

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: P560424

Luminaire Tested: FSR-12-2-LD4-2LO-35-UNV-93-88-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560424  
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-LD4-2LO-35-UNV-93-88-EDD-90  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

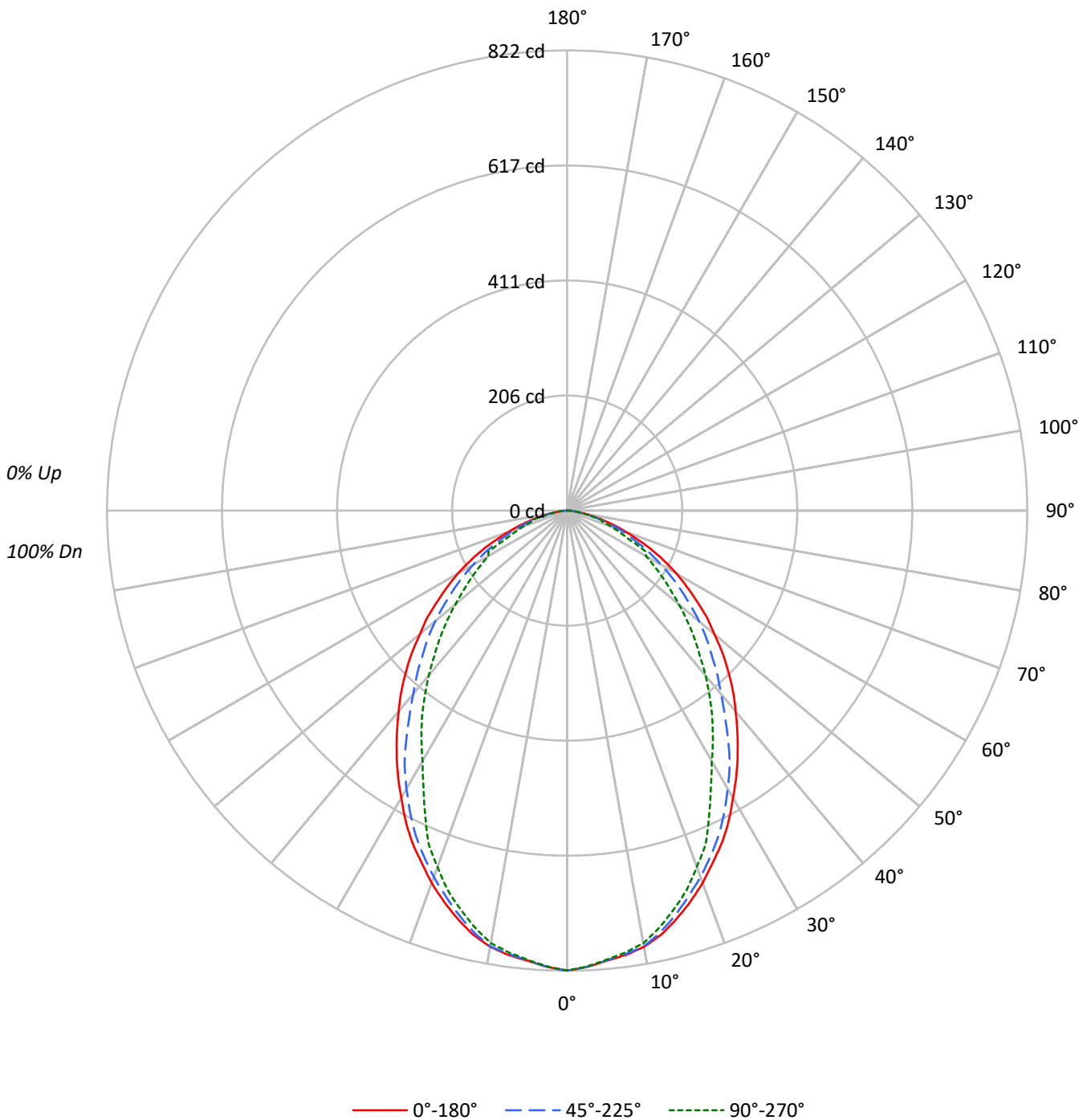
Lumens per Lamp: N/A  
Luminaire Lumens: 1613.0 lumens  
Efficiency: N/A  
Efficacy: 68.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.4  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	4422	4422	4422
5°	4362	4357	4352
10°	4324	4319	4288
15°	4207	4165	4107
20°	4053	3988	3879
25°	3887	3802	3565
30°	3683	3565	3211
35°	3489	3295	2970
40°	3290	3003	2703
45°	3102	2777	2444
50°	2871	2577	2179
55°	2656	2335	1952
60°	2434	2086	1748
65°	2141	1826	1549
70°	1764	1599	1316
75°	1402	1225	1283
80°	942	883	824
85°	587	704	821

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3102 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.5	4.7
10°-20°	209.9	13.0
20°-30°	290.6	18.0
30°-40°	309.9	19.2
40°-50°	282.7	17.5
50°-60°	221.5	13.7
60°-70°	144.3	8.9
70°-80°	63.9	4.0
80°-90°	13.7	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°	577.0	35.8
0°-40°	886.8	55.0
0°-60°	1391.0	86.2
0°-90°	1613.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1613.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	822	822	822	822	822	
5°	807	806	806	806	806	77
15°	755	755	748	740	737	212
25°	654	651	640	617	600	300
35°	531	527	502	464	452	332
45°	408	399	365	334	321	314
55°	283	274	249	219	208	254
65°	168	159	143	146	122	166
75°	67	63	59	56	62	72
85°	10	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°	821.6	821.6	821.6	821.6	821.6
2.5°	815.9	815.9	815.9	815.0	815.0
5°	807.4	806.4	806.4	805.5	805.5
7.5°	800.7	799.8	798.8	797.9	796.0
10°	791.2	791.2	790.3	785.5	784.6
12.5°	776.0	775.1	771.3	764.6	762.7
15°	755.1	755.1	747.6	740.0	737.1
17.5°	732.4	731.4	721.9	714.3	710.5
20°	707.7	705.8	696.3	683.9	677.3
22.5°	680.1	680.1	668.7	652.6	645.9
25°	654.5	650.7	640.2	617.4	600.3
27.5°	625.0	619.3	607.9	575.6	555.7
30°	592.7	589.9	573.7	531.9	516.7
32.5°	562.3	557.6	540.5	496.8	484.4
35°	531.0	527.2	501.5	463.5	452.1
37.5°	499.6	494.9	462.6	432.2	417.9
40°	468.3	462.6	427.4	399.9	384.7
42.5°	438.8	431.2	397.0	367.6	350.5
45°	407.5	398.9	364.8	334.4	321.1
47.5°	376.1	368.6	337.2	305.9	290.7
50°	342.9	336.3	307.8	276.4	260.3
52.5°	315.4	304.9	277.4	246.0	232.7
55°	283.1	274.5	248.9	219.4	208.0
57.5°	253.6	245.1	221.3	193.8	184.3
60°	226.1	213.7	193.8	170.0	162.4
62.5°	195.7	186.2	169.1	149.1	158.6
65°	168.1	158.6	143.4	146.3	121.6
67.5°	137.7	133.0	119.7	106.4	102.6
70°	112.1	106.4	101.6	87.4	83.6
72.5°	89.3	83.6	76.9	69.3	66.5
75°	67.4	62.7	58.9	56.0	61.7
77.5°	46.5	44.6	41.8	38.9	38.0
80°	30.4	29.4	28.5	27.5	26.6
82.5°	18.0	18.0	18.0	18.0	18.0
85°	9.5	10.4	11.4	12.3	13.3
87.5°	5.7	5.7	6.6	7.6	8.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)