

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: P559021

Luminaire Tested: FSR-12-1-LD4-1STD-50-UNV-93-96-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559021  
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-LD4-1STD-50-UNV-93-96-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER  
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

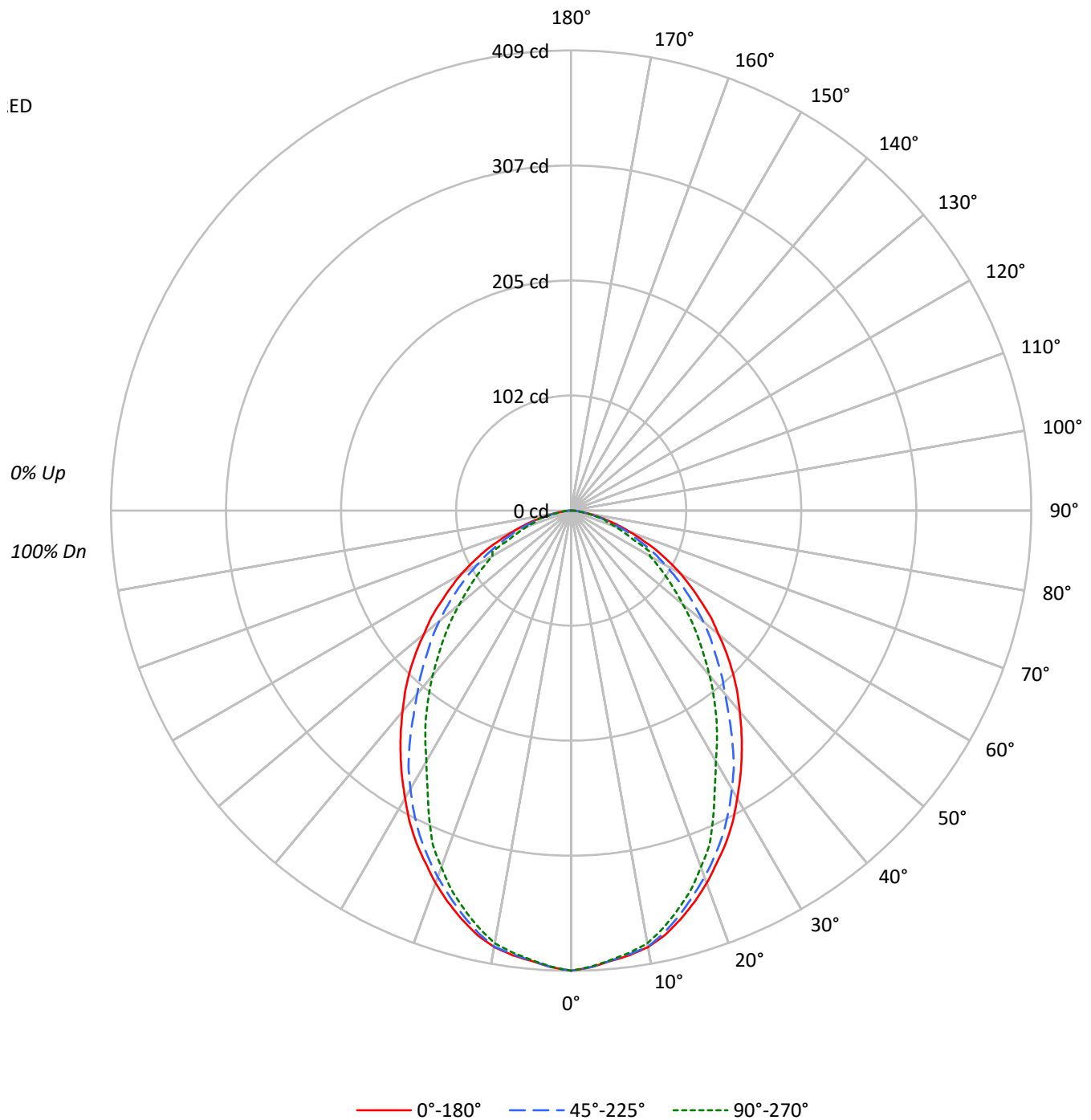
Lumens per Lamp: N/A  
Luminaire Lumens: 803.0 lumens  
Efficiency: N/A  
Efficacy: 96.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	4402	4402	4402
5°	4343	4338	4333
10°	4305	4300	4269
15°	4189	4148	4090
20°	4035	3970	3863
25°	3869	3785	3550
30°	3668	3550	3197
35°	3473	3281	2958
40°	3275	2990	2691
45°	3089	2764	2433
50°	2858	2565	2170
55°	2644	2325	1944
60°	2422	2077	1742
65°	2132	1819	1541
70°	1756	1592	1309
75°	1397	1219	1277
80°	936	880	818
85°	580	704	815

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3089 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.1	4.7
10°-20°	104.5	13.0
20°-30°	144.7	18.0
30°-40°	154.3	19.2
40°-50°	140.7	17.5
50°-60°	110.3	13.7
60°-70°	71.9	8.9
70°-80°	31.8	4.0
80°-90°	6.8	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°	287.2	35.8
0°-40°	441.5	55.0
0°-60°	692.5	86.2
0°-90°	803.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	803.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	409	409	409	409	409	
5°	402	402	402	401	401	38
15°	376	376	372	368	367	106
25°	326	324	319	307	299	150
35°	264	262	250	231	225	165
45°	203	199	182	166	160	156
55°	141	137	124	109	104	126
65°	84	79	71	73	60	82
75°	34	31	29	28	31	36
85°	5	5	6	6	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	409.0	409.0	409.0	409.0	409.0
2.5°	406.2	406.2	406.2	405.7	405.7
5°	401.9	401.5	401.5	401.0	401.0
7.5°	398.6	398.2	397.7	397.2	396.3
10°	393.9	393.9	393.4	391.1	390.6
12.5°	386.3	385.9	384.0	380.7	379.7
15°	375.9	375.9	372.2	368.4	367.0
17.5°	364.6	364.1	359.4	355.6	353.7
20°	352.3	351.3	346.6	340.5	337.2
22.5°	338.6	338.6	332.9	324.9	321.6
25°	325.8	323.9	318.7	307.4	298.9
27.5°	311.2	308.3	302.6	286.6	276.6
30°	295.1	293.7	285.6	264.8	257.2
32.5°	279.9	277.6	269.1	247.3	241.2
35°	264.3	262.4	249.7	230.8	225.1
37.5°	248.7	246.4	230.3	215.2	208.1
40°	233.1	230.3	212.8	199.1	191.5
42.5°	218.5	214.7	197.7	183.0	174.5
45°	202.9	198.6	181.6	166.5	159.8
47.5°	187.3	183.5	167.9	152.3	144.7
50°	170.7	167.4	153.2	137.6	129.6
52.5°	157.0	151.8	138.1	122.5	115.9
55°	140.9	136.7	123.9	109.2	103.6
57.5°	126.3	122.0	110.2	96.5	91.7
60°	112.5	106.4	96.5	84.6	80.9
62.5°	97.4	92.7	84.2	74.2	79.0
65°	83.7	79.0	71.4	72.8	60.5
67.5°	68.6	66.2	59.6	53.0	51.1
70°	55.8	53.0	50.6	43.5	41.6
72.5°	44.5	41.6	38.3	34.5	33.1
75°	33.6	31.2	29.3	27.9	30.7
77.5°	23.2	22.2	20.8	19.4	18.9
80°	15.1	14.7	14.2	13.7	13.2
82.5°	9.0	9.0	9.0	9.0	9.0
85°	4.7	5.2	5.7	6.1	6.6
87.5°	2.8	2.8	3.3	3.8	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)