

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: P558543

Luminaire Tested: FSR-12-1-LD4-1HI-40-UNV-81-97-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558543  
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-81-97-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

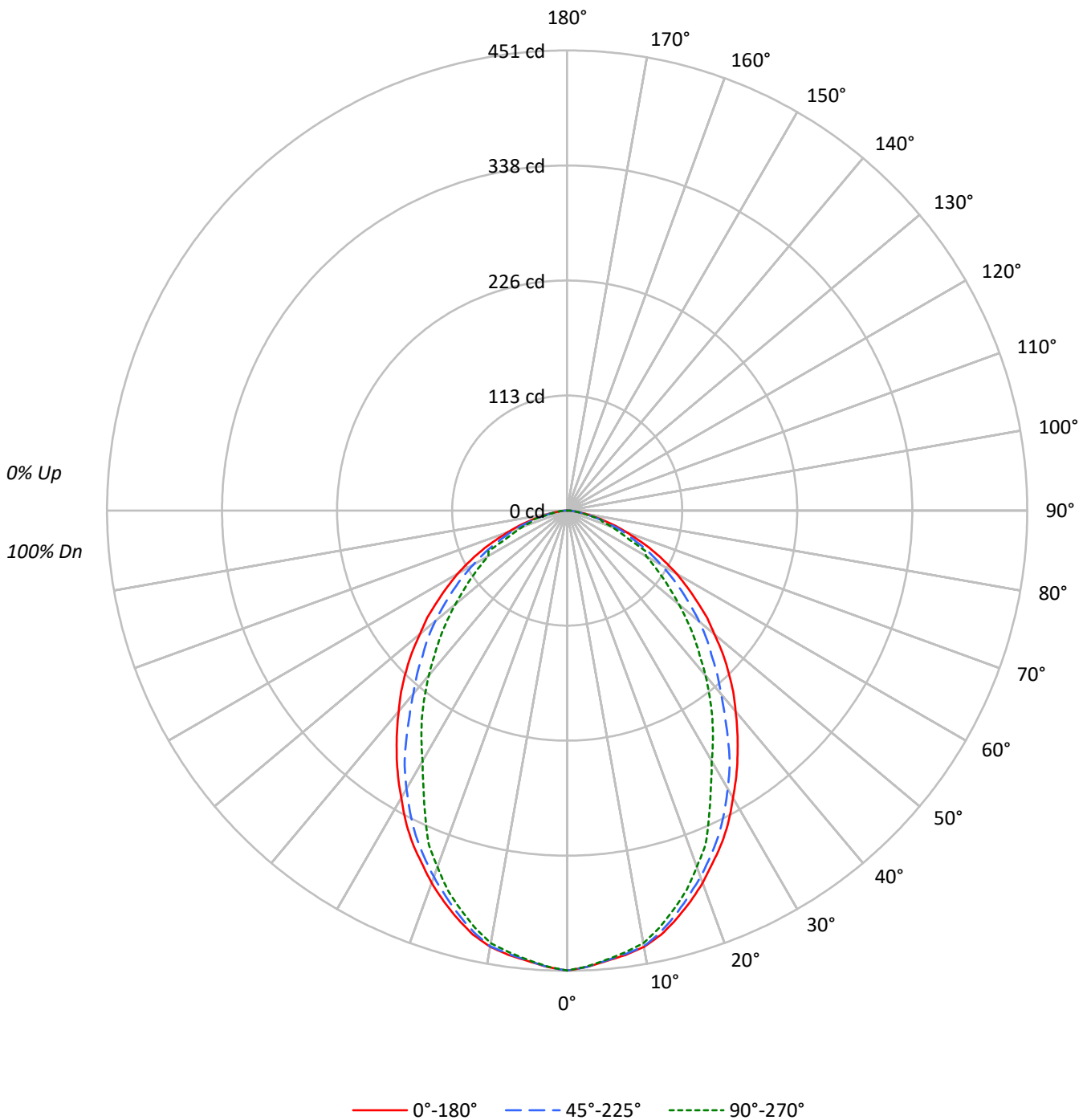
Lumens per Lamp: N/A  
Luminaire Lumens: 885.0 lumens  
Efficiency: N/A  
Efficacy: 81.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 10.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4852	4852	4852
5°	4787	4781	4775
10°	4745	4739	4705
15°	4617	4571	4506
20°	4448	4376	4257
25°	4265	4172	3912
30°	4042	3913	3524
35°	3828	3616	3260
40°	3610	3295	2966
45°	3404	3046	2682
50°	3150	2828	2391
55°	2914	2562	2141
60°	2669	2288	1918
65°	2348	2004	1699
70°	1936	1756	1445
75°	1539	1343	1410
80°	1035	967	905
85°	642	778	902

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3404 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.0	4.7
10°-20°	115.2	13.0
20°-30°	159.4	18.0
30°-40°	170.0	19.2
40°-50°	155.1	17.5
50°-60°	121.5	13.7
60°-70°	79.2	8.9
70°-80°	35.1	4.0
80°-90°	7.5	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°	316.6	35.8
0°-40°	486.6	55.0
0°-60°	763.2	86.2
0°-90°	885.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	885.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	451	451	451	451	451	
5°	443	442	442	442	442	42
15°	414	414	410	406	404	116
25°	359	357	351	339	329	165
35°	291	289	275	254	248	182
45°	224	219	200	183	176	172
55°	155	151	136	120	114	139
65°	92	87	79	80	67	91
75°	37	34	32	31	34	40
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°	450.8	450.8	450.8	450.8	450.8
2.5°	447.7	447.7	447.7	447.2	447.2
5°	443.0	442.5	442.5	441.9	441.9
7.5°	439.3	438.8	438.3	437.8	436.7
10°	434.1	434.1	433.6	431.0	430.5
12.5°	425.8	425.3	423.2	419.5	418.5
15°	414.3	414.3	410.2	406.0	404.4
17.5°	401.8	401.3	396.1	391.9	389.8
20°	388.3	387.2	382.0	375.2	371.6
22.5°	373.2	373.2	366.9	358.0	354.4
25°	359.1	357.0	351.3	338.8	329.4
27.5°	342.9	339.8	333.5	315.8	304.9
30°	325.2	323.6	314.8	291.9	283.5
32.5°	308.5	305.9	296.5	272.6	265.8
35°	291.3	289.2	275.2	254.3	248.1
37.5°	274.1	271.5	253.8	237.1	229.3
40°	256.9	253.8	234.5	219.4	211.1
42.5°	240.8	236.6	217.8	201.7	192.3
45°	223.6	218.9	200.1	183.4	176.2
47.5°	206.4	202.2	185.0	167.8	159.5
50°	188.1	184.5	168.9	151.7	142.8
52.5°	173.0	167.3	152.2	135.0	127.7
55°	155.3	150.6	136.5	120.4	114.1
57.5°	139.2	134.5	121.4	106.3	101.1
60°	124.0	117.3	106.3	93.3	89.1
62.5°	107.4	102.1	92.8	81.8	87.0
65°	92.2	87.0	78.7	80.3	66.7
67.5°	75.6	73.0	65.7	58.4	56.3
70°	61.5	58.4	55.8	47.9	45.9
72.5°	49.0	45.9	42.2	38.0	36.5
75°	37.0	34.4	32.3	30.7	33.9
77.5°	25.5	24.5	22.9	21.4	20.8
80°	16.7	16.2	15.6	15.1	14.6
82.5°	9.9	9.9	9.9	9.9	9.9
85°	5.2	5.7	6.3	6.8	7.3
87.5°	3.1	3.1	3.6	4.2	4.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)