

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: P559488

Luminaire Tested: FSR-12-1-LD4-2STD-40-UNV-81-84-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559488  
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-LD4-2STD-40-UNV-81-84-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

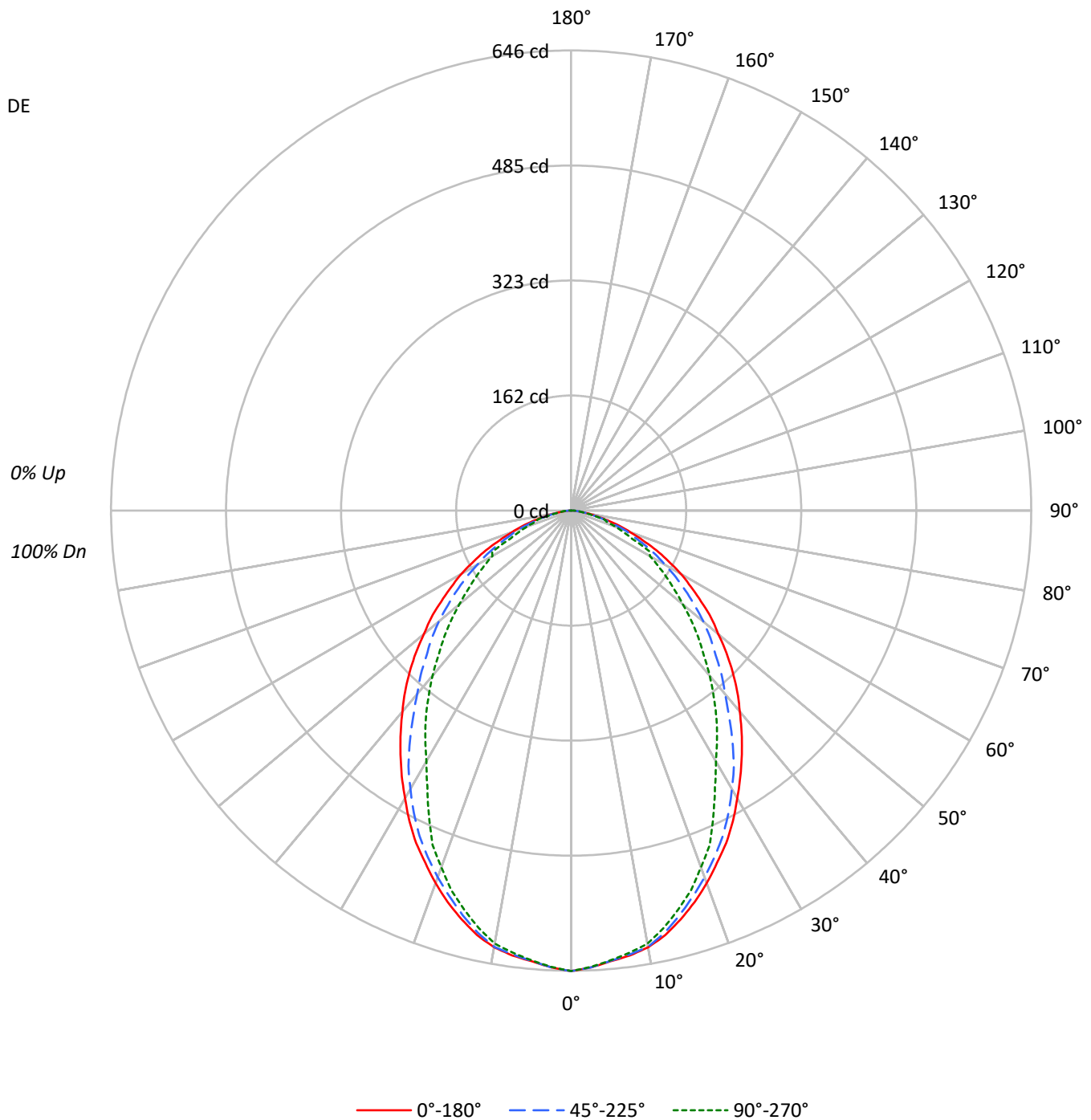
Lumens per Lamp: N/A  
Luminaire Lumens: 1269.0 lumens  
Efficiency: N/A  
Efficacy: 76.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	6958	6958	6958
5°	6863	6856	6847
10°	6804	6796	6747
15°	6620	6554	6462
20°	6377	6275	6103
25°	6115	5982	5609
30°	5796	5610	5052
35°	5489	5185	4674
40°	5176	4725	4253
45°	4880	4369	3845
50°	4518	4054	3430
55°	4179	3674	3072
60°	3830	3281	2751
65°	3370	2873	2437
70°	2776	2518	2071
75°	2208	1926	2021
80°	1481	1389	1296
85°	926	1112	1297

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4880 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.2	4.7
10°-20°	165.1	13.0
20°-30°	228.6	18.0
30°-40°	243.8	19.2
40°-50°	222.4	17.5
50°-60°	174.2	13.7
60°-70°	113.6	8.9
70°-80°	50.3	4.0
80°-90°	10.8	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°	453.9	35.8
0°-40°	697.7	55.0
0°-60°	1094.3	86.2
0°-90°	1269.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1269.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	646	646	646	646	646	
5°	635	634	634	634	634	60
15°	594	594	588	582	580	167
25°	515	512	504	486	472	236
35°	418	415	395	365	356	261
45°	321	314	287	263	253	247
55°	223	216	196	173	164	200
65°	132	125	113	115	96	130
75°	53	49	46	44	49	57
85°	8	8	9	10	10	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	646.4	646.4	646.4	646.4	646.4
2.5°	641.9	641.9	641.9	641.2	641.2
5°	635.2	634.5	634.5	633.7	633.7
7.5°	630.0	629.2	628.5	627.7	626.2
10°	622.5	622.5	621.8	618.0	617.3
12.5°	610.5	609.8	606.8	601.6	600.1
15°	594.1	594.1	588.1	582.1	579.9
17.5°	576.2	575.4	567.9	562.0	559.0
20°	556.7	555.2	547.8	538.1	532.8
22.5°	535.1	535.1	526.1	513.4	508.2
25°	514.9	511.9	503.7	485.7	472.3
27.5°	491.7	487.2	478.3	452.9	437.2
30°	466.3	464.1	451.4	418.5	406.5
32.5°	442.4	438.7	425.2	390.8	381.1
35°	417.7	414.7	394.6	364.7	355.7
37.5°	393.1	389.3	363.9	340.0	328.8
40°	368.4	363.9	336.3	314.6	302.7
42.5°	345.3	339.3	312.4	289.2	275.8
45°	320.6	313.9	287.0	263.0	252.6
47.5°	295.9	290.0	265.3	240.6	228.7
50°	269.8	264.5	242.1	217.5	204.8
52.5°	248.1	239.9	218.2	193.5	183.1
55°	222.7	216.0	195.8	172.6	163.7
57.5°	199.5	192.8	174.1	152.4	145.0
60°	177.9	168.1	152.4	133.8	127.8
62.5°	153.9	146.5	133.0	117.3	124.8
65°	132.3	124.8	112.8	115.1	95.7
67.5°	108.4	104.6	94.2	83.7	80.7
70°	88.2	83.7	80.0	68.8	65.8
72.5°	70.2	65.8	60.5	54.6	52.3
75°	53.1	49.3	46.3	44.1	48.6
77.5°	36.6	35.1	32.9	30.6	29.9
80°	23.9	23.2	22.4	21.7	20.9
82.5°	14.2	14.2	14.2	14.2	14.2
85°	7.5	8.2	9.0	9.7	10.5
87.5°	4.5	4.5	5.2	6.0	6.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)