

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: P558892

Luminaire Tested: FSR-12-1-LD4-1STD-35-UNV-93-96-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558892  
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-93-96-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER  
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

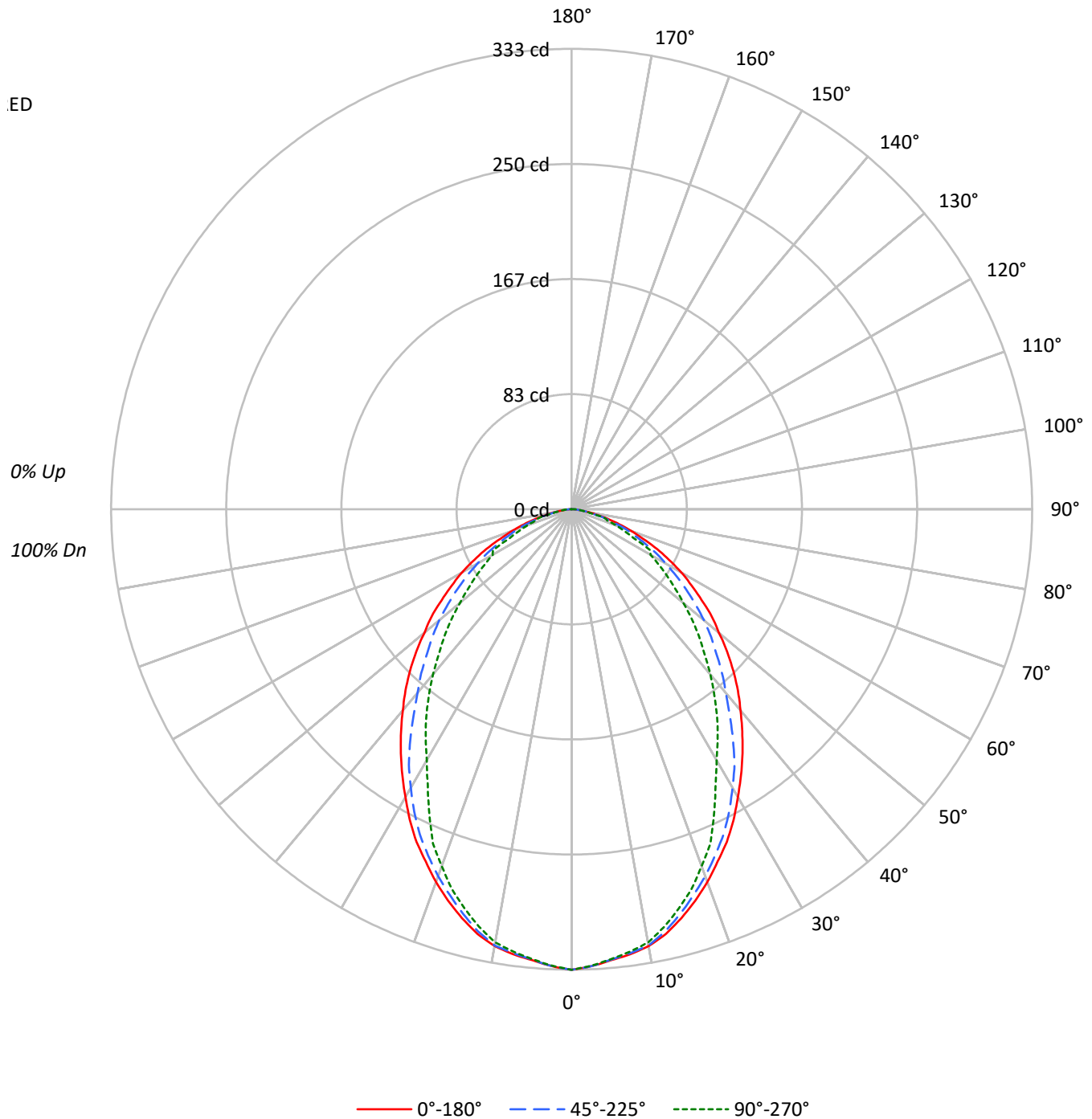
Lumens per Lamp: N/A  
Luminaire Lumens: 654.0 lumens  
Efficiency: N/A  
Efficacy: 78.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	3585	3585	3585
5°	3538	3533	3529
10°	3506	3502	3477
15°	3412	3378	3331
20°	3286	3234	3145
25°	3152	3083	2891
30°	2987	2891	2604
35°	2829	2671	2409
40°	2668	2435	2192
45°	2515	2251	1982
50°	2328	2090	1767
55°	2154	1894	1582
60°	1974	1692	1419
65°	1737	1482	1256
70°	1429	1297	1067
75°	1135	994	1040
80°	762	719	669
85°	482	568	667

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2515 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.0	4.7
10°-20°	85.1	13.0
20°-30°	117.8	18.0
30°-40°	125.6	19.2
40°-50°	114.6	17.5
50°-60°	89.8	13.7
60°-70°	58.5	8.9
70°-80°	25.9	4.0
80°-90°	5.6	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°	233.9	35.8
0°-40°	359.6	55.0
0°-60°	564.0	86.2
0°-90°	654.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	654.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	333	333	333	333	333	
5°	327	327	327	327	327	31
15°	306	306	303	300	299	86
25°	265	264	260	250	243	122
35°	215	214	203	188	183	135
45°	165	162	148	136	130	127
55°	115	111	101	89	84	103
65°	68	64	58	59	49	67
75°	27	25	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°	333.1	333.1	333.1	333.1	333.1
2.5°	330.8	330.8	330.8	330.4	330.4
5°	327.4	327.0	327.0	326.6	326.6
7.5°	324.7	324.3	323.9	323.5	322.7
10°	320.8	320.8	320.4	318.5	318.1
12.5°	314.7	314.3	312.7	310.0	309.3
15°	306.2	306.2	303.1	300.0	298.9
17.5°	296.9	296.6	292.7	289.6	288.1
20°	286.9	286.2	282.3	277.3	274.6
22.5°	275.8	275.8	271.1	264.6	261.9
25°	265.4	263.8	259.6	250.3	243.4
27.5°	253.4	251.1	246.5	233.4	225.3
30°	240.3	239.2	232.6	215.7	209.5
32.5°	228.0	226.1	219.1	201.4	196.4
35°	215.3	213.7	203.3	187.9	183.3
37.5°	202.6	200.7	187.6	175.2	169.5
40°	189.9	187.6	173.3	162.1	156.0
42.5°	177.9	174.8	161.0	149.0	142.1
45°	165.2	161.8	147.9	135.6	130.2
47.5°	152.5	149.4	136.7	124.0	117.9
50°	139.0	136.3	124.8	112.1	105.5
52.5°	127.9	123.6	112.5	99.7	94.4
55°	114.8	111.3	100.9	89.0	84.3
57.5°	102.8	99.4	89.7	78.6	74.7
60°	91.7	86.7	78.6	68.9	65.9
62.5°	79.3	75.5	68.6	60.5	64.3
65°	68.2	64.3	58.2	59.3	49.3
67.5°	55.8	53.9	48.5	43.1	41.6
70°	45.4	43.1	41.2	35.4	33.9
72.5°	36.2	33.9	31.2	28.1	27.0
75°	27.3	25.4	23.9	22.7	25.0
77.5°	18.9	18.1	16.9	15.8	15.4
80°	12.3	11.9	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)