

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: P560010

Luminaire Tested: FSR-12-2-LD4-1STD-35-UNV-81-94-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560010  
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-81-94-EDD-90  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

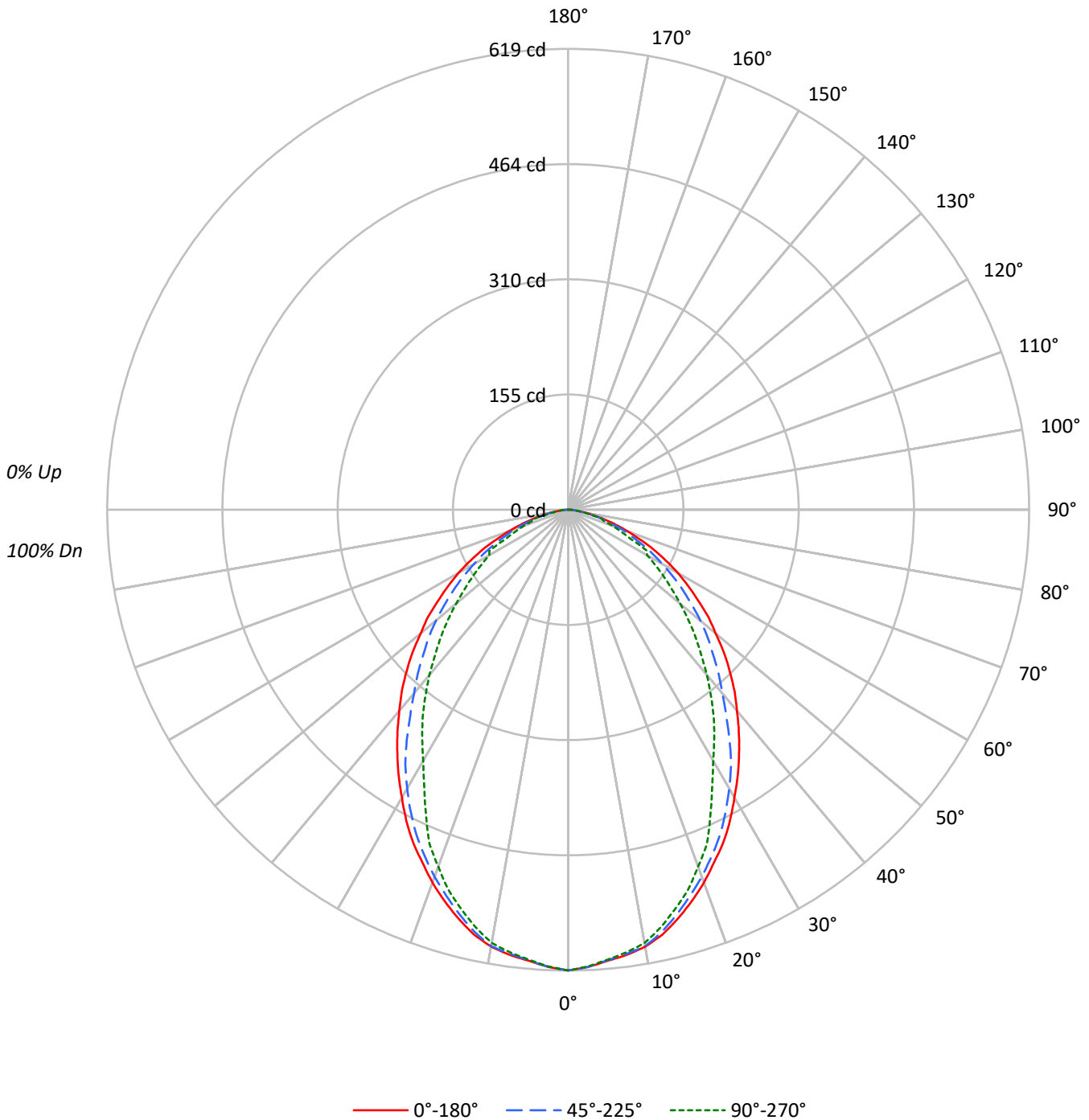
Lumens per Lamp: N/A  
Luminaire Lumens: 1215.0 lumens  
Efficiency: N/A  
Efficacy: 73.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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									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°	3331	3331	3331
5°	3286	3282	3278
10°	3257	3253	3230
15°	3169	3137	3093
20°	3053	3004	2922
25°	2928	2863	2685
30°	2775	2686	2419
35°	2628	2482	2238
40°	2478	2262	2036
45°	2336	2092	1840
50°	2163	1941	1641
55°	2000	1759	1470
60°	1833	1572	1316
65°	1612	1375	1167
70°	1328	1205	991
75°	1056	923	967
80°	710	666	620
85°	445	531	618

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2336 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.6	4.7
10°-20°	158.1	13.0
20°-30°	218.9	18.0
30°-40°	233.4	19.2
40°-50°	212.9	17.5
50°-60°	166.8	13.7
60°-70°	108.7	8.9
70°-80°	48.2	4.0
80°-90°	10.3	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°	434.6	35.8
0°-40°	668.0	55.0
0°-60°	1047.8	86.2
0°-90°	1215.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1215.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	619	619	619	619	619	
5°	608	608	608	607	607	58
15°	569	569	563	557	555	160
25°	493	490	482	465	452	226
35°	400	397	378	349	341	250
45°	307	300	275	252	242	236
55°	213	207	188	165	157	191
65°	127	120	108	110	92	125
75°	51	47	44	42	46	54
85°	7	8	9	9	10	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	618.9	618.9	618.9	618.9	618.9
2.5°	614.6	614.6	614.6	613.9	613.9
5°	608.2	607.5	607.5	606.7	606.7
7.5°	603.2	602.4	601.7	601.0	599.6
10°	596.0	596.0	595.3	591.7	591.0
12.5°	584.6	583.8	581.0	576.0	574.5
15°	568.8	568.8	563.1	557.4	555.2
17.5°	551.6	550.9	543.8	538.1	535.2
20°	533.0	531.6	524.5	515.2	510.1
22.5°	512.3	512.3	503.7	491.5	486.5
25°	493.0	490.1	482.2	465.1	452.2
27.5°	470.8	466.5	457.9	433.6	418.6
30°	446.5	444.3	432.2	400.7	389.2
32.5°	423.6	420.0	407.1	374.2	364.9
35°	400.0	397.1	377.8	349.2	340.6
37.5°	376.4	372.8	348.4	325.6	314.8
40°	352.7	348.4	322.0	301.2	289.8
42.5°	330.6	324.8	299.1	276.9	264.0
45°	306.9	300.5	274.8	251.9	241.8
47.5°	283.3	277.6	254.0	230.4	218.9
50°	258.3	253.3	231.8	208.2	196.0
52.5°	237.5	229.7	208.9	185.3	175.3
55°	213.2	206.8	187.5	165.3	156.7
57.5°	191.0	184.6	166.7	146.0	138.8
60°	170.3	161.0	146.0	128.1	122.3
62.5°	147.4	140.2	127.4	112.3	119.5
65°	126.6	119.5	108.0	110.2	91.6
67.5°	103.7	100.2	90.2	80.1	77.3
70°	84.4	80.1	76.6	65.8	63.0
72.5°	67.3	63.0	58.0	52.2	50.1
75°	50.8	47.2	44.4	42.2	46.5
77.5°	35.1	33.6	31.5	29.3	28.6
80°	22.9	22.2	21.5	20.7	20.0
82.5°	13.6	13.6	13.6	13.6	13.6
85°	7.2	7.9	8.6	9.3	10.0
87.5°	4.3	4.3	5.0	5.7	6.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)