

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: P559764

Luminaire Tested: FSR-12-2-LD4-1HI-50-UNV-82-86-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559764  
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-12-2-LD4-1HI-50-UNV-82-86-EDD-90  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

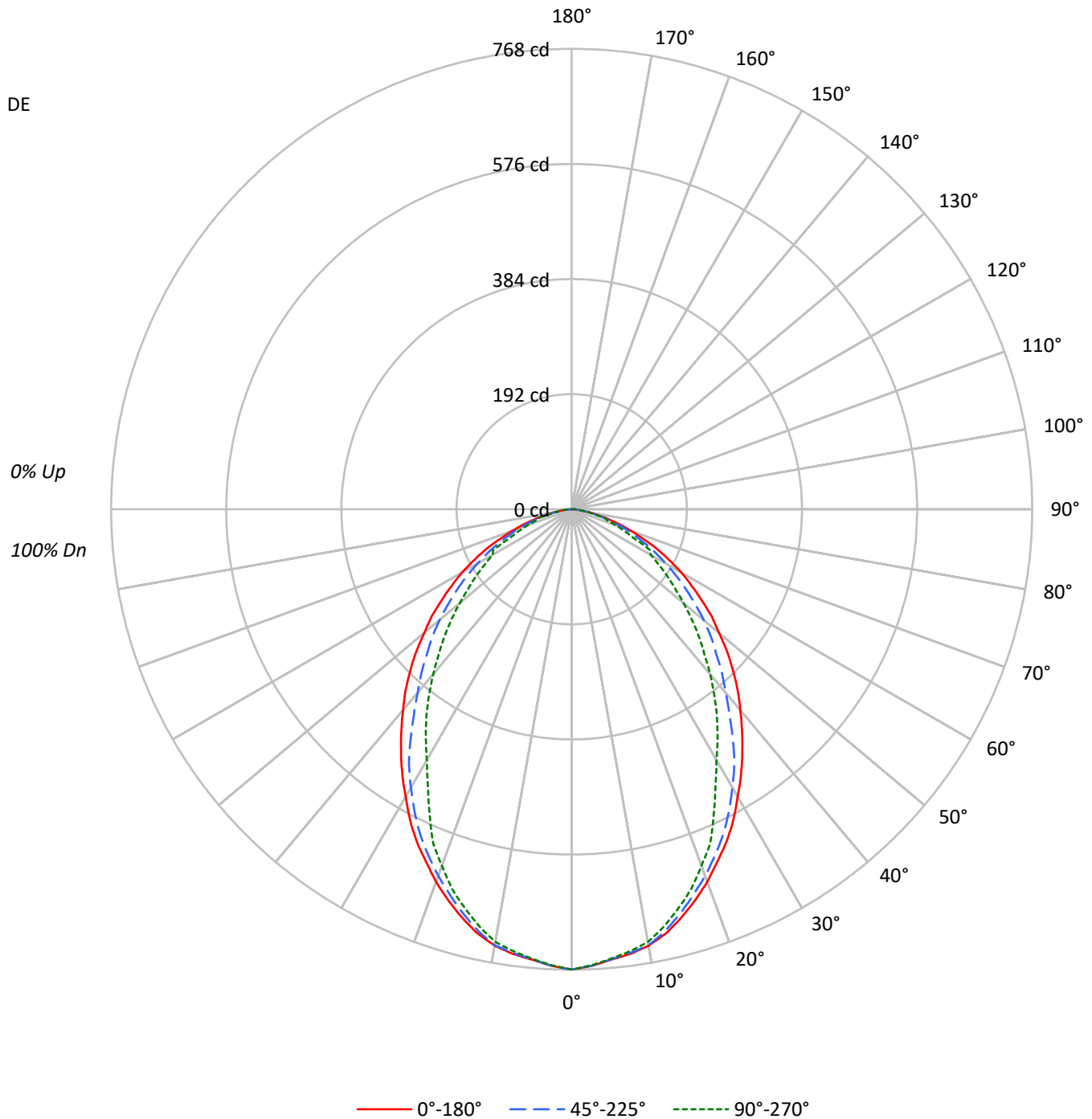
Lumens per Lamp: N/A  
Luminaire Lumens: 1507.0 lumens  
Efficiency: N/A  
Efficacy: 69.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4131	4131	4131
5°	4075	4070	4066
10°	4040	4035	4006
15°	3931	3891	3837
20°	3787	3726	3624
25°	3631	3552	3331
30°	3442	3331	3000
35°	3259	3079	2775
40°	3074	2806	2525
45°	2898	2594	2283
50°	2683	2407	2036
55°	2482	2182	1824
60°	2273	1948	1634
65°	2001	1706	1447
70°	1648	1495	1229
75°	1310	1144	1200
80°	880	824	769
85°	550	655	766

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2898 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.5	4.7
10°-20°	196.1	13.0
20°-30°	271.5	18.0
30°-40°	289.5	19.2
40°-50°	264.1	17.5
50°-60°	206.9	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°	539.1	35.8
0°-40°	828.6	55.0
0°-60°	1299.6	86.2
0°-90°	1507.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1507.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	768	768	768	768	768	
5°	754	753	753	753	753	72
15°	706	706	698	691	689	198
25°	612	608	598	577	561	281
35°	496	492	469	433	422	310
45°	381	373	341	312	300	293
55°	264	256	232	205	194	237
65°	157	148	134	137	114	155
75°	63	59	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°	767.6	767.6	767.6	767.6	767.6
2.5°	762.3	762.3	762.3	761.4	761.4
5°	754.3	753.4	753.4	752.6	752.6
7.5°	748.1	747.2	746.3	745.5	743.7
10°	739.2	739.2	738.4	733.9	733.0
12.5°	725.0	724.2	720.6	714.4	712.6
15°	705.5	705.5	698.4	691.3	688.7
17.5°	684.2	683.3	674.5	667.4	663.8
20°	661.2	659.4	650.5	639.0	632.8
22.5°	635.4	635.4	624.8	609.7	603.5
25°	611.5	607.9	598.1	576.8	560.9
27.5°	583.9	578.6	568.0	537.8	519.2
30°	553.8	551.1	536.0	497.0	482.8
32.5°	525.4	520.9	505.0	464.1	452.6
35°	496.1	492.5	468.6	433.1	422.4
37.5°	466.8	462.4	432.2	403.8	390.5
40°	437.5	432.2	399.4	373.6	359.4
42.5°	410.0	402.9	371.0	343.4	327.5
45°	380.7	372.7	340.8	312.4	300.0
47.5°	351.4	344.3	315.0	285.8	271.6
50°	320.4	314.2	287.5	258.2	243.2
52.5°	294.6	284.9	259.1	229.8	217.4
55°	264.5	256.5	232.5	205.0	194.4
57.5°	236.9	229.0	206.8	181.0	172.2
60°	211.2	199.7	181.0	158.9	151.8
62.5°	182.8	173.9	158.0	139.3	148.2
65°	157.1	148.2	134.0	136.7	113.6
67.5°	128.7	124.2	111.8	99.4	95.8
70°	104.7	99.4	95.0	81.6	78.1
72.5°	83.4	78.1	71.9	64.8	62.1
75°	63.0	58.6	55.0	52.4	57.7
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)