

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: P558626

Luminaire Tested: FSR-12-1-LD4-1HI-50-UNV-93-85-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558626  
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-93-85-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

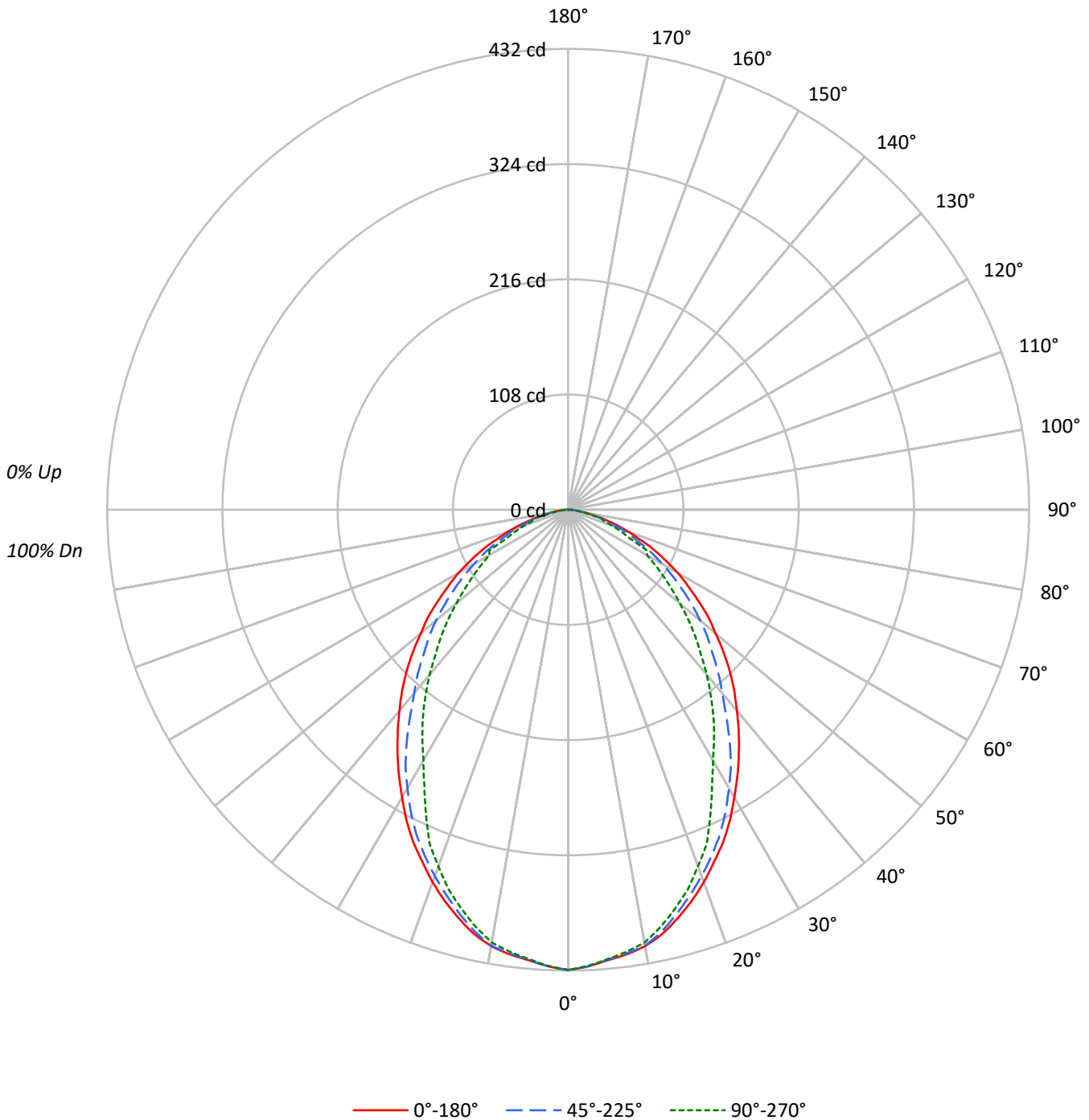
Lumens per Lamp: N/A  
Luminaire Lumens: 847.0 lumens  
Efficiency: N/A  
Efficacy: 78.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 10.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	4645	4645	4645
5°	4581	4576	4571
10°	4541	4536	4503
15°	4418	4374	4314
20°	4257	4188	4073
25°	4082	3993	3744
30°	3868	3745	3372
35°	3664	3461	3120
40°	3455	3155	2838
45°	3258	2915	2567
50°	3016	2706	2289
55°	2789	2453	2049
60°	2555	2192	1836
65°	2249	1918	1625
70°	1854	1681	1382
75°	1472	1285	1347
80°	992	930	868
85°	618	741	865

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3258 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.2	4.7
10°-20°	110.2	13.0
20°-30°	152.6	18.0
30°-40°	162.7	19.2
40°-50°	148.4	17.5
50°-60°	116.3	13.7
60°-70°	75.8	8.9
70°-80°	33.6	4.0
80°-90°	7.2	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°	303.0	35.8
0°-40°	465.7	55.0
0°-60°	730.4	86.2
0°-90°	847.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	847.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	432	432	432	432	432	
5°	424	424	424	423	423	40
15°	396	396	392	389	387	111
25°	344	342	336	324	315	158
35°	279	277	263	243	237	174
45°	214	210	192	176	169	165
55°	149	144	131	115	109	133
65°	88	83	75	77	64	87
75°	35	33	31	29	32	38
85°	5	6	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°	431.5	431.5	431.5	431.5	431.5
2.5°	428.5	428.5	428.5	428.0	428.0
5°	424.0	423.5	423.5	423.0	423.0
7.5°	420.5	420.0	419.5	419.0	418.0
10°	415.5	415.5	415.0	412.5	412.0
12.5°	407.5	407.0	405.0	401.5	400.5
15°	396.5	396.5	392.5	388.6	387.1
17.5°	384.6	384.1	379.1	375.1	373.1
20°	371.6	370.6	365.6	359.1	355.6
22.5°	357.1	357.1	351.1	342.7	339.2
25°	343.7	341.7	336.2	324.2	315.2
27.5°	328.2	325.2	319.2	302.3	291.8
30°	311.2	309.7	301.3	279.3	271.3
32.5°	295.3	292.8	283.8	260.9	254.4
35°	278.8	276.8	263.4	243.4	237.4
37.5°	262.4	259.9	242.9	226.9	219.5
40°	245.9	242.9	224.5	210.0	202.0
42.5°	230.4	226.4	208.5	193.0	184.1
45°	214.0	209.5	191.5	175.6	168.6
47.5°	197.5	193.5	177.1	160.6	152.6
50°	180.1	176.6	161.6	145.1	136.7
52.5°	165.6	160.1	145.6	129.2	122.2
55°	148.6	144.1	130.7	115.2	109.2
57.5°	133.2	128.7	116.2	101.8	96.8
60°	118.7	112.2	101.8	89.3	85.3
62.5°	102.8	97.8	88.8	78.3	83.3
65°	88.3	83.3	75.3	76.8	63.8
67.5°	72.3	69.8	62.8	55.9	53.9
70°	58.9	55.9	53.4	45.9	43.9
72.5°	46.9	43.9	40.4	36.4	34.9
75°	35.4	32.9	30.9	29.4	32.4
77.5°	24.4	23.4	21.9	20.5	20.0
80°	16.0	15.5	15.0	14.5	14.0
82.5°	9.5	9.5	9.5	9.5	9.5
85°	5.0	5.5	6.0	6.5	7.0
87.5°	3.0	3.0	3.5	4.0	4.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)