

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: P558894

Luminaire Tested: FSR-12-1-LD4-1STD-35-UNV-93-97-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558894  
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-93-97-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER  
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

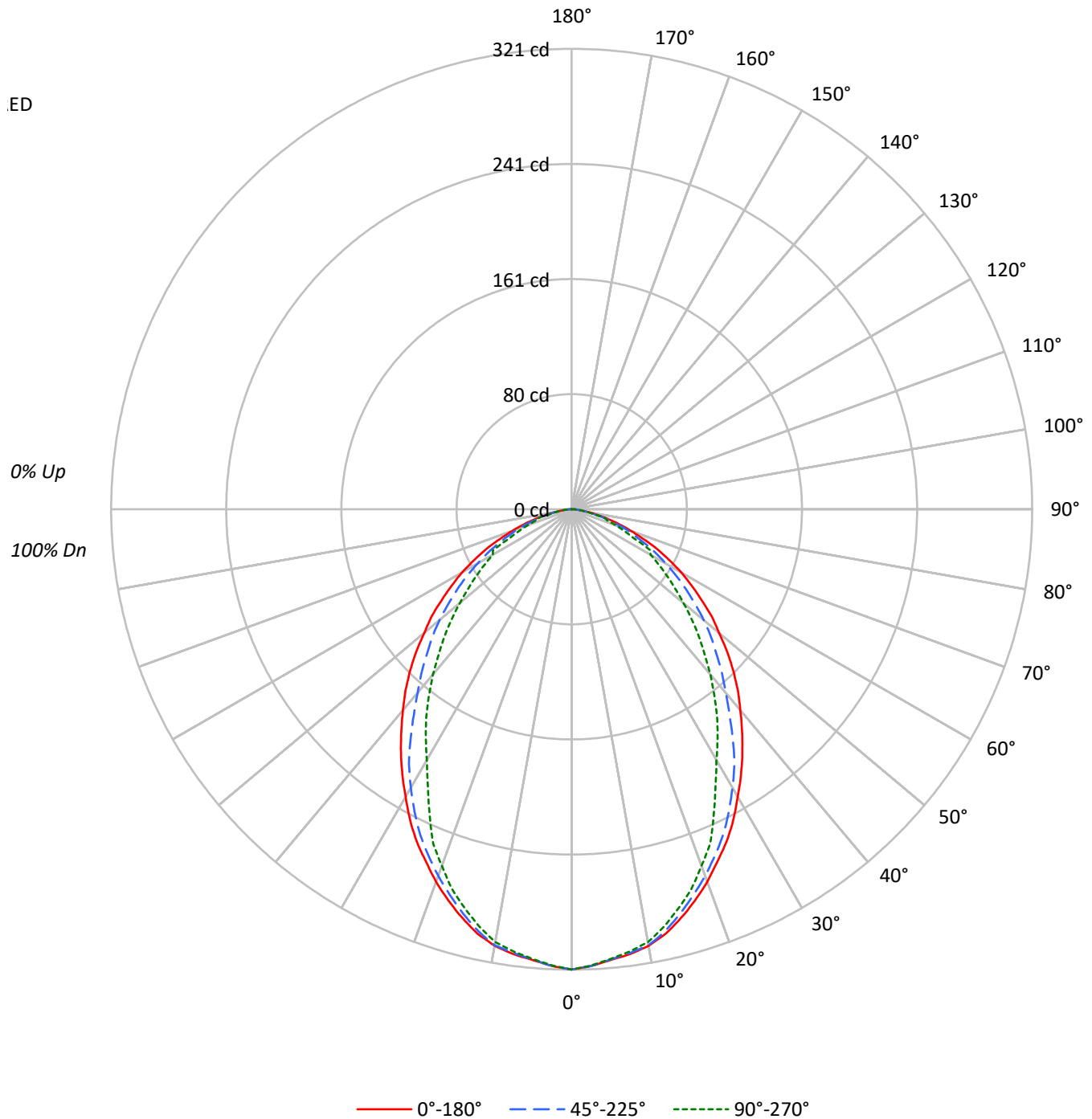
Lumens per Lamp: N/A  
Luminaire Lumens: 630.0 lumens  
Efficiency: N/A  
Efficacy: 75.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	3454	3454	3454
5°	3407	3404	3399
10°	3377	3374	3349
15°	3286	3254	3208
20°	3166	3115	3030
25°	3036	2970	2785
30°	2877	2785	2508
35°	2725	2574	2321
40°	2570	2345	2112
45°	2423	2169	1909
50°	2242	2013	1703
55°	2076	1824	1524
60°	1901	1630	1365
65°	1673	1426	1210
70°	1378	1249	1026
75°	1094	957	1002
80°	738	688	645
85°	457	556	642

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2423 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.9	4.7
10°-20°	82.0	13.0
20°-30°	113.5	18.0
30°-40°	121.0	19.2
40°-50°	110.4	17.5
50°-60°	86.5	13.7
60°-70°	56.4	8.9
70°-80°	25.0	4.0
80°-90°	5.4	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°	225.4	35.8
0°-40°	346.4	55.0
0°-60°	543.3	86.2
0°-90°	630.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	630.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	321	321	321	321	321	
5°	315	315	315	315	315	30
15°	295	295	292	289	288	83
25°	256	254	250	241	234	117
35°	207	206	196	181	177	130
45°	159	156	142	131	125	123
55°	111	107	97	86	81	99
65°	66	62	56	57	48	65
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°	320.9	320.9	320.9	320.9	320.9
2.5°	318.7	318.7	318.7	318.3	318.3
5°	315.3	315.0	315.0	314.6	314.6
7.5°	312.8	312.4	312.0	311.6	310.9
10°	309.0	309.0	308.7	306.8	306.4
12.5°	303.1	302.7	301.3	298.7	297.9
15°	294.9	294.9	292.0	289.0	287.9
17.5°	286.0	285.7	282.0	279.0	277.5
20°	276.4	275.7	271.9	267.1	264.5
22.5°	265.6	265.6	261.2	254.9	252.3
25°	255.6	254.1	250.1	241.1	234.5
27.5°	244.1	241.9	237.4	224.8	217.0
30°	231.5	230.4	224.1	207.8	201.8
32.5°	219.6	217.8	211.1	194.0	189.2
35°	207.4	205.9	195.9	181.0	176.6
37.5°	195.1	193.3	180.7	168.8	163.2
40°	182.9	180.7	166.9	156.2	150.3
42.5°	171.4	168.4	155.1	143.6	136.9
45°	159.2	155.8	142.5	130.6	125.4
47.5°	146.9	143.9	131.7	119.5	113.5
50°	133.9	131.3	120.2	108.0	101.7
52.5°	123.2	119.1	108.3	96.1	90.9
55°	110.6	107.2	97.2	85.7	81.2
57.5°	99.1	95.7	86.4	75.7	72.0
60°	88.3	83.5	75.7	66.4	63.4
62.5°	76.4	72.7	66.0	58.2	62.0
65°	65.7	62.0	56.0	57.1	47.5
67.5°	53.8	51.9	46.7	41.6	40.1
70°	43.8	41.6	39.7	34.1	32.6
72.5°	34.9	32.6	30.1	27.1	26.0
75°	26.3	24.5	23.0	21.9	24.1
77.5°	18.2	17.4	16.3	15.2	14.8
80°	11.9	11.5	11.1	10.8	10.4
82.5°	7.0	7.0	7.0	7.0	7.0
85°	3.7	4.1	4.5	4.8	5.2
87.5°	2.2	2.2	2.6	3.0	3.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)