

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: P560092

Luminaire Tested: FSR-12-2-LD4-1STD-40-UNV-82-96-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560092  
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-82-96-EDD-90  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

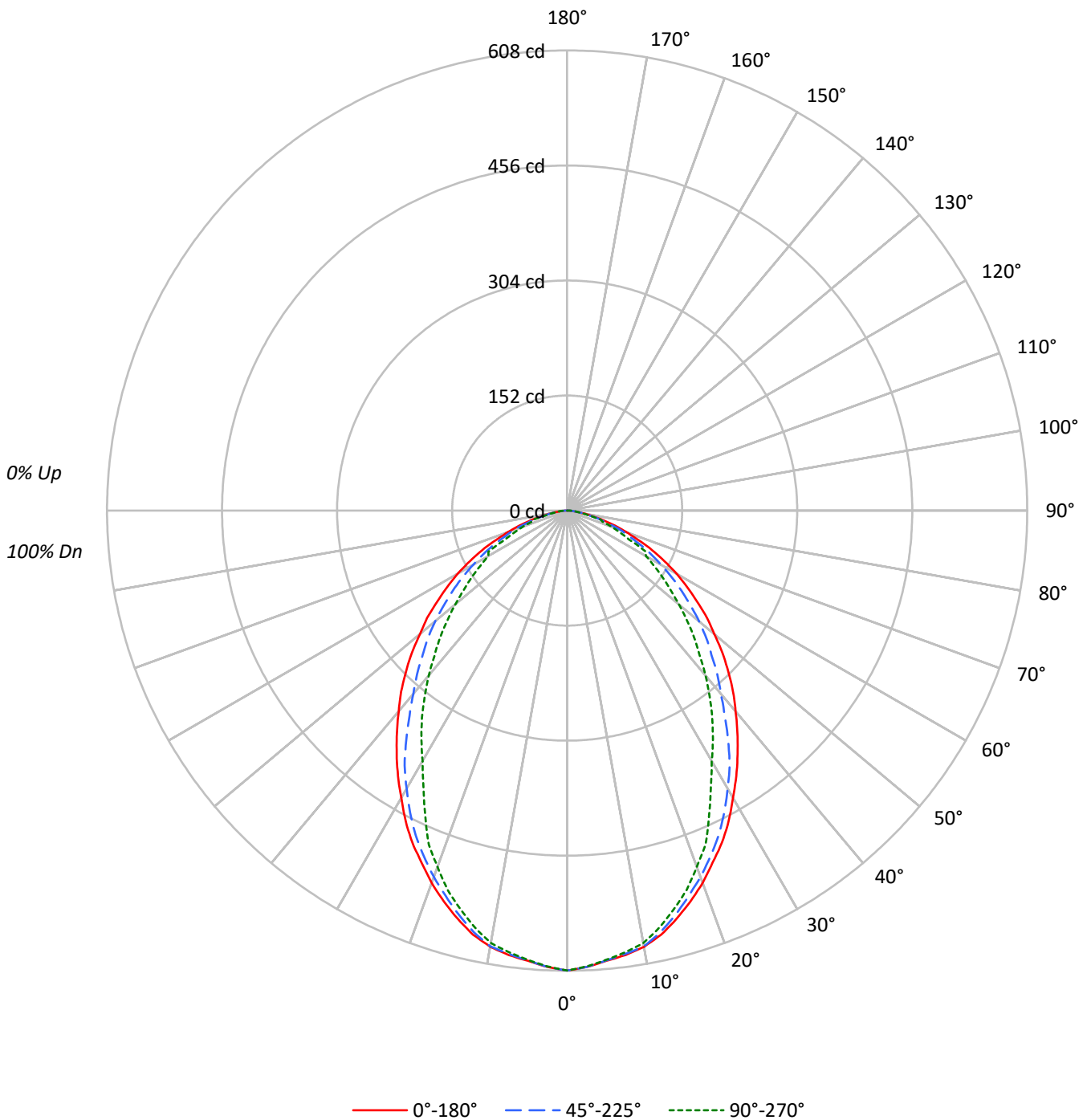
Lumens per Lamp: N/A  
Luminaire Lumens: 1193.0 lumens  
Efficiency: N/A  
Efficacy: 71.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	3271	3271	3271
5°	3226	3223	3219
10°	3198	3194	3171
15°	3112	3081	3038
20°	2998	2950	2869
25°	2875	2812	2637
30°	2724	2637	2375
35°	2580	2437	2197
40°	2434	2221	1999
45°	2294	2054	1808
50°	2123	1906	1612
55°	1965	1727	1444
60°	1800	1542	1293
65°	1583	1351	1145
70°	1304	1183	972
75°	1038	907	950
80°	697	654	611
85°	432	519	605

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2294 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.6	4.7
10°-20°	155.2	13.0
20°-30°	214.9	18.0
30°-40°	229.2	19.2
40°-50°	209.1	17.5
50°-60°	163.8	13.7
60°-70°	106.8	8.9
70°-80°	47.3	4.0
80°-90°	10.1	0.8
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°	426.7	35.8
0°-40°	655.9	55.0
0°-60°	1028.8	86.2
0°-90°	1193.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1193.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	608	608	608	608	608	
5°	597	596	596	596	596	57
15°	558	558	553	547	545	157
25°	484	481	474	457	444	222
35°	393	390	371	343	334	246
45°	301	295	270	247	238	232
55°	209	203	184	162	154	188
65°	124	117	106	108	90	123
75°	50	46	44	41	46	53
85°	7	8	8	9	10	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	607.7	607.7	607.7	607.7	607.7
2.5°	603.5	603.5	603.5	602.8	602.8
5°	597.2	596.5	596.5	595.8	595.8
7.5°	592.2	591.5	590.8	590.1	588.7
10°	585.2	585.2	584.5	581.0	580.3
12.5°	574.0	573.3	570.5	565.5	564.1
15°	558.5	558.5	552.9	547.3	545.2
17.5°	541.7	541.0	533.9	528.3	525.5
20°	523.4	522.0	515.0	505.8	500.9
22.5°	503.0	503.0	494.6	482.6	477.7
25°	484.1	481.2	473.5	456.7	444.0
27.5°	462.3	458.1	449.6	425.7	411.0
30°	438.4	436.3	424.3	393.4	382.2
32.5°	415.9	412.4	399.7	367.4	358.3
35°	392.7	389.9	370.9	342.8	334.4
37.5°	369.5	366.0	342.1	319.7	309.1
40°	346.4	342.1	316.1	295.8	284.5
42.5°	324.6	319.0	293.7	271.9	259.2
45°	301.4	295.1	269.8	247.3	237.5
47.5°	278.2	272.6	249.4	226.2	215.0
50°	253.6	248.7	227.6	204.4	192.5
52.5°	233.2	225.5	205.1	182.0	172.1
55°	209.4	203.0	184.1	162.3	153.9
57.5°	187.6	181.3	163.7	143.3	136.3
60°	167.2	158.1	143.3	125.8	120.1
62.5°	144.7	137.7	125.1	110.3	117.3
65°	124.3	117.3	106.1	108.2	89.9
67.5°	101.9	98.4	88.5	78.7	75.9
70°	82.9	78.7	75.2	64.6	61.8
72.5°	66.0	61.8	56.9	51.3	49.2
75°	49.9	46.4	43.6	41.4	45.7
77.5°	34.4	33.0	30.9	28.8	28.1
80°	22.5	21.8	21.1	20.4	19.7
82.5°	13.3	13.3	13.3	13.3	13.3
85°	7.0	7.7	8.4	9.1	9.8
87.5°	4.2	4.2	4.9	5.6	6.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)