

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: P560075

Luminaire Tested: FSR-12-2-LD4-1STD-40-UNV-81-94-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560075  
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-LD4-1STD-40-UNV-81-94-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

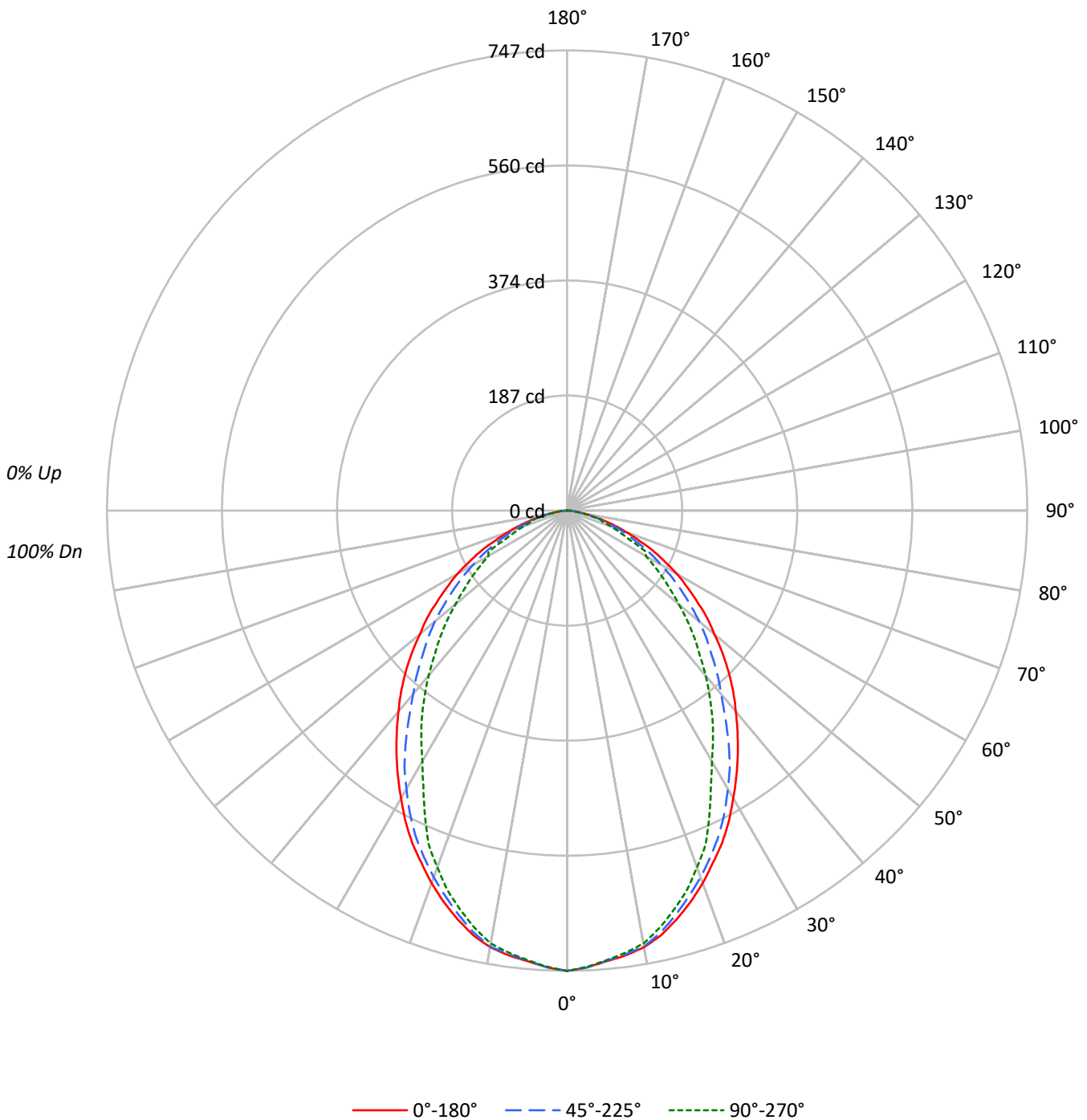
Lumens per Lamp: N/A  
Luminaire Lumens: 1467.0 lumens  
Efficiency: N/A  
Efficacy: 88.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4022	4022	4022
5°	3967	3962	3958
10°	3933	3928	3900
15°	3827	3788	3735
20°	3686	3627	3528
25°	3534	3458	3242
30°	3350	3243	2921
35°	3173	2997	2702
40°	2992	2732	2458
45°	2821	2525	2222
50°	2611	2344	1982
55°	2415	2123	1775
60°	2213	1897	1590
65°	1947	1661	1408
70°	1603	1454	1196
75°	1275	1115	1169
80°	855	803	750
85°	531	642	747

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2821 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.6	4.7
10°-20°	190.9	13.0
20°-30°	264.3	18.0
30°-40°	281.8	19.2
40°-50°	257.1	17.5
50°-60°	201.4	13.7
60°-70°	131.3	8.9
70°-80°	58.2	4.0
80°-90°	12.5	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°	524.8	35.8
0°-40°	806.6	55.0
0°-60°	1265.1	86.2
0°-90°	1467.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1467.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	747	747	747	747	747	
5°	734	733	733	733	733	70
15°	687	687	680	673	670	193
25°	595	592	582	562	546	273
35°	483	480	456	422	411	302
45°	371	363	332	304	292	285
55°	257	250	226	200	189	231
65°	153	144	130	133	111	151
75°	61	57	54	51	56	66
85°	9	10	10	11	12	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	747.3	747.3	747.3	747.3	747.3
2.5°	742.1	742.1	742.1	741.2	741.2
5°	734.3	733.4	733.4	732.6	732.6
7.5°	728.3	727.4	726.5	725.7	723.9
10°	719.6	719.6	718.8	714.4	713.6
12.5°	705.8	704.9	701.5	695.4	693.7
15°	686.8	686.8	679.9	673.0	670.4
17.5°	666.1	665.2	656.6	649.6	646.2
20°	643.6	641.9	633.2	622.0	616.0
22.5°	618.5	618.5	608.2	593.5	587.4
25°	595.2	591.8	582.3	561.5	546.0
27.5°	568.4	563.3	552.9	523.5	505.4
30°	539.1	536.5	521.8	483.8	470.0
32.5°	511.4	507.1	491.6	451.8	440.6
35°	482.9	479.5	456.1	421.6	411.2
37.5°	454.4	450.1	420.7	393.1	380.1
40°	425.9	420.7	388.8	363.7	349.9
42.5°	399.1	392.2	361.1	334.3	318.8
45°	370.6	362.8	331.7	304.1	292.0
47.5°	342.1	335.2	306.7	278.2	264.4
50°	311.9	305.8	279.9	251.4	236.7
52.5°	286.8	277.3	252.3	223.7	211.7
55°	257.4	249.7	226.3	199.6	189.2
57.5°	230.7	222.9	201.3	176.2	167.6
60°	205.6	194.4	176.2	154.6	147.7
62.5°	178.0	169.3	153.8	135.6	144.3
65°	152.9	144.3	130.4	133.0	110.6
67.5°	125.3	120.9	108.9	96.8	93.3
70°	101.9	96.8	92.4	79.5	76.0
72.5°	81.2	76.0	70.0	63.1	60.5
75°	61.3	57.0	53.6	51.0	56.2
77.5°	42.3	40.6	38.0	35.4	34.6
80°	27.6	26.8	25.9	25.1	24.2
82.5°	16.4	16.4	16.4	16.4	16.4
85°	8.6	9.5	10.4	11.2	12.1
87.5°	5.2	5.2	6.0	6.9	7.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)