

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: P558836

Luminaire Tested: FSR-12-1-LD4-1STD-35-UNV-80-86-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558836  
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-80-86-EDD-90  
Description: 1X1 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON  
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

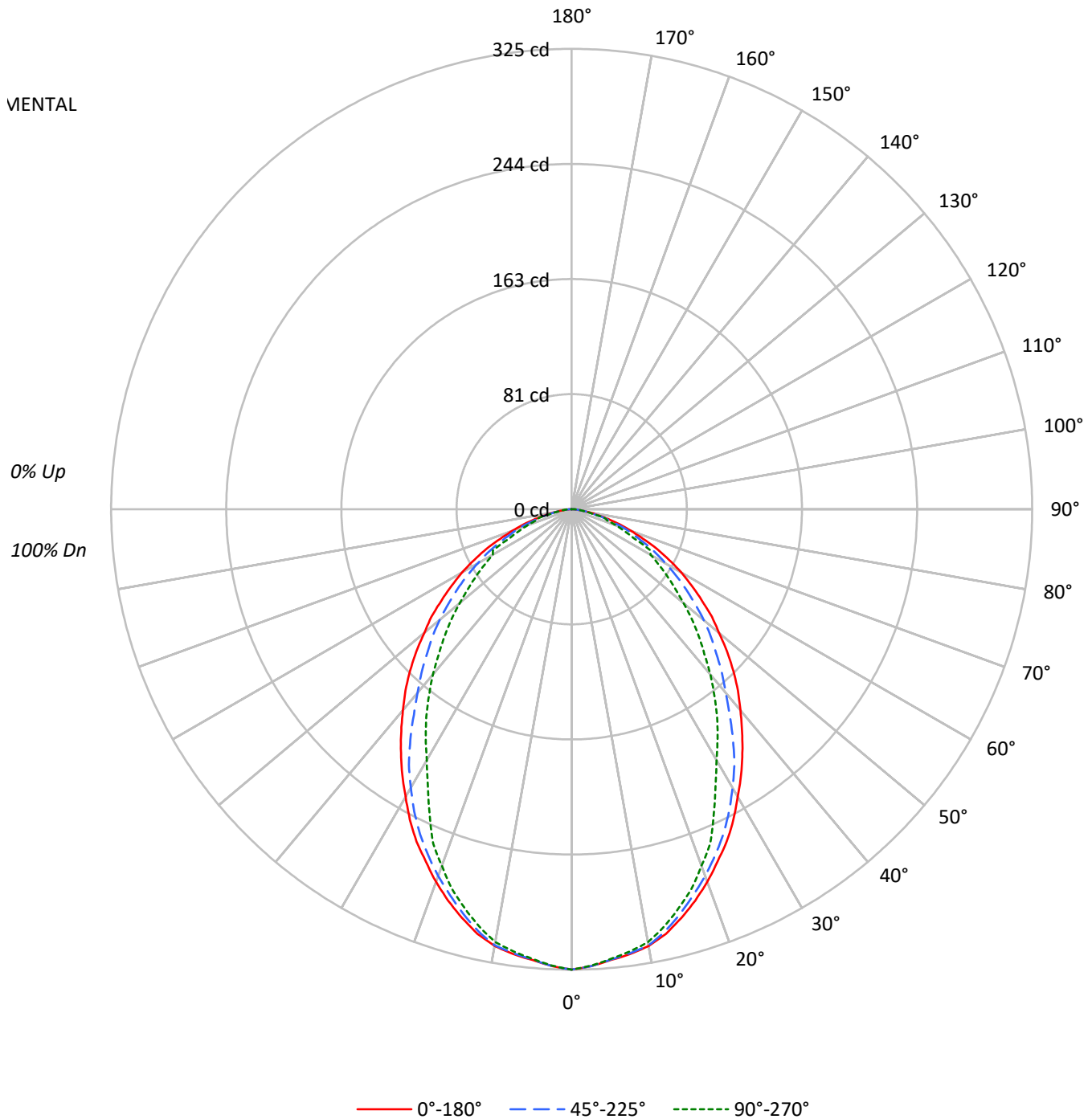
Lumens per Lamp: N/A  
Luminaire Lumens: 638.0 lumens  
Efficiency: N/A  
Efficacy: 76.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	3498	3498	3498
5°	3451	3447	3442
10°	3421	3417	3392
15°	3329	3295	3249
20°	3206	3155	3069
25°	3075	3007	2820
30°	2913	2820	2541
35°	2759	2607	2349
40°	2602	2376	2139
45°	2454	2197	1933
50°	2271	2038	1723
55°	2102	1847	1544
60°	1925	1649	1382
65°	1694	1444	1225
70°	1394	1265	1042
75°	1110	969	1015
80°	744	700	651
85°	469	556	655

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2454 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	30.3	4.7
10°-20°	83.0	13.0
20°-30°	114.9	18.0
30°-40°	122.6	19.2
40°-50°	111.8	17.5
50°-60°	87.6	13.7
60°-70°	57.1	8.9
70°-80°	25.3	4.0
80°-90°	5.4	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°	228.2	35.8
0°-40°	350.8	55.0
0°-60°	550.2	86.2
0°-90°	638.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	638.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	325	325	325	325	325	
5°	319	319	319	319	319	30
15°	299	299	296	293	292	84
25°	259	257	253	244	237	119
35°	210	208	198	183	179	131
45°	161	158	144	132	127	124
55°	112	109	98	87	82	100
65°	66	63	57	58	48	66
75°	27	25	23	22	24	29
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°	325.0	325.0	325.0	325.0	325.0
2.5°	322.7	322.7	322.7	322.4	322.4
5°	319.4	319.0	319.0	318.6	318.6
7.5°	316.7	316.3	316.0	315.6	314.8
10°	313.0	313.0	312.6	310.7	310.3
12.5°	307.0	306.6	305.1	302.4	301.7
15°	298.7	298.7	295.7	292.7	291.6
17.5°	289.7	289.3	285.5	282.5	281.0
20°	279.9	279.2	275.4	270.5	267.9
22.5°	269.0	269.0	264.5	258.1	255.5
25°	258.9	257.4	253.2	244.2	237.4
27.5°	247.2	245.0	240.5	227.7	219.8
30°	234.4	233.3	226.9	210.4	204.4
32.5°	222.4	220.5	213.8	196.5	191.6
35°	210.0	208.5	198.4	183.3	178.8
37.5°	197.6	195.7	183.0	170.9	165.3
40°	185.2	183.0	169.1	158.2	152.2
42.5°	173.6	170.6	157.0	145.4	138.6
45°	161.2	157.8	144.3	132.2	127.0
47.5°	148.8	145.8	133.4	121.0	115.0
50°	135.6	133.0	121.7	109.3	102.9
52.5°	124.7	120.6	109.7	97.3	92.0
55°	112.0	108.6	98.4	86.8	82.3
57.5°	100.3	96.9	87.5	76.6	72.9
60°	89.4	84.5	76.6	67.3	64.2
62.5°	77.4	73.6	66.9	59.0	62.7
65°	66.5	62.7	56.7	57.9	48.1
67.5°	54.5	52.6	47.3	42.1	40.6
70°	44.3	42.1	40.2	34.6	33.1
72.5°	35.3	33.1	30.4	27.4	26.3
75°	26.7	24.8	23.3	22.2	24.4
77.5°	18.4	17.7	16.5	15.4	15.0
80°	12.0	11.6	11.3	10.9	10.5
82.5°	7.1	7.1	7.1	7.1	7.1
85°	3.8	4.1	4.5	4.9	5.3
87.5°	2.3	2.3	2.6	3.0	3.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)