

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: P559568

Luminaire Tested: FSR-12-1-LD4-2STD-50-UNV-82-84-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559568  
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-50-UNV-82-84-EDD-90  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

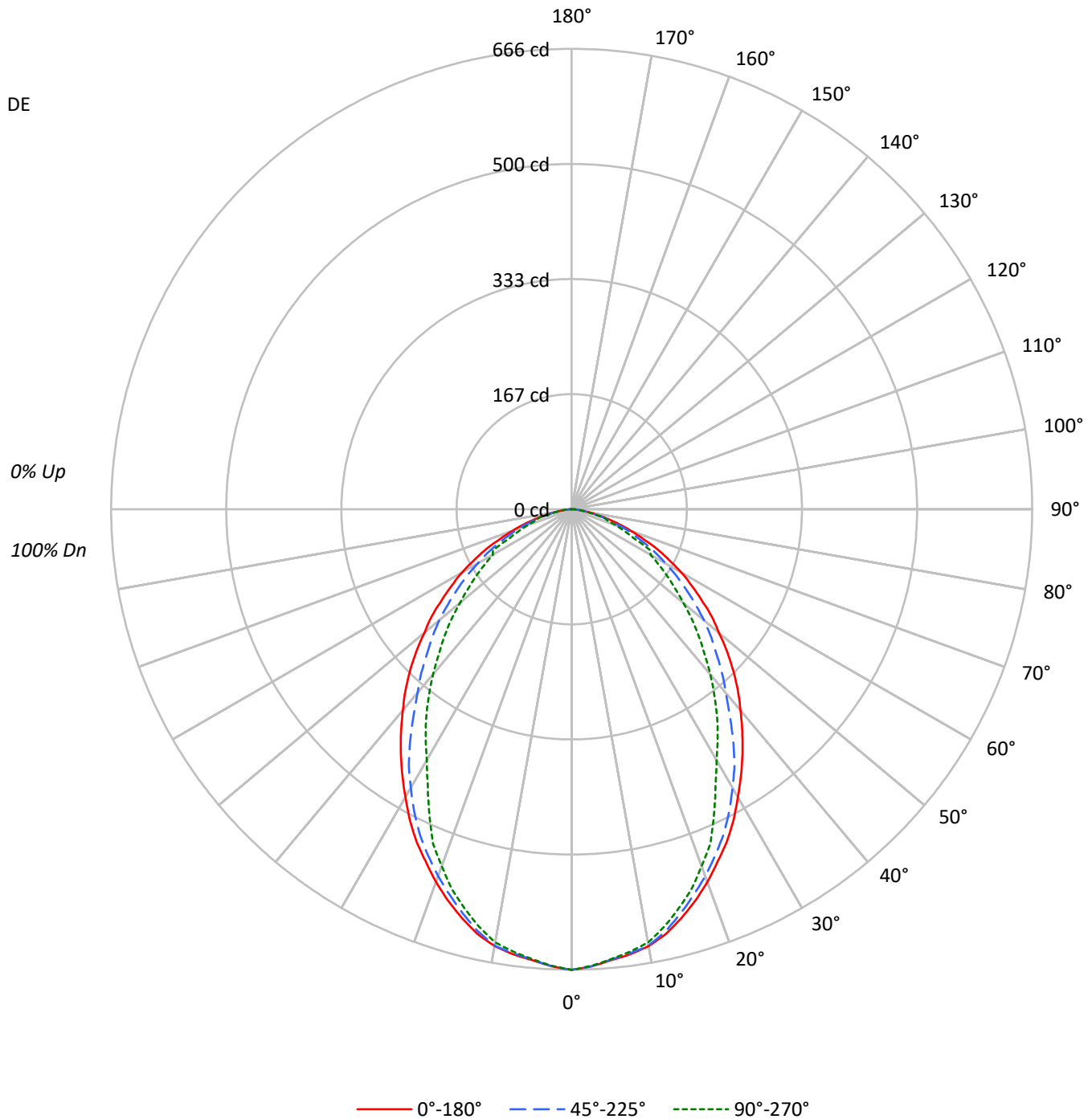
Lumens per Lamp: N/A  
Luminaire Lumens: 1308.0 lumens  
Efficiency: N/A  
Efficacy: 78.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	7172	7172	7172
5°	7074	7066	7058
10°	7013	7005	6954
15°	6824	6755	6661
20°	6573	6467	6291
25°	6303	6166	5782
30°	5973	5782	5208
35°	5658	5344	4817
40°	5335	4870	4384
45°	5030	4503	3962
50°	4657	4180	3535
55°	4307	3787	3166
60°	3946	3382	2835
65°	3472	2962	2511
70°	2861	2593	2134
75°	2275	1988	2084
80°	1525	1432	1339
85°	951	1136	1334

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5030 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.0	4.7
10°-20°	170.2	13.0
20°-30°	235.6	18.0
30°-40°	251.3	19.2
40°-50°	229.2	17.5
50°-60°	179.6	13.7
60°-70°	117.0	8.9
70°-80°	51.9	4.0
80°-90°	11.1	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°	467.9	35.8
0°-40°	719.1	55.0
0°-60°	1128.0	86.2
0°-90°	1308.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1308.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	666	666	666	666	666	
5°	655	654	654	653	653	62
15°	612	612	606	600	598	172
25°	531	528	519	501	487	244
35°	431	428	407	376	367	269
45°	330	324	296	271	260	255
55°	230	223	202	178	169	206
65°	136	129	116	119	99	134
75°	55	51	48	45	50	59
85°	8	8	9	10	11	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	666.3	666.3	666.3	666.3	666.3
2.5°	661.7	661.7	661.7	660.9	660.9
5°	654.7	654.0	654.0	653.2	653.2
7.5°	649.3	648.6	647.8	647.0	645.5
10°	641.6	641.6	640.9	637.0	636.2
12.5°	629.3	628.5	625.5	620.1	618.5
15°	612.4	612.4	606.2	600.0	597.7
17.5°	593.9	593.1	585.4	579.2	576.2
20°	573.8	572.3	564.6	554.6	549.2
22.5°	551.5	551.5	542.3	529.2	523.8
25°	530.7	527.6	519.2	500.7	486.8
27.5°	506.8	502.2	493.0	466.8	450.6
30°	480.6	478.3	465.2	431.3	419.0
32.5°	456.0	452.1	438.3	402.8	392.8
35°	430.6	427.5	406.7	375.9	366.6
37.5°	405.2	401.3	375.1	350.5	338.9
40°	379.7	375.1	346.6	324.3	312.0
42.5°	355.9	349.7	322.0	298.1	284.2
45°	330.4	323.5	295.8	271.1	260.3
47.5°	305.0	298.9	273.4	248.0	235.7
50°	278.1	272.7	249.6	224.1	211.1
52.5°	255.7	247.3	224.9	199.5	188.7
55°	229.5	222.6	201.8	177.9	168.7
57.5°	205.7	198.7	179.5	157.1	149.4
60°	183.3	173.3	157.1	137.9	131.7
62.5°	158.7	151.0	137.1	120.9	128.6
65°	136.3	128.6	116.3	118.6	98.6
67.5°	111.7	107.8	97.1	86.3	83.2
70°	90.9	86.3	82.4	70.9	67.8
72.5°	72.4	67.8	62.4	56.2	53.9
75°	54.7	50.8	47.8	45.4	50.1
77.5°	37.7	36.2	33.9	31.6	30.8
80°	24.6	23.9	23.1	22.3	21.6
82.5°	14.6	14.6	14.6	14.6	14.6
85°	7.7	8.5	9.2	10.0	10.8
87.5°	4.6	4.6	5.4	6.2	6.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)