

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: P559744

Luminaire Tested: FSR-12-2-LD4-1HI-50-UNV-81-84-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559744  
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-12-2-LD4-1HI-50-UNV-81-84-EDD-90  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

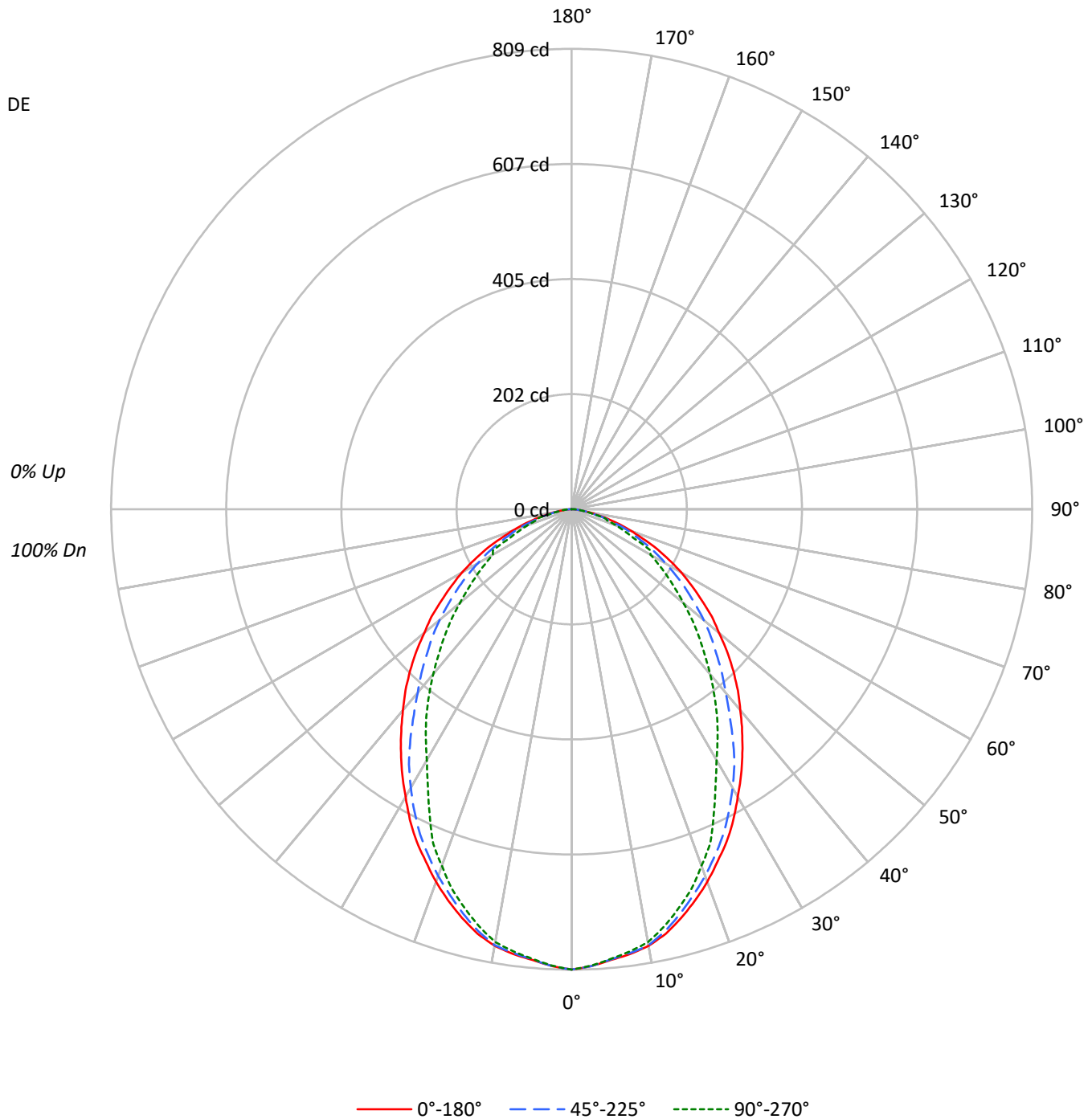
Lumens per Lamp: N/A  
Luminaire Lumens: 1588.0 lumens  
Efficiency: N/A  
Efficacy: 73.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4353	4353	4353
5°	4294	4289	4284
10°	4257	4252	4221
15°	4142	4101	4043
20°	3990	3926	3819
25°	3826	3743	3510
30°	3626	3510	3161
35°	3434	3244	2924
40°	3239	2956	2661
45°	3054	2733	2406
50°	2827	2537	2145
55°	2615	2299	1922
60°	2396	2054	1721
65°	2108	1798	1524
70°	1736	1575	1295
75°	1381	1206	1264
80°	927	871	812
85°	580	692	809

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3054 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.3	4.7
10°-20°	206.6	13.0
20°-30°	286.1	18.0
30°-40°	305.1	19.2
40°-50°	278.3	17.5
50°-60°	218.0	13.7
60°-70°	142.1	8.9
70°-80°	63.0	4.0
80°-90°	13.5	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°	568.0	35.8
0°-40°	873.1	55.0
0°-60°	1369.4	86.2
0°-90°	1588.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1588.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	809	809	809	809	809	
5°	795	794	794	793	793	75
15°	743	743	736	728	726	209
25°	644	641	630	608	591	296
35°	523	519	494	456	445	327
45°	401	393	359	329	316	309
55°	279	270	245	216	205	250
65°	166	156	141	144	120	163
75°	66	62	58	55	61	71
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	808.9	808.9	808.9	808.9	808.9
2.5°	803.3	803.3	803.3	802.4	802.4
5°	794.9	793.9	793.9	793.0	793.0
7.5°	788.3	787.4	786.5	785.5	783.7
10°	779.0	779.0	778.0	773.4	772.4
12.5°	764.0	763.1	759.3	752.8	750.9
15°	743.4	743.4	736.0	728.5	725.7
17.5°	721.0	720.1	710.7	703.2	699.5
20°	696.7	694.8	685.5	673.3	666.8
22.5°	669.6	669.6	658.3	642.4	635.9
25°	644.3	640.6	630.3	607.8	591.0
27.5°	615.3	609.7	598.5	566.7	547.1
30°	583.5	580.7	564.8	523.7	508.7
32.5°	553.6	548.9	532.1	489.1	476.9
35°	522.7	519.0	493.8	456.4	445.1
37.5°	491.9	487.2	455.4	425.5	411.5
40°	461.0	455.4	420.8	393.7	378.7
42.5°	432.0	424.6	390.9	361.9	345.1
45°	401.2	392.8	359.1	329.2	316.1
47.5°	370.3	362.8	332.0	301.1	286.2
50°	337.6	331.0	303.0	272.1	256.2
52.5°	310.5	300.2	273.1	242.2	229.1
55°	278.7	270.3	245.0	216.0	204.8
57.5°	249.7	241.3	217.9	190.8	181.4
60°	222.6	210.4	190.8	167.4	159.9
62.5°	192.6	183.3	166.5	146.8	156.2
65°	165.5	156.2	141.2	144.0	119.7
67.5°	135.6	130.9	117.8	104.7	101.0
70°	110.3	104.7	100.1	86.0	82.3
72.5°	87.9	82.3	75.7	68.3	65.5
75°	66.4	61.7	58.0	55.2	60.8
77.5°	45.8	44.0	41.1	38.3	37.4
80°	29.9	29.0	28.1	27.1	26.2
82.5°	17.8	17.8	17.8	17.8	17.8
85°	9.4	10.3	11.2	12.2	13.1
87.5°	5.6	5.6	6.5	7.5	8.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)