

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: P559476

Luminaire Tested: FSR-12-1-LD4-2STD-40-UNV-80-86-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559476  
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-LD4-2STD-40-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 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

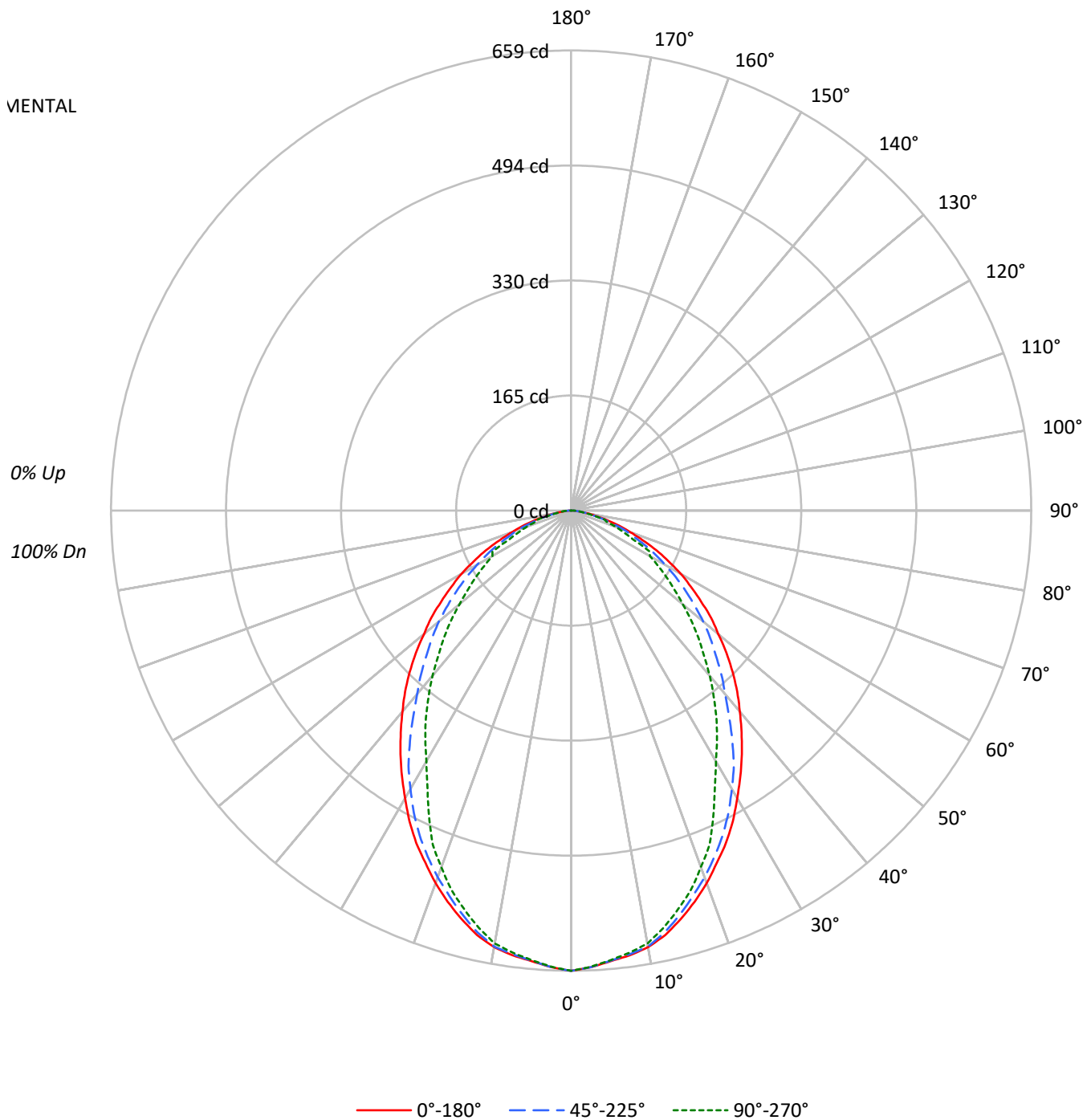
Lumens per Lamp: N/A  
Luminaire Lumens: 1294.0 lumens  
Efficiency: N/A  
Efficacy: 78.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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																												
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7094	7094	7094
5°	6998	6991	6982
10°	6938	6930	6879
15°	6751	6683	6589
20°	6503	6399	6223
25°	6235	6100	5720
30°	5910	5721	5152
35°	5598	5286	4766
40°	5279	4818	4336
45°	4976	4454	3921
50°	4607	4135	3496
55°	4262	3746	3132
60°	3905	3348	2805
65°	3436	2932	2483
70°	2829	2565	2112
75°	2250	1963	2059
80°	1512	1420	1320
85°	939	1124	1321

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4976 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.4	4.7
10°-20°	168.4	13.0
20°-30°	233.1	18.0
30°-40°	248.6	19.2
40°-50°	226.8	17.5
50°-60°	177.7	13.7
60°-70°	115.8	8.9
70°-80°	51.3	4.0
80°-90°	11.0	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°	462.9	35.8
0°-40°	711.5	55.0
0°-60°	1115.9	86.2
0°-90°	1294.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1294.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	659	659	659	659	659	
5°	648	647	647	646	646	61
15°	606	606	600	594	591	170
25°	525	522	514	495	482	241
35°	426	423	402	372	363	266
45°	327	320	293	268	258	252
55°	227	220	200	176	167	204
65°	135	127	115	117	98	133
75°	54	50	47	45	50	58
85°	8	8	9	10	11	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	659.1	659.1	659.1	659.1	659.1
2.5°	654.6	654.6	654.6	653.8	653.8
5°	647.7	647.0	647.0	646.2	646.2
7.5°	642.4	641.6	640.9	640.1	638.6
10°	634.8	634.8	634.0	630.2	629.4
12.5°	622.6	621.8	618.8	613.4	611.9
15°	605.8	605.8	599.7	593.6	591.3
17.5°	587.5	586.8	579.1	573.0	570.0
20°	567.7	566.2	558.6	548.7	543.3
22.5°	545.6	545.6	536.5	523.5	518.2
25°	525.0	522.0	513.6	495.3	481.6
27.5°	501.4	496.8	487.7	461.8	445.8
30°	475.5	473.2	460.3	426.7	414.5
32.5°	451.1	447.3	433.6	398.5	388.6
35°	426.0	422.9	402.3	371.9	362.7
37.5°	400.8	397.0	371.1	346.7	335.3
40°	375.7	371.1	342.9	320.8	308.6
42.5°	352.1	346.0	318.5	294.9	281.2
45°	326.9	320.0	292.6	268.2	257.6
47.5°	301.8	295.7	270.5	245.4	233.2
50°	275.1	269.8	246.9	221.7	208.8
52.5°	253.0	244.6	222.5	197.4	186.7
55°	227.1	220.2	199.6	176.0	166.9
57.5°	203.5	196.6	177.6	155.5	147.8
60°	181.4	171.5	155.5	136.4	130.3
62.5°	157.0	149.4	135.6	119.6	127.3
65°	134.9	127.3	115.1	117.4	97.5
67.5°	110.5	106.7	96.0	85.3	82.3
70°	89.9	85.3	81.5	70.1	67.1
72.5°	71.6	67.1	61.7	55.6	53.3
75°	54.1	50.3	47.2	45.0	49.5
77.5°	37.3	35.8	33.5	31.2	30.5
80°	24.4	23.6	22.9	22.1	21.3
82.5°	14.5	14.5	14.5	14.5	14.5
85°	7.6	8.4	9.1	9.9	10.7
87.5°	4.6	4.6	5.3	6.1	6.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)