

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: P559009

Luminaire Tested: FSR-12-1-LD4-1STD-50-UNV-93-84-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559009  
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-93-84-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

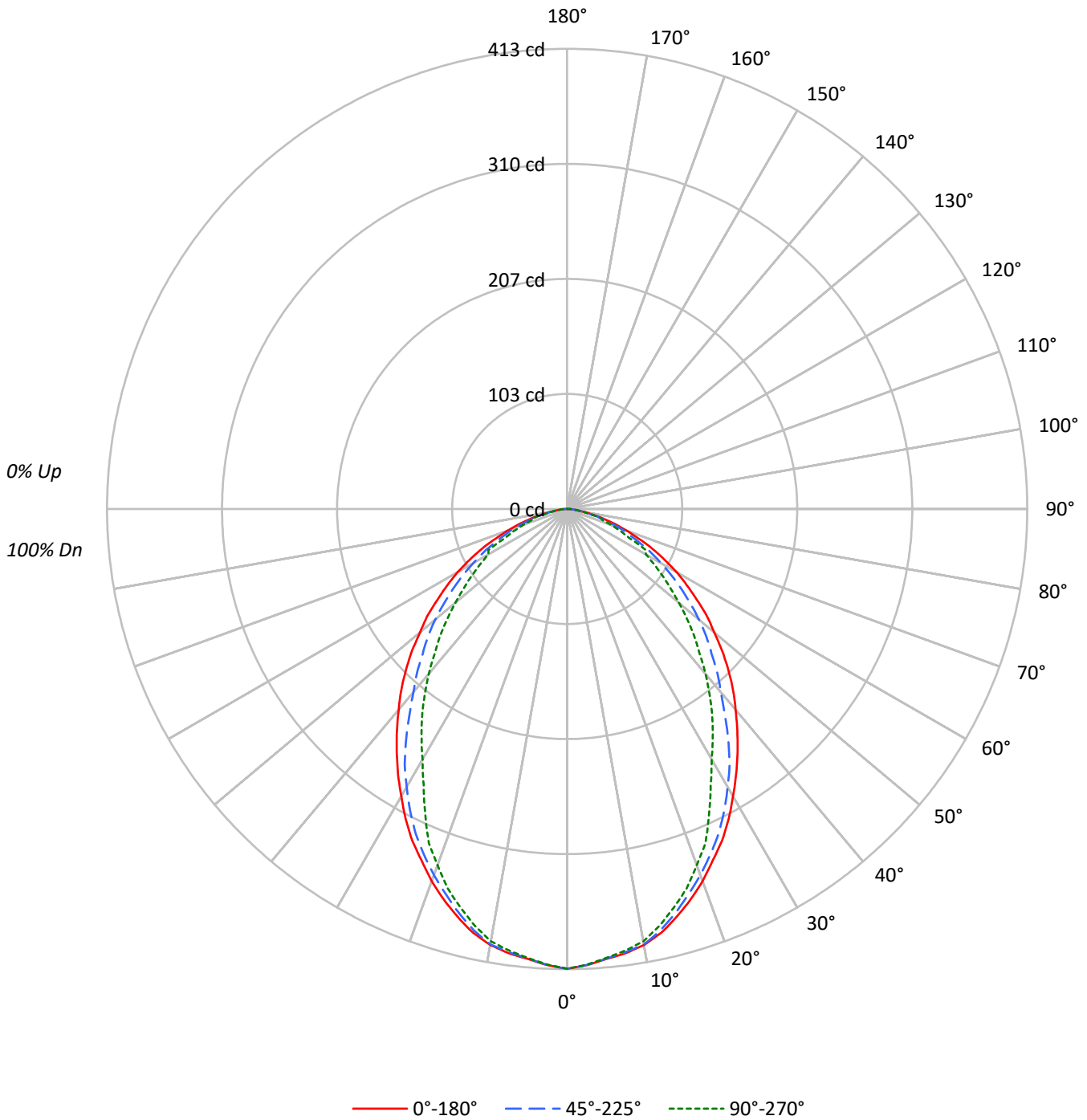
Lumens per Lamp: N/A  
Luminaire Lumens: 810.0 lumens  
Efficiency: N/A  
Efficacy: 97.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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				
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°	4441	4441	4441
5°	4380	4376	4371
10°	4342	4338	4306
15°	4226	4183	4125
20°	4071	4005	3896
25°	3904	3818	3581
30°	3699	3581	3225
35°	3503	3310	2984
40°	3305	3015	2715
45°	3115	2789	2454
50°	2884	2587	2189
55°	2667	2346	1961
60°	2443	2095	1757
65°	2150	1834	1556
70°	1772	1605	1322
75°	1410	1231	1289
80°	948	886	831
85°	593	704	827

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3115 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.4	4.7
10°-20°	105.4	13.0
20°-30°	145.9	18.0
30°-40°	155.6	19.2
40°-50°	142.0	17.5
50°-60°	111.2	13.7
60°-70°	72.5	8.9
70°-80°	32.1	4.0
80°-90°	6.9	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°	289.7	35.8
0°-40°	445.3	55.0
0°-60°	698.5	86.2
0°-90°	810.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	810.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	413	413	413	413	413	
5°	405	405	405	404	404	38
15°	379	379	375	372	370	107
25°	329	327	322	310	302	151
35°	267	265	252	233	227	167
45°	205	200	183	168	161	158
55°	142	138	125	110	104	127
65°	84	80	72	74	61	83
75°	34	32	30	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°	412.6	412.6	412.6	412.6	412.6
2.5°	409.7	409.7	409.7	409.3	409.3
5°	405.4	405.0	405.0	404.5	404.5
7.5°	402.1	401.6	401.2	400.7	399.7
10°	397.3	397.3	396.9	394.5	394.0
12.5°	389.7	389.2	387.3	384.0	383.0
15°	379.2	379.2	375.4	371.6	370.2
17.5°	367.8	367.3	362.5	358.7	356.8
20°	355.4	354.4	349.6	343.4	340.1
22.5°	341.5	341.5	335.8	327.7	324.4
25°	328.7	326.7	321.5	310.0	301.5
27.5°	313.9	311.0	305.3	289.1	279.0
30°	297.6	296.2	288.1	267.1	259.5
32.5°	282.4	280.0	271.4	249.5	243.3
35°	266.6	264.7	251.9	232.8	227.1
37.5°	250.9	248.5	232.3	217.0	209.9
40°	235.2	232.3	214.6	200.8	193.2
42.5°	220.4	216.6	199.4	184.6	176.0
45°	204.6	200.3	183.2	167.9	161.2
47.5°	188.9	185.1	169.3	153.6	146.0
50°	172.2	168.9	154.5	138.8	130.7
52.5°	158.4	153.1	139.3	123.5	116.9
55°	142.1	137.9	125.0	110.2	104.5
57.5°	127.4	123.1	111.1	97.3	92.5
60°	113.5	107.3	97.3	85.4	81.6
62.5°	98.3	93.5	84.9	74.9	79.7
65°	84.4	79.7	72.0	73.5	61.1
67.5°	69.2	66.8	60.1	53.4	51.5
70°	56.3	53.4	51.0	43.9	42.0
72.5°	44.8	42.0	38.6	34.8	33.4
75°	33.9	31.5	29.6	28.1	31.0
77.5°	23.4	22.4	21.0	19.6	19.1
80°	15.3	14.8	14.3	13.8	13.4
82.5°	9.1	9.1	9.1	9.1	9.1
85°	4.8	5.2	5.7	6.2	6.7
87.5°	2.9	2.9	3.3	3.8	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)