

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: P558634

Luminaire Tested: FSR-12-1-LD4-1HI-50-UNV-93-94-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558634  
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-LD4-1HI-50-UNV-93-94-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

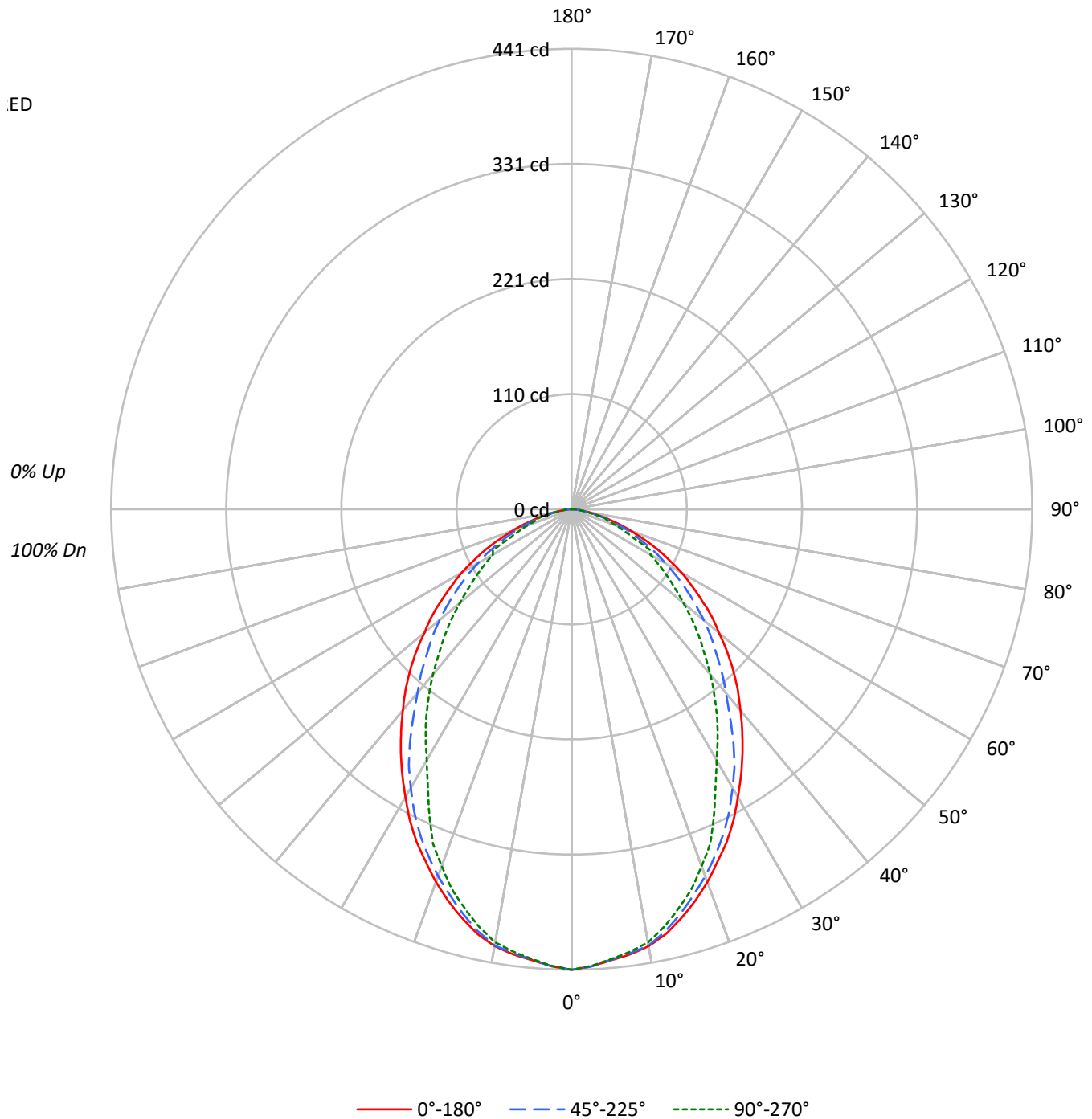
Lumens per Lamp: N/A  
Luminaire Lumens: 866.0 lumens  
Efficiency: N/A  
Efficacy: 80.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 10.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	4748	4748	4748
5°	4684	4679	4673
10°	4643	4638	4604
15°	4518	4473	4410
20°	4352	4282	4165
25°	4173	4082	3828
30°	3955	3828	3448
35°	3746	3539	3189
40°	3532	3225	2902
45°	3331	2981	2624
50°	3083	2766	2339
55°	2852	2507	2096
60°	2613	2239	1877
65°	2300	1961	1663
70°	1895	1718	1413
75°	1506	1314	1377
80°	1010	948	886
85°	630	753	877

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3331 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	41.1	4.7
10°-20°	112.7	13.0
20°-30°	156.0	18.0
30°-40°	166.4	19.2
40°-50°	151.8	17.5
50°-60°	118.9	13.7
60°-70°	77.5	8.9
70°-80°	34.3	4.0
80°-90°	7.4	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°	309.8	35.8
0°-40°	476.1	55.0
0°-60°	746.8	86.2
0°-90°	866.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	866.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	441	441	441	441	441	
5°	434	433	433	432	432	41
15°	405	405	401	397	396	114
25°	351	349	344	332	322	161
35°	285	283	269	249	243	178
45°	219	214	196	180	172	169
55°	152	147	134	118	112	136
65°	90	85	77	78	65	89
75°	36	34	32	30	33	39
85°	5	6	6	7	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	441.1	441.1	441.1	441.1	441.1
2.5°	438.1	438.1	438.1	437.6	437.6
5°	433.5	433.0	433.0	432.5	432.5
7.5°	429.9	429.4	428.9	428.4	427.4
10°	424.8	424.8	424.3	421.7	421.2
12.5°	416.7	416.1	414.1	410.5	409.5
15°	405.4	405.4	401.4	397.3	395.7
17.5°	393.2	392.7	387.6	383.5	381.5
20°	379.9	378.9	373.8	367.2	363.6
22.5°	365.1	365.1	359.0	350.4	346.8
25°	351.4	349.3	343.7	331.5	322.3
27.5°	335.6	332.5	326.4	309.0	298.3
30°	318.2	316.7	308.0	285.6	277.4
32.5°	301.9	299.4	290.2	266.7	260.1
35°	285.1	283.0	269.3	248.9	242.7
37.5°	268.2	265.7	248.4	232.0	224.4
40°	251.4	248.4	229.5	214.7	206.5
42.5°	235.6	231.5	213.2	197.4	188.2
45°	218.8	214.2	195.8	179.5	172.4
47.5°	202.0	197.9	181.0	164.2	156.1
50°	184.1	180.5	165.2	148.4	139.7
52.5°	169.3	163.7	148.9	132.1	124.9
55°	152.0	147.4	133.6	117.8	111.7
57.5°	136.2	131.6	118.8	104.0	98.9
60°	121.4	114.7	104.0	91.3	87.2
62.5°	105.1	100.0	90.8	80.1	85.2
65°	90.3	85.2	77.0	78.5	65.3
67.5°	73.9	71.4	64.3	57.1	55.1
70°	60.2	57.1	54.6	46.9	44.9
72.5°	47.9	44.9	41.3	37.2	35.7
75°	36.2	33.7	31.6	30.1	33.1
77.5°	25.0	24.0	22.4	20.9	20.4
80°	16.3	15.8	15.3	14.8	14.3
82.5°	9.7	9.7	9.7	9.7	9.7
85°	5.1	5.6	6.1	6.6	7.1
87.5°	3.1	3.1	3.6	4.1	4.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)