

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: P560163

Luminaire Tested: FSR-12-2-LD4-1STD-50-UNV-93-85-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560163  
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-50-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 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

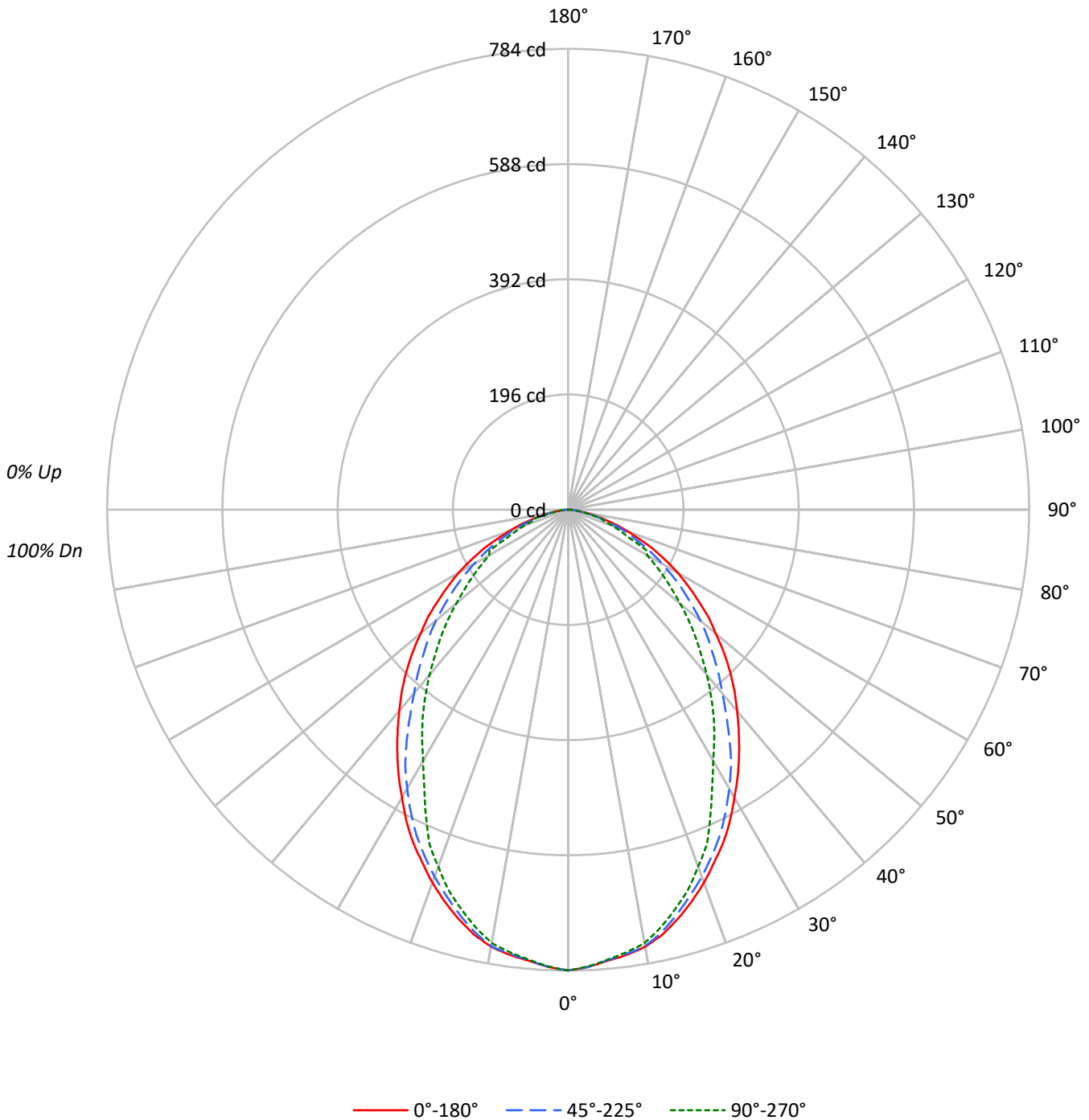
Lumens per Lamp: N/A  
Luminaire Lumens: 1539.0 lumens  
Efficiency: N/A  
Efficacy: 92.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	4219	4219	4219
5°	4162	4157	4152
10°	4126	4121	4091
15°	4014	3974	3919
20°	3867	3805	3701
25°	3708	3627	3401
30°	3514	3402	3064
35°	3328	3144	2834
40°	3139	2865	2578
45°	2959	2649	2331
50°	2740	2458	2079
55°	2534	2228	1863
60°	2322	1990	1668
65°	2043	1743	1477
70°	1682	1526	1256
75°	1337	1169	1225
80°	899	843	787
85°	562	673	784

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2959 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.0	4.7
10°-20°	200.3	13.0
20°-30°	277.3	18.0
30°-40°	295.6	19.2
40°-50°	269.7	17.5
50°-60°	211.3	13.7
60°-70°	137.7	8.9
70°-80°	61.0	4.0
80°-90°	13.1	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°	550.5	35.8
0°-40°	846.2	55.0
0°-60°	1327.1	86.2
0°-90°	1539.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1539.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	784	784	784	784	784	
5°	770	769	769	768	768	73
15°	720	720	713	706	703	203
25°	624	621	611	589	573	287
35°	507	503	478	442	431	317
45°	389	381	348	319	306	299
55°	270	262	237	209	198	242
65°	160	151	137	140	116	158
75°	64	60	56	54	59	69
85°	9	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°	783.9	783.9	783.9	783.9	783.9
2.5°	778.5	778.5	778.5	777.6	777.6
5°	770.4	769.4	769.4	768.5	768.5
7.5°	764.0	763.1	762.2	761.3	759.5
10°	754.9	754.9	754.0	749.5	748.6
12.5°	740.4	739.5	735.9	729.6	727.8
15°	720.5	720.5	713.3	706.0	703.3
17.5°	698.8	697.8	688.8	681.5	677.9
20°	675.2	673.4	664.3	652.5	646.2
22.5°	648.9	648.9	638.0	622.6	616.3
25°	624.4	620.8	610.8	589.1	572.8
27.5°	596.3	590.9	580.0	549.2	530.2
30°	565.5	562.8	547.4	507.5	493.0
32.5°	536.5	532.0	515.7	474.0	462.2
35°	506.6	503.0	478.5	442.3	431.4
37.5°	476.7	472.2	441.4	412.4	398.8
40°	446.8	441.4	407.8	381.6	367.0
42.5°	418.7	411.5	378.8	350.7	334.4
45°	388.8	380.6	348.0	319.0	306.3
47.5°	358.9	351.6	321.7	291.8	277.3
50°	327.2	320.8	293.6	263.7	248.3
52.5°	300.9	290.9	264.6	234.7	222.0
55°	270.1	261.9	237.4	209.4	198.5
57.5°	242.0	233.8	211.2	184.9	175.8
60°	215.7	203.9	184.9	162.2	155.0
62.5°	186.7	177.6	161.3	142.3	151.4
65°	160.4	151.4	136.9	139.6	116.0
67.5°	131.4	126.9	114.2	101.5	97.9
70°	106.9	101.5	97.0	83.4	79.8
72.5°	85.2	79.8	73.4	66.2	63.4
75°	64.3	59.8	56.2	53.5	58.9
77.5°	44.4	42.6	39.9	37.2	36.3
80°	29.0	28.1	27.2	26.3	25.4
82.5°	17.2	17.2	17.2	17.2	17.2
85°	9.1	10.0	10.9	11.8	12.7
87.5°	5.4	5.4	6.3	7.3	8.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)