

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: P558737

Luminaire Tested: FSR-12-1-LD4-1LO-40-UNV-82-84-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558737  
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-40-UNV-82-84-EDD  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

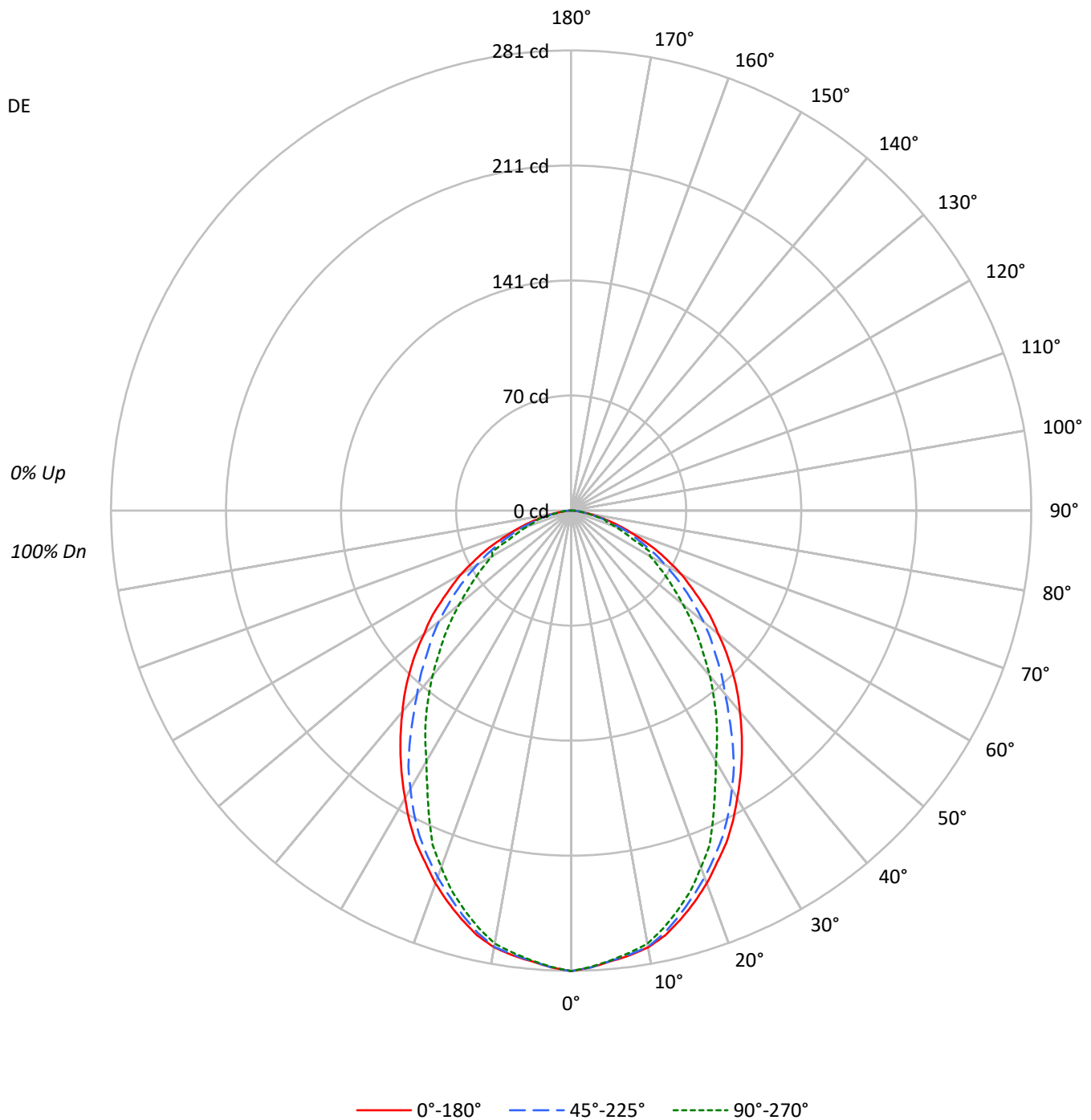
Lumens per Lamp: N/A  
Luminaire Lumens: 552.0 lumens  
Efficiency: N/A  
Efficacy: 95.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 5.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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	47	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°	3027	3027	3027
5°	2985	2982	2979
10°	2960	2957	2935
15°	2880	2851	2812
20°	2774	2730	2655
25°	2660	2602	2439
30°	2521	2440	2197
35°	2388	2255	2033
40°	2252	2056	1851
45°	2124	1900	1673
50°	1964	1763	1492
55°	1818	1599	1336
60°	1666	1427	1197
65°	1465	1251	1060
70°	1209	1095	900
75°	961	840	878
80°	645	607	564
85°	408	482	568

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2124 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	26.2	4.7
10°-20°	71.8	13.0
20°-30°	99.4	18.0
30°-40°	106.0	19.2
40°-50°	96.7	17.5
50°-60°	75.8	13.7
60°-70°	49.4	8.9
70°-80°	21.9	4.0
80°-90°	4.7	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°	197.4	35.8
0°-40°	303.5	55.0
0°-60°	476.0	86.2
0°-90°	552.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	552.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	281	281	281	281	281	
5°	276	276	276	276	276	26
15°	258	258	256	253	252	73
25°	224	223	219	211	205	103
35°	182	180	172	159	155	114
45°	140	136	125	114	110	107
55°	97	94	85	75	71	87
65°	58	54	49	50	42	57
75°	23	22	20	19	21	25
85°	3	4	4	4	5	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	281.2	281.2	281.2	281.2	281.2
2.5°	279.2	279.2	279.2	278.9	278.9
5°	276.3	276.0	276.0	275.7	275.7
7.5°	274.0	273.7	273.4	273.1	272.4
10°	270.8	270.8	270.5	268.8	268.5
12.5°	265.6	265.3	264.0	261.7	261.0
15°	258.4	258.4	255.8	253.2	252.3
17.5°	250.6	250.3	247.0	244.4	243.1
20°	242.2	241.5	238.3	234.0	231.8
22.5°	232.7	232.7	228.8	223.3	221.0
25°	224.0	222.7	219.1	211.3	205.4
27.5°	213.9	211.9	208.0	197.0	190.2
30°	202.8	201.9	196.3	182.0	176.8
32.5°	192.4	190.8	185.0	170.0	165.8
35°	181.7	180.4	171.6	158.6	154.7
37.5°	171.0	169.4	158.3	147.9	143.0
40°	160.3	158.3	146.3	136.9	131.7
42.5°	150.2	147.6	135.9	125.8	119.9
45°	139.5	136.5	124.8	114.4	109.9
47.5°	128.7	126.1	115.4	104.7	99.5
50°	117.3	115.1	105.3	94.6	89.1
52.5°	107.9	104.3	94.9	84.2	79.6
55°	96.9	93.9	85.2	75.1	71.2
57.5°	86.8	83.9	75.7	66.3	63.1
60°	77.4	73.1	66.3	58.2	55.6
62.5°	67.0	63.7	57.9	51.0	54.3
65°	57.5	54.3	49.1	50.1	41.6
67.5°	47.1	45.5	41.0	36.4	35.1
70°	38.4	36.4	34.8	29.9	28.6
72.5°	30.6	28.6	26.3	23.7	22.8
75°	23.1	21.5	20.2	19.2	21.1
77.5°	15.9	15.3	14.3	13.3	13.0
80°	10.4	10.1	9.8	9.4	9.1
82.5°	6.2	6.2	6.2	6.2	6.2
85°	3.3	3.6	3.9	4.2	4.6
87.5°	2.0	2.0	2.3	2.6	2.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)