

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: P558859

Luminaire Tested: FSR-12-1-LD4-1STD-35-UNV-81-94-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558859  
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-35-UNV-81-94-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

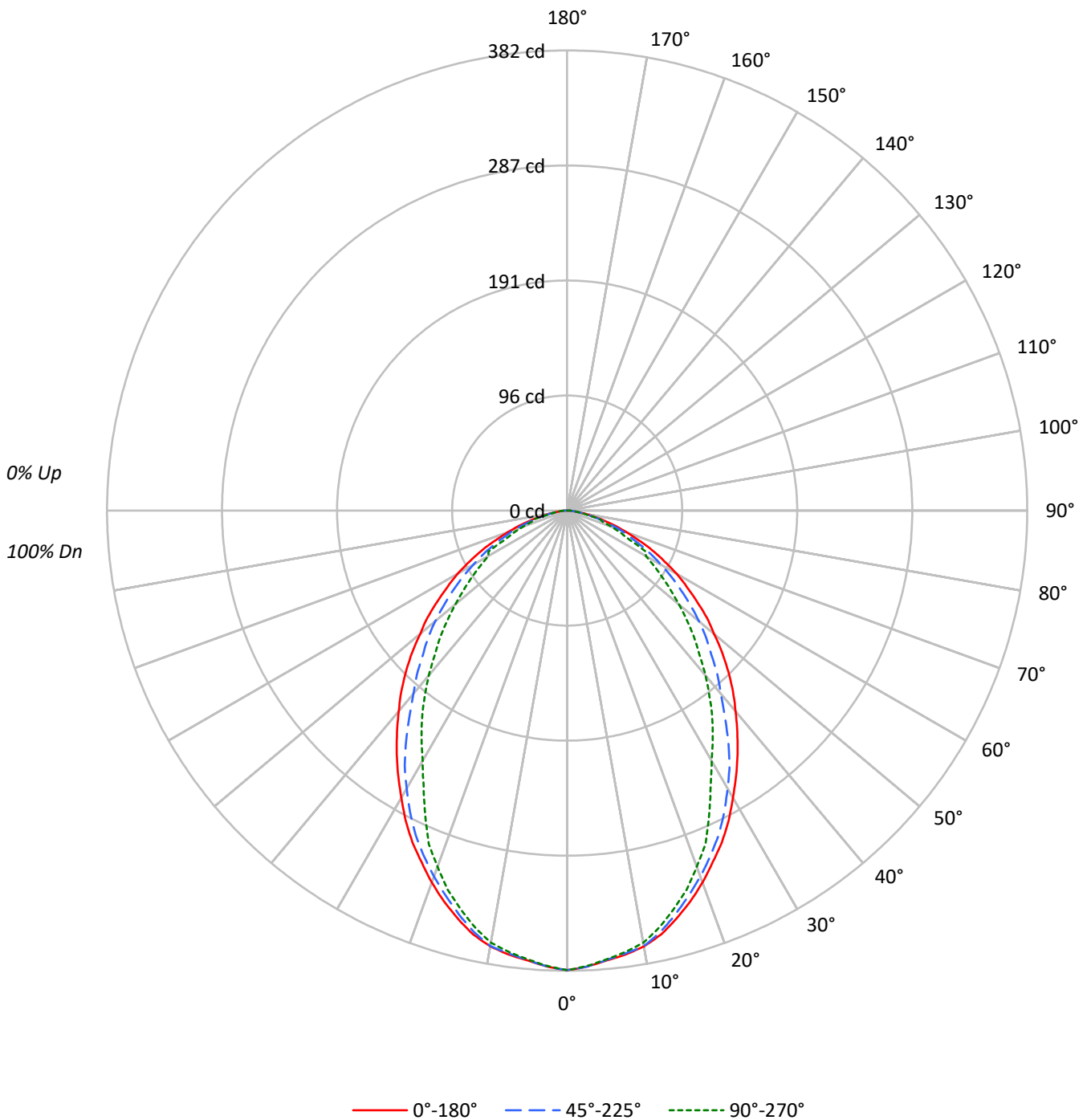
Lumens per Lamp: N/A  
Luminaire Lumens: 749.0 lumens  
Efficiency: N/A  
Efficacy: 90.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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



TEST NUMBER: P558859

CATALOG NUMBER: FSR-12-1-LD4-1STD-35-UNV-81-94-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P558859

CATALOG NUMBER: FSR-12-1-LD4-1STD-35-UNV-81-94-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°	4106	4106	4106
5°	4051	4046	4041
10°	4016	4011	3982
15°	3908	3868	3814
20°	3764	3703	3603
25°	3609	3531	3311
30°	3420	3311	2982
35°	3240	3060	2759
40°	3056	2789	2510
45°	2880	2579	2270
50°	2666	2393	2025
55°	2466	2169	1813
60°	2260	1938	1623
65°	1989	1696	1439
70°	1637	1485	1221
75°	1302	1135	1194
80°	874	818	769
85°	543	655	766

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2880 cd/sqm



TEST NUMBER: P558859

CATALOG NUMBER: FSR-12-1-LD4-1STD-35-UNV-81-94-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.5	4.7
10°-20°	97.5	13.0
20°-30°	134.9	18.0
30°-40°	143.9	19.2
40°-50°	131.3	17.5
50°-60°	102.8	13.7
60°-70°	67.0	8.9
70°-80°	29.7	4.0
80°-90°	6.4	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°	267.9	35.8
0°-40°	411.8	55.0
0°-60°	645.9	86.2
0°-90°	749.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	749.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	382	382	382	382	382	
5°	375	374	374	374	374	36
15°	351	351	347	344	342	99
25°	304	302	297	287	279	140
35°	247	245	233	215	210	154
45°	189	185	169	155	149	146
55°	131	128	116	102	97	118
65°	78	74	67	68	56	77
75°	31	29	27	26	29	34
85°	4	5	5	6	6	6
90°	0	0	0	0	0	



TEST NUMBER: P558859

CATALOG NUMBER: FSR-12-1-LD4-1STD-35-UNV-81-94-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	381.5	381.5	381.5	381.5	381.5
2.5°	378.9	378.9	378.9	378.4	378.4
5°	374.9	374.5	374.5	374.0	374.0
7.5°	371.8	371.4	370.9	370.5	369.6
10°	367.4	367.4	367.0	364.8	364.3
12.5°	360.4	359.9	358.2	355.1	354.2
15°	350.7	350.7	347.1	343.6	342.3
17.5°	340.1	339.6	335.2	331.7	329.9
20°	328.6	327.7	323.3	317.6	314.5
22.5°	315.8	315.8	310.5	303.0	299.9
25°	303.9	302.1	297.3	286.7	278.8
27.5°	290.2	287.6	282.3	267.3	258.0
30°	275.2	273.9	266.4	247.0	239.9
32.5°	261.1	258.9	251.0	230.7	224.9
35°	246.6	244.8	232.9	215.2	210.0
37.5°	232.0	229.8	214.8	200.7	194.1
40°	217.5	214.8	198.5	185.7	178.6
42.5°	203.8	200.2	184.4	170.7	162.8
45°	189.2	185.3	169.4	155.3	149.1
47.5°	174.7	171.1	156.6	142.0	135.0
50°	159.2	156.1	142.9	128.4	120.9
52.5°	146.4	141.6	128.8	114.2	108.1
55°	131.4	127.5	115.6	101.9	96.6
57.5°	117.8	113.8	102.8	90.0	85.6
60°	105.0	99.2	90.0	79.0	75.4
62.5°	90.9	86.5	78.5	69.2	73.7
65°	78.1	73.7	66.6	67.9	56.5
67.5°	64.0	61.8	55.6	49.4	47.6
70°	52.0	49.4	47.2	40.6	38.8
72.5°	41.5	38.8	35.7	32.2	30.9
75°	31.3	29.1	27.3	26.0	28.7
77.5°	21.6	20.7	19.4	18.1	17.6
80°	14.1	13.7	13.2	12.8	12.4
82.5°	8.4	8.4	8.4	8.4	8.4
85°	4.4	4.9	5.3	5.7	6.2
87.5°	2.6	2.6	3.1	3.5	4.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)