

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: P560553

Luminaire Tested: FSR-12-2-LD4-2LO-50-UNV-93-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560553  
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-LD4-2LO-50-UNV-93-88-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

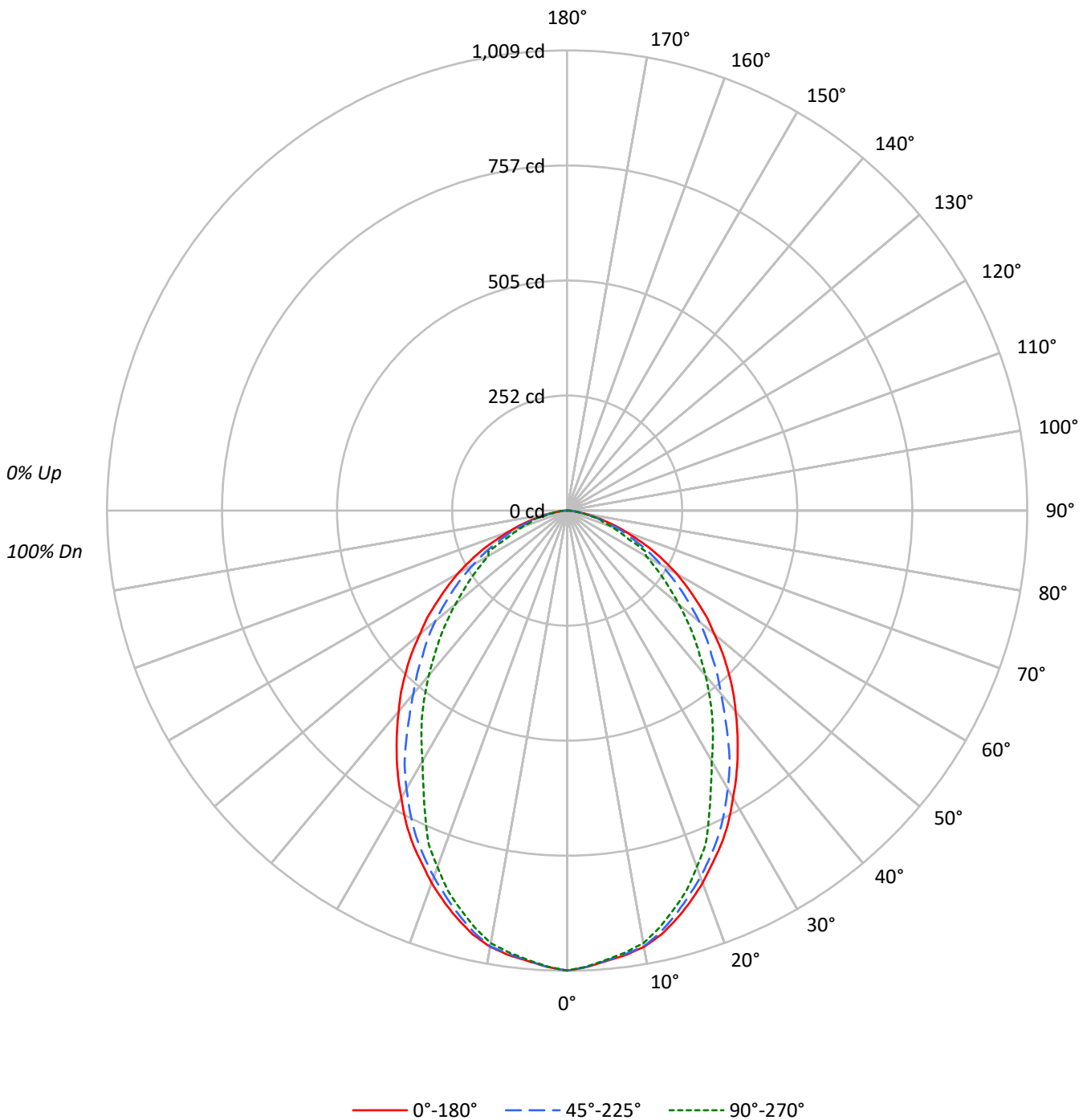
Lumens per Lamp: N/A  
Luminaire Lumens: 1980.0 lumens  
Efficiency: N/A  
Efficacy: 84.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.4  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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				
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°	5428	5428	5428
5°	5354	5348	5342
10°	5308	5302	5263
15°	5165	5113	5041
20°	4975	4895	4762
25°	4771	4667	4376
30°	4522	4377	3942
35°	4282	4045	3646
40°	4038	3686	3318
45°	3807	3408	3000
50°	3524	3163	2675
55°	3261	2867	2396
60°	2987	2561	2146
65°	2628	2243	1900
70°	2165	1964	1614
75°	1722	1503	1576
80°	1156	1085	1010
85°	722	865	1007

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3807 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.9	4.7
10°-20°	257.7	13.0
20°-30°	356.7	18.0
30°-40°	380.4	19.2
40°-50°	347.0	17.5
50°-60°	271.9	13.7
60°-70°	177.2	8.9
70°-80°	78.5	4.0
80°-90°	16.9	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°	708.3	35.8
0°-40°	1088.6	55.0
0°-60°	1707.5	86.2
0°-90°	1980.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1980.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1009	1009	1009	1009	1009	
5°	991	990	990	989	989	94
15°	927	927	918	908	905	261
25°	803	799	786	758	737	369
35°	652	647	616	569	555	407
45°	500	490	448	410	394	385
55°	348	337	306	269	255	312
65°	206	195	176	180	149	203
75°	83	77	72	69	76	89
85°	12	13	14	15	16	16
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1008.6	1008.6	1008.6	1008.6	1008.6
2.5°	1001.6	1001.6	1001.6	1000.4	1000.4
5°	991.1	989.9	989.9	988.8	988.8
7.5°	982.9	981.8	980.6	979.4	977.1
10°	971.3	971.3	970.1	964.3	963.1
12.5°	952.6	951.5	946.8	938.6	936.3
15°	927.0	927.0	917.6	908.3	904.8
17.5°	899.0	897.8	886.2	876.8	872.2
20°	868.7	866.3	854.7	839.5	831.4
22.5°	834.9	834.9	820.9	801.0	792.9
25°	803.4	798.7	785.9	757.9	736.9
27.5°	767.2	760.2	746.2	706.6	682.1
30°	727.6	724.1	704.3	653.0	634.3
32.5°	690.3	684.4	663.5	609.8	594.7
35°	651.8	647.1	615.6	569.0	555.0
37.5°	613.3	607.5	567.8	530.5	513.0
40°	574.8	567.8	524.7	490.9	472.2
42.5°	538.7	529.4	487.4	451.2	430.3
45°	500.2	489.7	447.7	410.4	394.1
47.5°	461.7	452.4	413.9	375.5	356.8
50°	420.9	412.8	377.8	339.3	319.5
52.5°	387.1	374.3	340.5	302.0	285.7
55°	347.5	337.0	305.5	269.3	255.4
57.5°	311.3	300.8	271.7	237.9	226.2
60°	277.5	262.3	237.9	208.7	199.4
62.5°	240.2	228.5	207.5	183.1	194.7
65°	206.4	194.7	176.1	179.6	149.2
67.5°	169.1	163.2	146.9	130.6	125.9
70°	137.6	130.6	124.8	107.3	102.6
72.5°	109.6	102.6	94.4	85.1	81.6
75°	82.8	77.0	72.3	68.8	75.8
77.5°	57.1	54.8	51.3	47.8	46.6
80°	37.3	36.1	35.0	33.8	32.6
82.5°	22.2	22.2	22.2	22.2	22.2
85°	11.7	12.8	14.0	15.2	16.3
87.5°	7.0	7.0	8.2	9.3	10.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)