

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: P558661

Luminaire Tested: FSR-12-1-LD4-1LO-35-UNV-81-86-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558661  
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-LD4-1LO-35-UNV-81-86-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

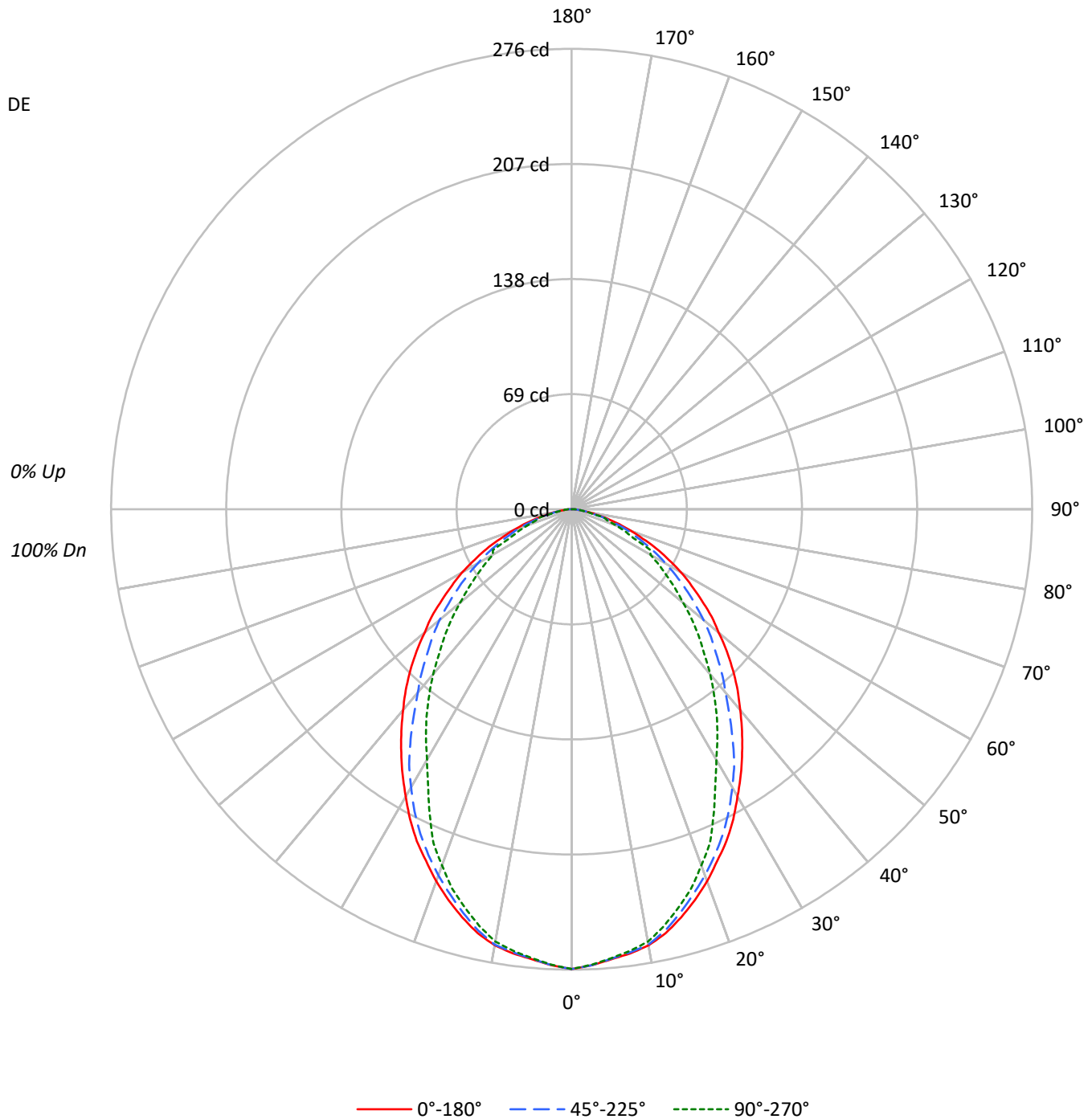
Lumens per Lamp: N/A  
Luminaire Lumens: 541.0 lumens  
Efficiency: N/A  
Efficacy: 93.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 5.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	2967	2967	2967
5°	2926	2923	2920
10°	2901	2898	2877
15°	2823	2794	2755
20°	2718	2675	2603
25°	2607	2550	2391
30°	2471	2391	2154
35°	2340	2210	1992
40°	2207	2015	1813
45°	2081	1862	1639
50°	1926	1728	1462
55°	1781	1567	1310
60°	1632	1399	1173
65°	1436	1225	1039
70°	1183	1073	881
75°	940	823	861
80°	632	595	552
85°	395	469	556

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2081 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.7	4.7
10°-20°	70.4	13.0
20°-30°	97.5	18.0
30°-40°	103.9	19.2
40°-50°	94.8	17.5
50°-60°	74.3	13.7
60°-70°	48.4	8.9
70°-80°	21.4	4.0
80°-90°	4.6	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°	193.5	35.8
0°-40°	297.5	55.0
0°-60°	466.5	86.2
0°-90°	541.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	541.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	276	276	276	276	276	
5°	271	270	270	270	270	26
15°	253	253	251	248	247	71
25°	220	218	215	207	201	101
35°	178	177	168	156	152	111
45°	137	134	122	112	108	105
55°	95	92	84	74	70	85
65°	56	53	48	49	41	56
75°	23	21	20	19	21	24
85°	3	4	4	4	4	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	275.6	275.6	275.6	275.6	275.6
2.5°	273.7	273.7	273.7	273.3	273.3
5°	270.8	270.5	270.5	270.2	270.2
7.5°	268.6	268.3	267.9	267.6	267.0
10°	265.4	265.4	265.1	263.5	263.2
12.5°	260.3	260.0	258.7	256.5	255.8
15°	253.3	253.3	250.7	248.2	247.2
17.5°	245.6	245.3	242.1	239.6	238.3
20°	237.3	236.7	233.5	229.4	227.2
22.5°	228.1	228.1	224.3	218.9	216.6
25°	219.5	218.2	214.7	207.1	201.3
27.5°	209.6	207.7	203.9	193.1	186.4
30°	198.8	197.8	192.4	178.4	173.3
32.5°	188.6	187.0	181.3	166.6	162.5
35°	178.1	176.8	168.2	155.5	151.6
37.5°	167.6	166.0	155.2	145.0	140.2
40°	157.1	155.2	143.4	134.1	129.0
42.5°	147.2	144.6	133.2	123.3	117.6
45°	136.7	133.8	122.3	112.1	107.7
47.5°	126.2	123.6	113.1	102.6	97.5
50°	115.0	112.8	103.2	92.7	87.3
52.5°	105.8	102.3	93.0	82.5	78.1
55°	94.9	92.1	83.5	73.6	69.8
57.5°	85.1	82.2	74.2	65.0	61.8
60°	75.8	71.7	65.0	57.0	54.5
62.5°	65.6	62.4	56.7	50.0	53.2
65°	56.4	53.2	48.1	49.1	40.8
67.5°	46.2	44.6	40.1	35.7	34.4
70°	37.6	35.7	34.1	29.3	28.0
72.5°	29.9	28.0	25.8	23.3	22.3
75°	22.6	21.0	19.8	18.8	20.7
77.5°	15.6	15.0	14.0	13.1	12.7
80°	10.2	9.9	9.6	9.2	8.9
82.5°	6.1	6.1	6.1	6.1	6.1
85°	3.2	3.5	3.8	4.1	4.5
87.5°	1.9	1.9	2.2	2.5	2.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)