

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: P560029

Luminaire Tested: FSR-12-2-LD4-1STD-35-UNV-82-96-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560029  
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-82-96-EDD  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

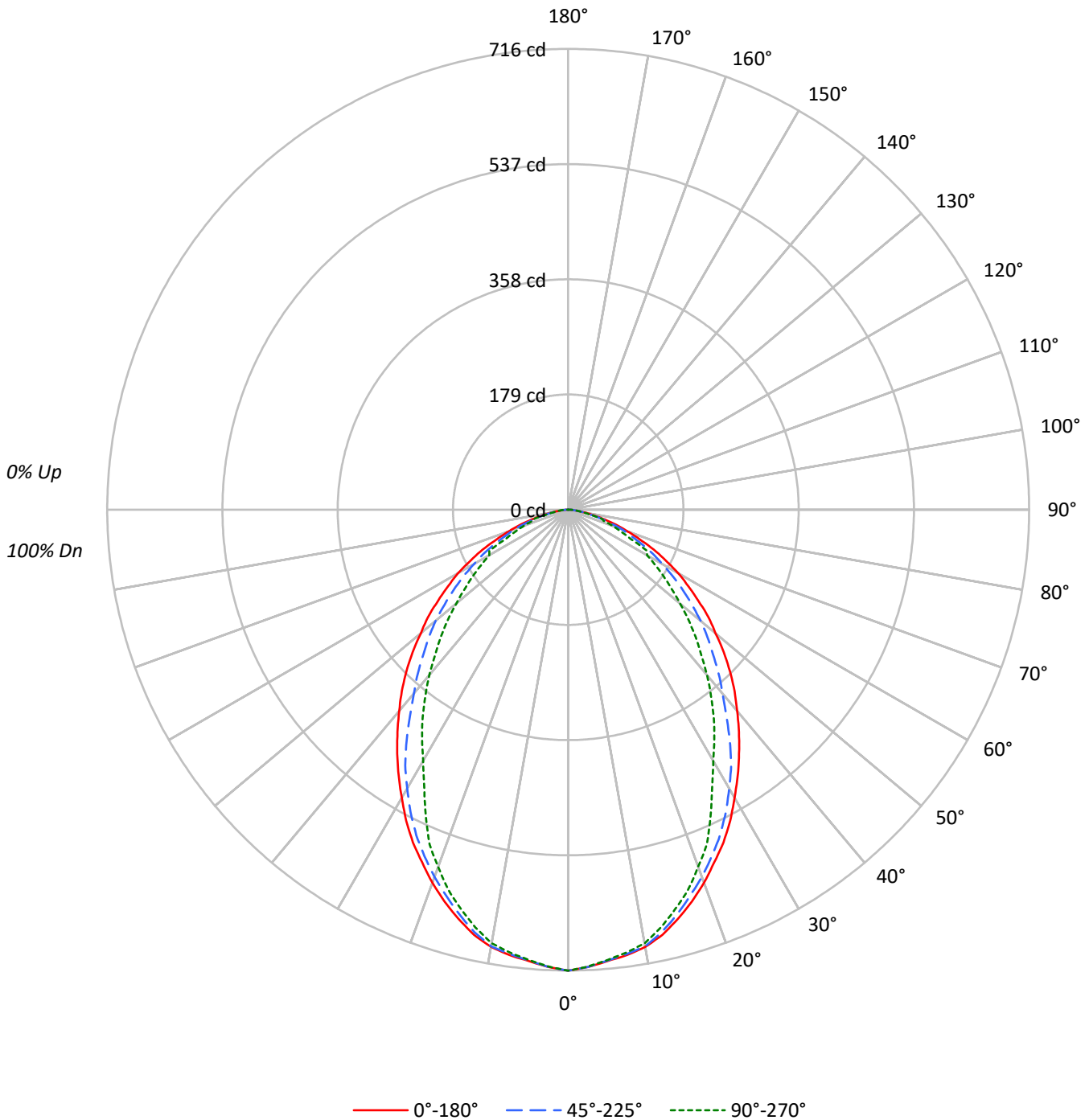
Lumens per Lamp: N/A  
Luminaire Lumens: 1406.0 lumens  
Efficiency: N/A  
Efficacy: 84.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	3855	3855	3855
5°	3802	3798	3793
10°	3769	3765	3738
15°	3667	3631	3580
20°	3533	3476	3381
25°	3388	3314	3108
30°	3211	3108	2799
35°	3041	2872	2589
40°	2868	2618	2356
45°	2704	2420	2130
50°	2503	2246	1900
55°	2315	2035	1701
60°	2122	1818	1524
65°	1867	1592	1350
70°	1537	1394	1147
75°	1223	1067	1119
80°	821	769	719
85°	513	611	716

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2704 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.7	4.7
10°-20°	183.0	13.0
20°-30°	253.3	18.0
30°-40°	270.1	19.2
40°-50°	246.4	17.5
50°-60°	193.0	13.7
60°-70°	125.8	8.9
70°-80°	55.7	4.0
80°-90°	12.0	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°	502.9	35.8
0°-40°	773.0	55.0
0°-60°	1212.5	86.2
0°-90°	1406.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1406.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	716	716	716	716	716	
5°	704	703	703	702	702	67
15°	658	658	652	645	642	185
25°	570	567	558	538	523	262
35°	463	460	437	404	394	289
45°	355	348	318	291	280	274
55°	247	239	217	191	181	221
65°	147	138	125	128	106	144
75°	59	55	51	49	54	63
85°	8	9	10	11	12	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	716.2	716.2	716.2	716.2	716.2
2.5°	711.2	711.2	711.2	710.4	710.4
5°	703.8	703.0	703.0	702.1	702.1
7.5°	698.0	697.2	696.3	695.5	693.8
10°	689.7	689.7	688.9	684.7	683.9
12.5°	676.5	675.6	672.3	666.5	664.9
15°	658.2	658.2	651.6	645.0	642.5
17.5°	638.4	637.5	629.3	622.6	619.3
20°	616.8	615.2	606.9	596.1	590.3
22.5°	592.8	592.8	582.9	568.8	563.0
25°	570.5	567.2	558.1	538.2	523.3
27.5°	544.8	539.8	529.9	501.8	484.4
30°	516.7	514.2	500.1	463.7	450.4
32.5°	490.2	486.0	471.1	433.0	422.3
35°	462.8	459.5	437.2	404.1	394.1
37.5°	435.5	431.4	403.2	376.7	364.3
40°	408.2	403.2	372.6	348.6	335.3
42.5°	382.5	375.9	346.1	320.4	305.5
45°	355.2	347.7	317.9	291.4	279.9
47.5°	327.9	321.3	293.9	266.6	253.4
50°	298.9	293.1	268.3	240.9	226.9
52.5°	274.9	265.8	241.8	214.4	202.9
55°	246.7	239.3	216.9	191.3	181.3
57.5°	221.1	213.6	192.9	168.9	160.6
60°	197.1	186.3	168.9	148.2	141.6
62.5°	170.6	162.3	147.4	130.0	138.3
65°	146.6	138.3	125.0	127.5	106.0
67.5°	120.1	115.9	104.3	92.7	89.4
70°	97.7	92.7	88.6	76.2	72.9
72.5°	77.8	72.9	67.1	60.4	58.0
75°	58.8	54.6	51.3	48.9	53.8
77.5°	40.6	38.9	36.4	33.9	33.1
80°	26.5	25.7	24.8	24.0	23.2
82.5°	15.7	15.7	15.7	15.7	15.7
85°	8.3	9.1	9.9	10.8	11.6
87.5°	5.0	5.0	5.8	6.6	7.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)