161.1	148.9	145.2
37.5°	160.5	158.9	148.6	138.8	134.2
40°	150.4	148.6	137.3	128.4	123.5
42.5°	140.9	138.5	127.5	118.1	112.6
45°	130.9	128.1	117.1	107.4	103.1
47.5°	120.8	118.4	108.3	98.2	93.3
50°	110.1	108.0	98.8	88.8	83.6
52.5°	101.3	97.9	89.1	79.0	74.7
55°	90.9	88.2	79.9	70.5	66.8
57.5°	81.4	78.7	71.1	62.2	59.2
60°	72.6	68.6	62.2	54.6	52.2
62.5°	62.8	59.8	54.3	47.9	50.9
65°	54.0	50.9	46.1	47.0	39.0
67.5°	44.2	42.7	38.4	34.2	32.9
70°	36.0	34.2	32.6	28.1	26.8
72.5°	28.7	26.8	24.7	22.3	21.4
75°	21.7	20.1	18.9	18.0	19.8
77.5°	14.9	14.3	13.4	12.5	12.2
80°	9.8	9.5	9.2	8.8	8.5
82.5°	5.8	5.8	5.8	5.8	5.8
85°	3.1	3.4	3.7	4.0	4.3
87.5°	1.8	1.8	2.1	2.4	2.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)