

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: P559066

Luminaire Tested: FSR-12-1-LD4-2HI-35-UNV-82-94-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559066  
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-LD4-2HI-35-UNV-82-94-EDD-90  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

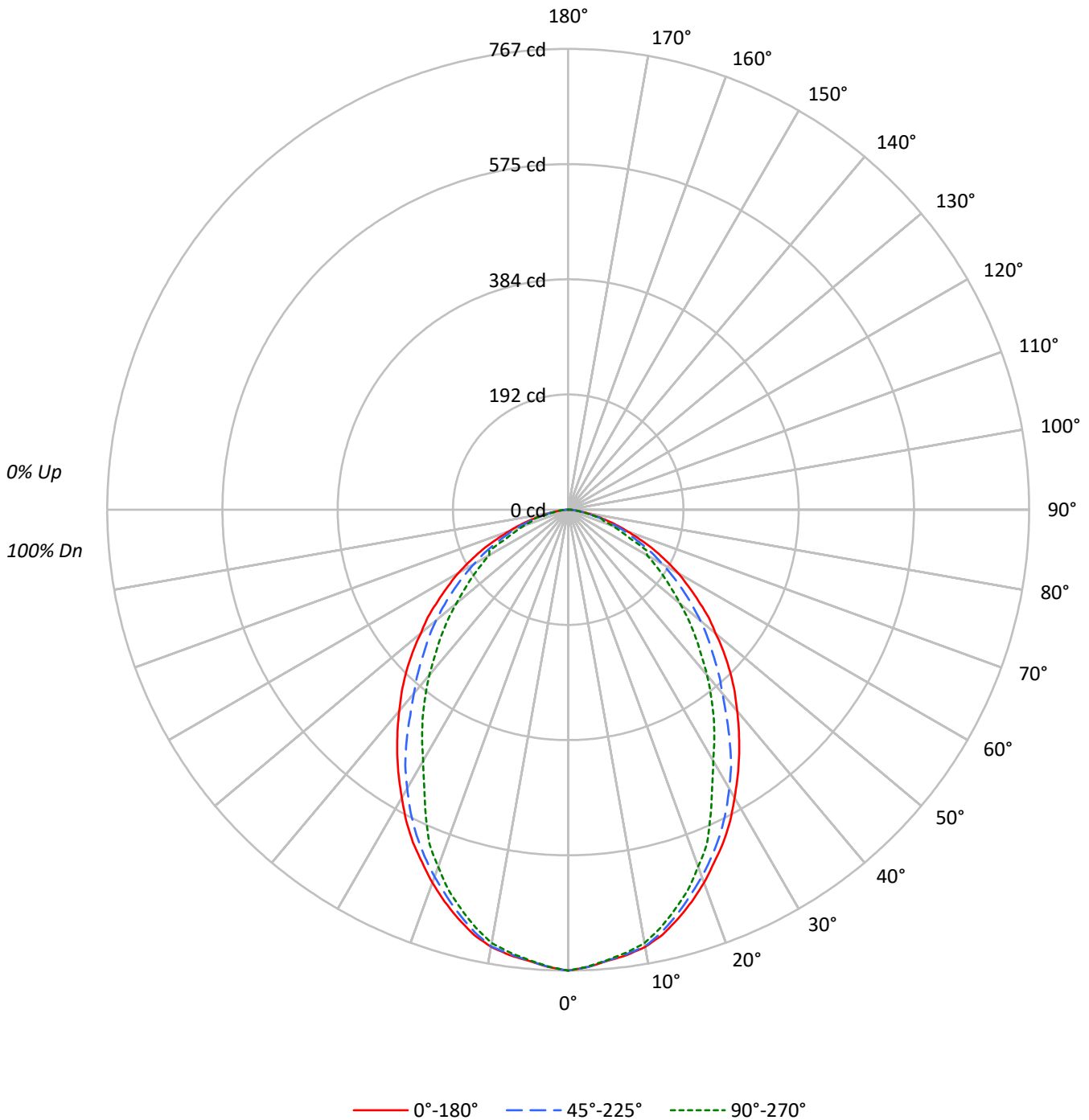
Lumens per Lamp: N/A  
Luminaire Lumens: 1506.0 lumens  
Efficiency: N/A  
Efficacy: 69.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	8257	8257	8257
5°	8145	8135	8126
10°	8075	8065	8006
15°	7857	7778	7669
20°	7568	7447	7243
25°	7257	7099	6657
30°	6878	6658	5997
35°	6515	6154	5547
40°	6143	5608	5047
45°	5792	5185	4564
50°	5362	4811	4069
55°	4960	4361	3644
60°	4545	3894	3266
65°	3999	3410	2891
70°	3292	2987	2455
75°	2620	2287	2396
80°	1760	1649	1537
85°	1099	1309	1531

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5792 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.4	4.7
10°-20°	196.0	13.0
20°-30°	271.3	18.0
30°-40°	289.3	19.2
40°-50°	263.9	17.5
50°-60°	206.8	13.7
60°-70°	134.8	8.9
70°-80°	59.7	4.0
80°-90°	12.8	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°	538.7	35.8
0°-40°	828.0	55.0
0°-60°	1298.7	86.2
0°-90°	1506.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1506.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	767	767	767	767	767	
5°	754	753	753	752	752	72
15°	705	705	698	691	688	198
25°	611	608	598	576	560	281
35°	496	492	468	433	422	310
45°	380	372	341	312	300	293
55°	264	256	232	205	194	237
65°	157	148	134	137	114	155
75°	63	58	55	52	58	68
85°	9	10	11	12	12	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	767.1	767.1	767.1	767.1	767.1
2.5°	761.8	761.8	761.8	760.9	760.9
5°	753.8	752.9	752.9	752.1	752.1
7.5°	747.6	746.7	745.9	745.0	743.2
10°	738.8	738.8	737.9	733.4	732.5
12.5°	724.6	723.7	720.1	713.9	712.2
15°	705.1	705.1	698.0	690.9	688.2
17.5°	683.8	682.9	674.0	666.9	663.4
20°	660.7	658.9	650.1	638.5	632.3
22.5°	635.0	635.0	624.4	609.3	603.1
25°	611.0	607.5	597.7	576.5	560.5
27.5°	583.6	578.2	567.6	537.4	518.8
30°	553.4	550.7	535.7	496.6	482.5
32.5°	525.0	520.6	504.6	463.8	452.3
35°	495.8	492.2	468.3	432.8	422.1
37.5°	466.5	462.1	431.9	403.5	390.2
40°	437.2	431.9	399.1	373.4	359.2
42.5°	409.7	402.6	370.7	343.2	327.3
45°	380.5	372.5	340.6	312.2	299.8
47.5°	351.2	344.1	314.8	285.6	271.4
50°	320.2	313.9	287.3	258.1	243.0
52.5°	294.4	284.7	259.0	229.7	217.3
55°	264.3	256.3	232.4	204.9	194.2
57.5°	236.8	228.8	206.6	180.9	172.1
60°	211.1	199.5	180.9	158.7	151.7
62.5°	182.7	173.8	157.9	139.2	148.1
65°	157.0	148.1	133.9	136.6	113.5
67.5°	128.6	124.2	111.7	99.3	95.8
70°	104.6	99.3	94.9	81.6	78.0
72.5°	83.4	78.0	71.8	64.7	62.1
75°	63.0	58.5	55.0	52.3	57.6
77.5°	43.5	41.7	39.0	36.4	35.5
80°	28.4	27.5	26.6	25.7	24.8
82.5°	16.9	16.9	16.9	16.9	16.9
85°	8.9	9.8	10.6	11.5	12.4
87.5°	5.3	5.3	6.2	7.1	8.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)