

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: P560035

Luminaire Tested: FSR-12-2-LD4-1STD-35-UNV-93-85-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560035  
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-35-UNV-93-85-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

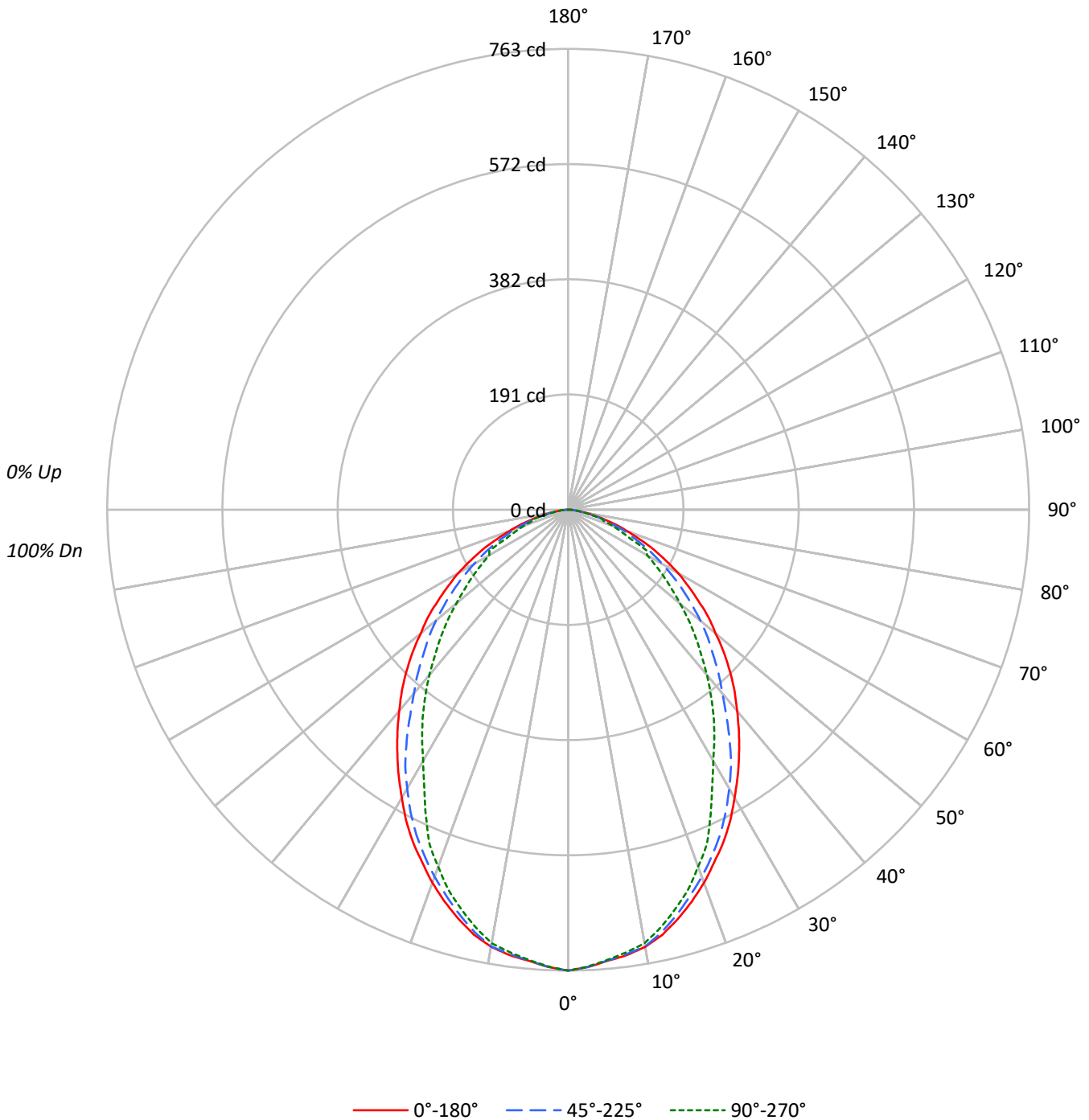
Lumens per Lamp: N/A  
Luminaire Lumens: 1498.0 lumens  
Efficiency: N/A  
Efficacy: 90.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4107	4107	4107
5°	4051	4046	4042
10°	4016	4011	3982
15°	3908	3869	3814
20°	3764	3703	3603
25°	3609	3531	3311
30°	3421	3311	2982
35°	3240	3060	2759
40°	3055	2789	2510
45°	2880	2578	2270
50°	2667	2393	2024
55°	2467	2168	1813
60°	2260	1938	1623
65°	1988	1696	1438
70°	1638	1485	1221
75°	1302	1137	1192
80°	874	821	766
85°	543	655	766

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2880 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.0	4.7
10°-20°	194.9	13.0
20°-30°	269.9	18.0
30°-40°	287.8	19.2
40°-50°	262.5	17.5
50°-60°	205.7	13.7
60°-70°	134.0	8.9
70°-80°	59.4	4.0
80°-90°	12.8	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
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0°-30°	535.8	35.8
0°-40°	823.6	55.0
0°-60°	1291.8	86.2
0°-90°	1498.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1498.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	763	763	763	763	763	
5°	750	749	749	748	748	71
15°	701	701	694	687	684	197
25°	608	604	595	573	558	279
35°	493	490	466	430	420	308
45°	378	370	339	310	298	292
55°	263	255	231	204	193	236
65°	156	147	133	136	113	154
75°	63	58	55	52	57	67
85°	9	10	11	12	12	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	763.1	763.1	763.1	763.1	763.1
2.5°	757.8	757.8	757.8	756.9	756.9
5°	749.8	748.9	748.9	748.1	748.1
7.5°	743.7	742.8	741.9	741.0	739.2
10°	734.8	734.8	734.0	729.5	728.7
12.5°	720.7	719.8	716.3	710.1	708.4
15°	701.3	701.3	694.3	687.2	684.5
17.5°	680.1	679.3	670.4	663.4	659.8
20°	657.2	655.4	646.6	635.1	629.0
22.5°	631.6	631.6	621.0	606.0	599.9
25°	607.8	604.3	594.6	573.4	557.5
27.5°	580.5	575.2	564.6	534.6	516.1
30°	550.5	547.8	532.8	494.0	479.9
32.5°	522.2	517.8	501.9	461.4	449.9
35°	493.1	489.6	465.8	430.5	419.9
37.5°	464.0	459.6	429.6	401.4	388.1
40°	434.9	429.6	397.0	371.4	357.3
42.5°	407.6	400.5	368.7	341.4	325.5
45°	378.4	370.5	338.7	310.5	298.2
47.5°	349.3	342.3	313.2	284.1	269.9
50°	318.5	312.3	285.8	256.7	241.7
52.5°	292.9	283.2	257.6	228.5	216.1
55°	262.9	254.9	231.1	203.8	193.2
57.5°	235.5	227.6	205.5	180.0	171.1
60°	210.0	198.5	180.0	157.9	150.8
62.5°	181.7	172.9	157.0	138.5	147.3
65°	156.1	147.3	133.2	135.9	112.9
67.5°	127.9	123.5	111.2	98.8	95.3
70°	104.1	98.8	94.4	81.2	77.6
72.5°	82.9	77.6	71.5	64.4	61.8
75°	62.6	58.2	54.7	52.0	57.3
77.5°	43.2	41.5	38.8	36.2	35.3
80°	28.2	27.3	26.5	25.6	24.7
82.5°	16.8	16.8	16.8	16.8	16.8
85°	8.8	9.7	10.6	11.5	12.4
87.5°	5.3	5.3	6.2	7.1	7.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)