

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: P559719

Luminaire Tested: FSR-12-2-LD4-1HI-40-UNV-93-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559719  
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-40-UNV-93-87-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

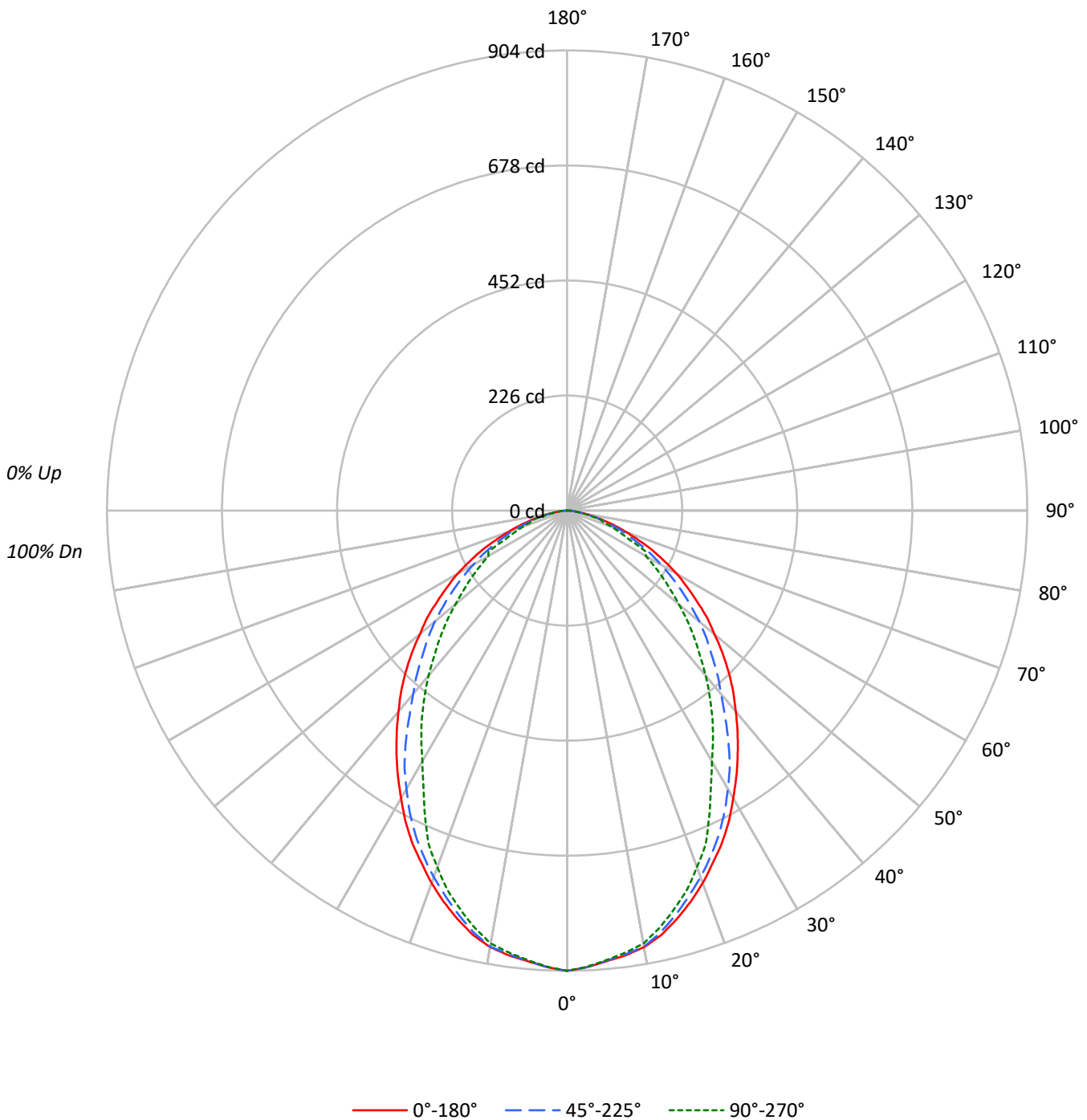
Lumens per Lamp: N/A  
Luminaire Lumens: 1775.0 lumens  
Efficiency: N/A  
Efficacy: 82.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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													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°	4866	4866	4866
5°	4800	4794	4789
10°	4758	4753	4718
15°	4630	4583	4519
20°	4460	4388	4269
25°	4277	4184	3923
30°	4054	3923	3534
35°	3839	3626	3269
40°	3620	3305	2974
45°	3413	3055	2689
50°	3159	2836	2398
55°	2923	2570	2148
60°	2678	2295	1924
65°	2356	2010	1704
70°	1940	1759	1448
75°	1543	1347	1412
80°	1035	973	908
85°	648	772	902

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3413 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.2	4.7
10°-20°	231.0	13.0
20°-30°	319.8	18.0
30°-40°	341.0	19.2
40°-50°	311.1	17.5
50°-60°	243.7	13.7
60°-70°	158.8	8.9
70°-80°	70.4	4.0
80°-90°	15.1	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°	634.9	35.8
0°-40°	975.9	55.0
0°-60°	1530.7	86.2
0°-90°	1775.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1775.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	904	904	904	904	904	
5°	888	887	887	886	886	84
15°	831	831	823	814	811	234
25°	720	716	704	679	661	331
35°	584	580	552	510	498	365
45°	448	439	401	368	353	345
55°	312	302	274	242	229	279
65°	185	175	158	161	134	182
75°	74	69	65	62	68	80
85°	10	12	12	14	15	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	904.2	904.2	904.2	904.2	904.2
2.5°	897.9	897.9	897.9	896.8	896.8
5°	888.5	887.4	887.4	886.4	886.4
7.5°	881.2	880.1	879.1	878.0	875.9
10°	870.7	870.7	869.7	864.4	863.4
12.5°	854.0	852.9	848.8	841.4	839.4
15°	831.0	831.0	822.6	814.3	811.1
17.5°	805.9	804.9	794.4	786.0	781.9
20°	778.7	776.6	766.2	752.6	745.3
22.5°	748.4	748.4	735.9	718.1	710.8
25°	720.2	716.0	704.5	679.4	660.6
27.5°	687.8	681.5	669.0	633.4	611.5
30°	652.3	649.1	631.3	585.4	568.6
32.5°	618.8	613.6	594.8	546.7	533.1
35°	584.3	580.1	551.9	510.1	497.6
37.5°	549.8	544.6	509.0	475.6	459.9
40°	515.3	509.0	470.4	440.1	423.3
42.5°	482.9	474.6	436.9	404.5	385.7
45°	448.4	439.0	401.4	367.9	353.3
47.5°	413.9	405.6	371.1	336.6	319.9
50°	377.3	370.0	338.7	304.2	286.4
52.5°	347.0	335.5	305.2	270.7	256.1
55°	311.5	302.1	273.9	241.5	228.9
57.5°	279.1	269.7	243.5	213.2	202.8
60°	248.8	235.2	213.2	187.1	178.7
62.5°	215.3	204.9	186.1	164.1	174.6
65°	185.0	174.6	157.8	161.0	133.8
67.5°	151.6	146.3	131.7	117.1	112.9
70°	123.3	117.1	111.8	96.2	92.0
72.5°	98.3	92.0	84.7	76.3	73.2
75°	74.2	69.0	64.8	61.7	67.9
77.5°	51.2	49.1	46.0	42.9	41.8
80°	33.4	32.4	31.4	30.3	29.3
82.5°	19.9	19.9	19.9	19.9	19.9
85°	10.5	11.5	12.5	13.6	14.6
87.5°	6.3	6.3	7.3	8.4	9.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)