

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: P558564

Luminaire Tested: FSR-12-1-LD4-1HI-40-UNV-93-86-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558564  
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-40-UNV-93-86-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

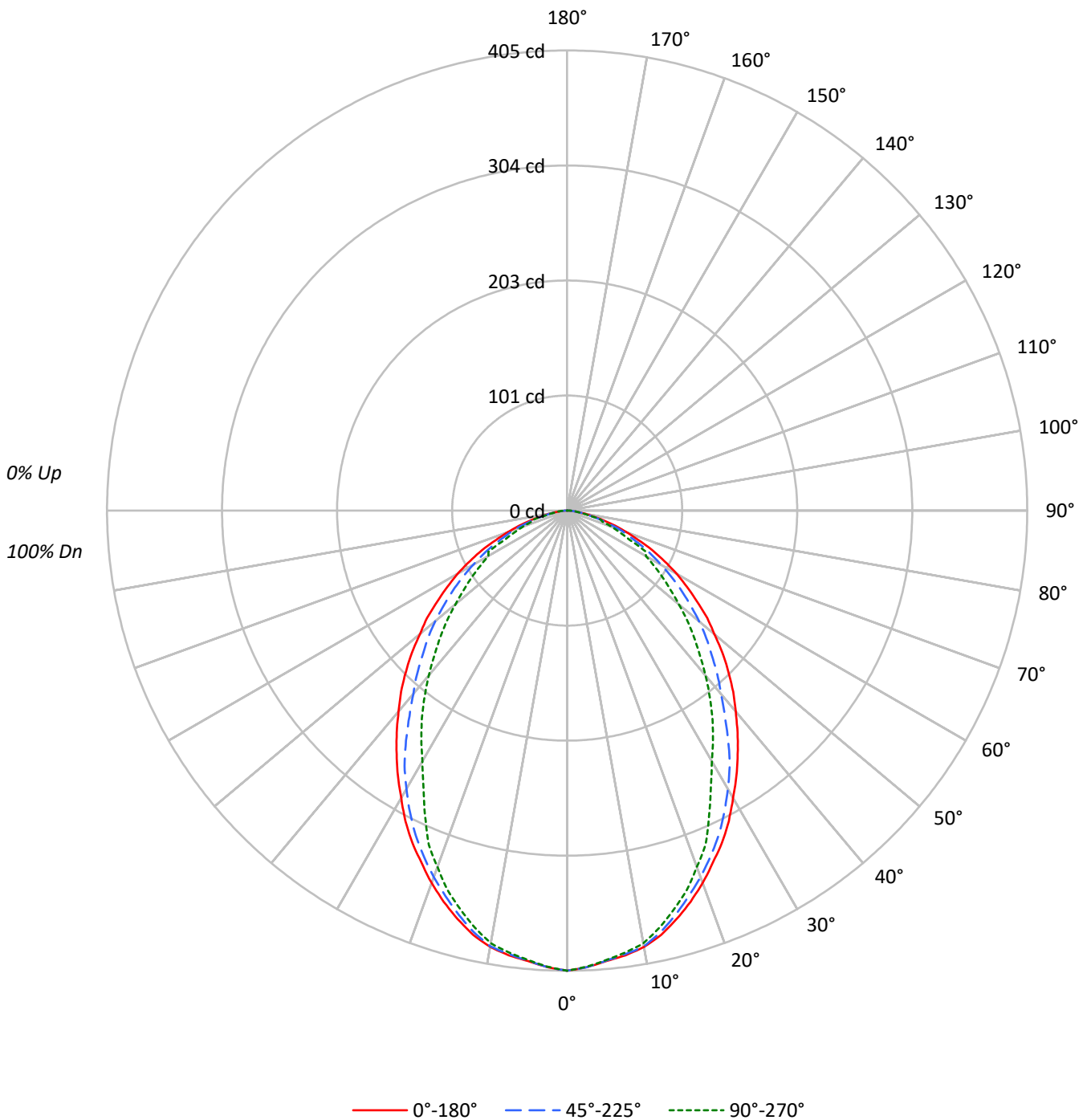
Lumens per Lamp: N/A  
Luminaire Lumens: 795.0 lumens  
Efficiency: N/A  
Efficacy: 73.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 10.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	50	30	10	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	4359	4359	4359
5°	4299	4295	4290
10°	4263	4257	4227
15°	4148	4105	4048
20°	3995	3931	3824
25°	3831	3747	3514
30°	3631	3515	3166
35°	3439	3248	2928
40°	3243	2961	2664
45°	3057	2737	2408
50°	2830	2540	2148
55°	2618	2303	1924
60°	2398	2056	1724
65°	2111	1801	1526
70°	1737	1577	1297
75°	1381	1206	1264
80°	930	868	812
85°	580	692	815

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3057 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.7	4.7
10°-20°	103.5	13.0
20°-30°	143.2	18.0
30°-40°	152.7	19.2
40°-50°	139.3	17.5
50°-60°	109.2	13.7
60°-70°	71.1	8.9
70°-80°	31.5	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°	284.4	35.8
0°-40°	437.1	55.0
0°-60°	685.6	86.2
0°-90°	795.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	795.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	405	405	405	405	405	
5°	398	398	398	397	397	38
15°	372	372	368	365	363	105
25°	323	321	316	304	296	148
35°	262	260	247	228	223	164
45°	201	197	180	165	158	155
55°	140	135	123	108	102	125
65°	83	78	71	72	60	82
75°	33	31	29	28	30	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°	405.0	405.0	405.0	405.0	405.0
2.5°	402.2	402.2	402.2	401.7	401.7
5°	397.9	397.5	397.5	397.0	397.0
7.5°	394.7	394.2	393.7	393.3	392.3
10°	390.0	390.0	389.5	387.2	386.7
12.5°	382.5	382.0	380.1	376.9	375.9
15°	372.2	372.2	368.4	364.7	363.3
17.5°	361.0	360.5	355.8	352.1	350.2
20°	348.8	347.8	343.2	337.1	333.8
22.5°	335.2	335.2	329.6	321.6	318.4
25°	322.6	320.7	315.5	304.3	295.9
27.5°	308.1	305.2	299.6	283.7	273.9
30°	292.1	290.7	282.8	262.2	254.7
32.5°	277.2	274.8	266.4	244.9	238.8
35°	261.7	259.8	247.2	228.5	222.8
37.5°	246.3	243.9	228.0	213.0	206.0
40°	230.8	228.0	210.7	197.1	189.6
42.5°	216.3	212.5	195.7	181.2	172.8
45°	200.8	196.6	179.8	164.8	158.2
47.5°	185.4	181.6	166.2	150.7	143.3
50°	169.0	165.7	151.7	136.2	128.3
52.5°	155.4	150.3	136.7	121.3	114.7
55°	139.5	135.3	122.7	108.1	102.5
57.5°	125.0	120.8	109.1	95.5	90.8
60°	111.4	105.3	95.5	83.8	80.1
62.5°	96.4	91.8	83.3	73.5	78.2
65°	82.9	78.2	70.7	72.1	59.9
67.5°	67.9	65.5	59.0	52.4	50.6
70°	55.2	52.4	50.1	43.1	41.2
72.5°	44.0	41.2	37.9	34.2	32.8
75°	33.2	30.9	29.0	27.6	30.4
77.5°	22.9	22.0	20.6	19.2	18.7
80°	15.0	14.5	14.0	13.6	13.1
82.5°	8.9	8.9	8.9	8.9	8.9
85°	4.7	5.1	5.6	6.1	6.6
87.5°	2.8	2.8	3.3	3.7	4.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)