

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: P559005

Luminaire Tested: FSR-12-1-LD4-1STD-50-UNV-82-96-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559005  
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-82-96-EDD  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

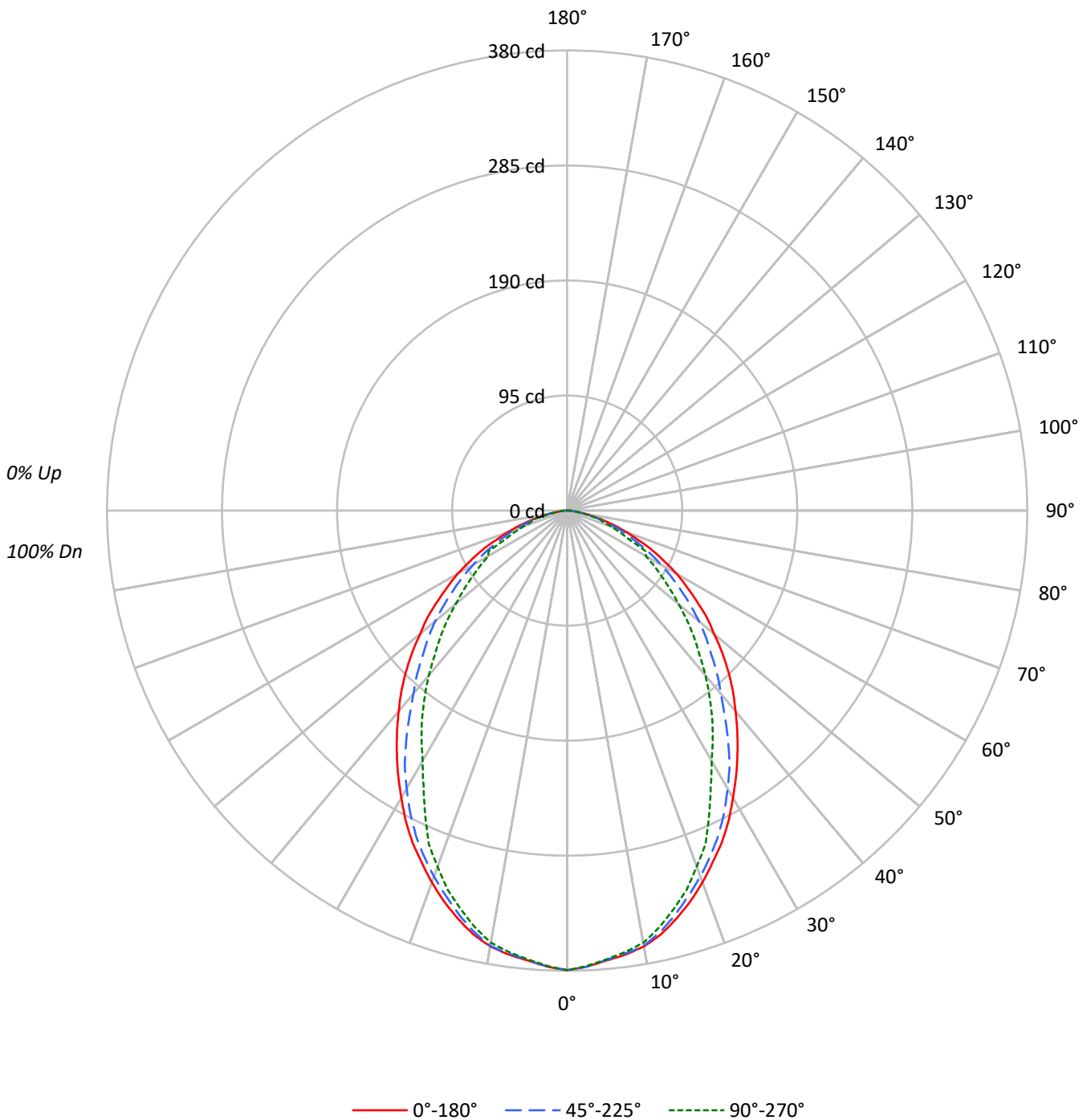
Lumens per Lamp: N/A  
Luminaire Lumens: 745.0 lumens  
Efficiency: N/A  
Efficacy: 89.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	4085	4085	4085
5°	4029	4025	4019
10°	3995	3989	3961
15°	3887	3848	3793
20°	3743	3684	3583
25°	3590	3512	3293
30°	3403	3294	2967
35°	3222	3043	2744
40°	3039	2774	2497
45°	2865	2565	2257
50°	2653	2380	2013
55°	2453	2156	1803
60°	2248	1927	1615
65°	1979	1686	1431
70°	1630	1476	1215
75°	1293	1131	1185
80°	868	818	762
85°	543	655	753

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2865 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.3	4.7
10°-20°	96.9	13.0
20°-30°	134.2	18.0
30°-40°	143.1	19.2
40°-50°	130.6	17.5
50°-60°	102.3	13.7
60°-70°	66.7	8.9
70°-80°	29.5	4.0
80°-90°	6.3	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°	266.5	35.8
0°-40°	409.6	55.0
0°-60°	642.5	86.2
0°-90°	745.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	745.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	380	380	380	380	380	
5°	373	372	372	372	372	35
15°	349	349	345	342	340	98
25°	302	300	296	285	277	139
35°	245	244	232	214	209	153
45°	188	184	168	154	148	145
55°	131	127	115	101	96	117
65°	78	73	66	68	56	77
75°	31	29	27	26	28	33
85°	4	5	5	6	6	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	379.5	379.5	379.5	379.5	379.5
2.5°	376.9	376.9	376.9	376.4	376.4
5°	372.9	372.5	372.5	372.0	372.0
7.5°	369.8	369.4	369.0	368.5	367.6
10°	365.5	365.5	365.0	362.8	362.4
12.5°	358.4	358.0	356.2	353.2	352.3
15°	348.8	348.8	345.3	341.8	340.4
17.5°	338.3	337.8	333.4	329.9	328.2
20°	326.8	326.0	321.6	315.9	312.8
22.5°	314.1	314.1	308.9	301.4	298.3
25°	302.3	300.5	295.7	285.2	277.3
27.5°	288.7	286.0	280.8	265.9	256.7
30°	273.8	272.4	265.0	245.7	238.7
32.5°	259.7	257.5	249.6	229.5	223.7
35°	245.2	243.5	231.6	214.1	208.8
37.5°	230.8	228.6	213.7	199.6	193.0
40°	216.3	213.7	197.4	184.7	177.7
42.5°	202.7	199.2	183.4	169.8	161.9
45°	188.2	184.3	168.5	154.4	148.3
47.5°	173.7	170.2	155.7	141.3	134.2
50°	158.4	155.3	142.1	127.7	120.2
52.5°	145.7	140.8	128.1	113.6	107.5
55°	130.7	126.8	114.9	101.3	96.1
57.5°	117.1	113.2	102.2	89.5	85.1
60°	104.4	98.7	89.5	78.5	75.0
62.5°	90.4	86.0	78.1	68.9	73.3
65°	77.7	73.3	66.2	67.6	56.2
67.5°	63.6	61.4	55.3	49.1	47.4
70°	51.8	49.1	46.9	40.4	38.6
72.5°	41.2	38.6	35.5	32.0	30.7
75°	31.1	29.0	27.2	25.9	28.5
77.5°	21.5	20.6	19.3	18.0	17.5
80°	14.0	13.6	13.2	12.7	12.3
82.5°	8.3	8.3	8.3	8.3	8.3
85°	4.4	4.8	5.3	5.7	6.1
87.5°	2.6	2.6	3.1	3.5	3.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)