

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: P559975

Luminaire Tested: FSR-12-2-LD4-1LO-50-UNV-93-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559975  
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-LD4-1LO-50-UNV-93-87-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

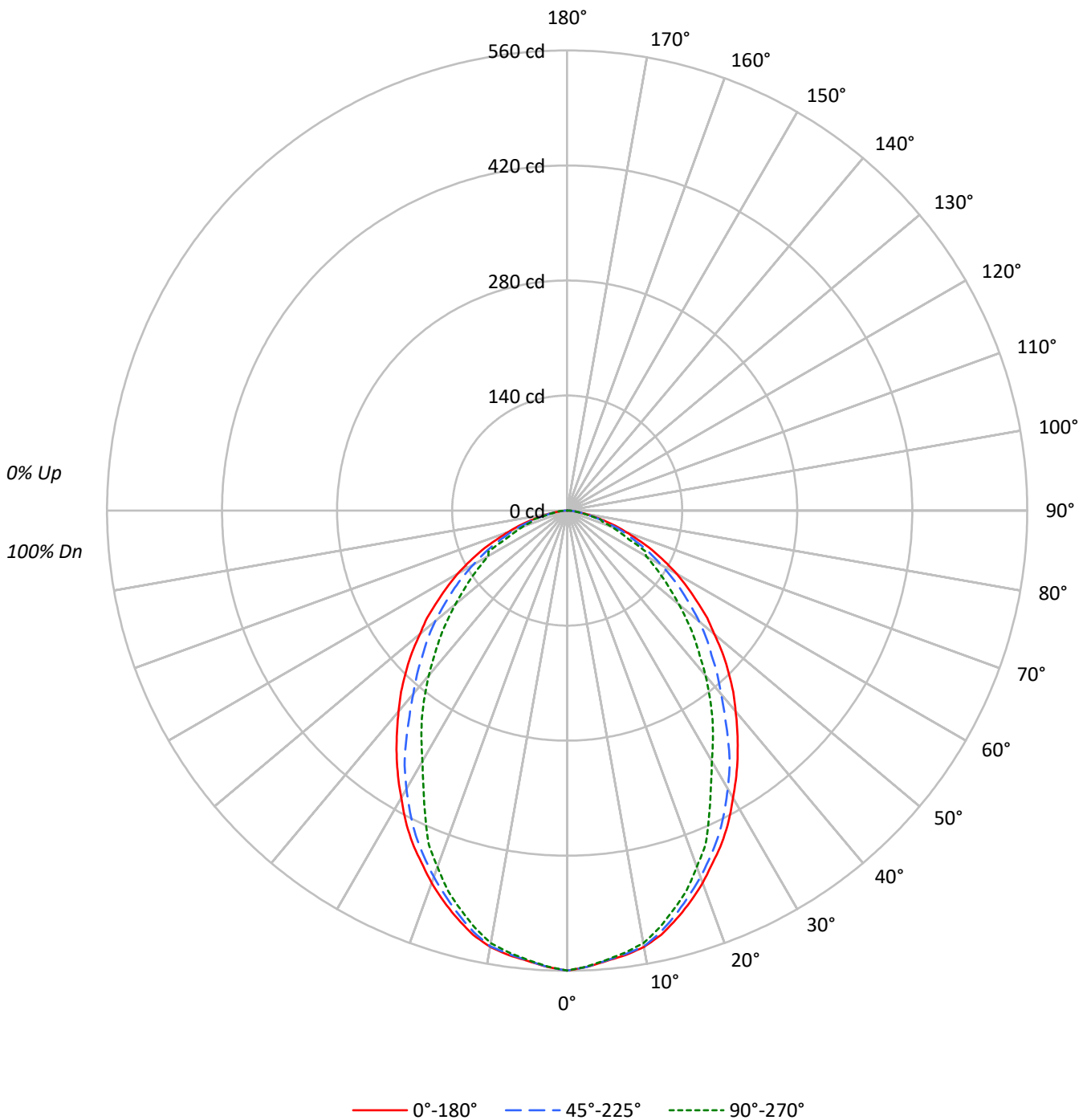
Lumens per Lamp: N/A  
Luminaire Lumens: 1099.0 lumens  
Efficiency: N/A  
Efficacy: 93.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	3013	3013	3013
5°	2972	2969	2965
10°	2946	2943	2922
15°	2867	2838	2798
20°	2762	2717	2643
25°	2648	2590	2429
30°	2509	2429	2188
35°	2377	2245	2024
40°	2242	2046	1841
45°	2113	1891	1665
50°	1956	1756	1485
55°	1810	1591	1330
60°	1658	1421	1192
65°	1459	1244	1054
70°	1202	1089	897
75°	957	834	875
80°	642	601	561
85°	401	482	562

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2113 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.1	4.7
10°-20°	143.0	13.0
20°-30°	198.0	18.0
30°-40°	211.1	19.2
40°-50°	192.6	17.5
50°-60°	150.9	13.7
60°-70°	98.3	8.9
70°-80°	43.6	4.0
80°-90°	9.4	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°	393.1	35.8
0°-40°	604.2	55.0
0°-60°	947.7	86.2
0°-90°	1099.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1099.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	560	560	560	560	560	
5°	550	550	550	549	549	52
15°	514	514	509	504	502	145
25°	446	443	436	421	409	205
35°	362	359	342	316	308	226
45°	278	272	248	228	219	214
55°	193	187	170	150	142	173
65°	115	108	98	100	83	113
75°	46	43	40	38	42	49
85°	6	7	8	8	9	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	559.8	559.8	559.8	559.8	559.8
2.5°	555.9	555.9	555.9	555.3	555.3
5°	550.1	549.5	549.5	548.8	548.8
7.5°	545.6	544.9	544.3	543.6	542.3
10°	539.1	539.1	538.5	535.2	534.6
12.5°	528.8	528.1	525.5	521.0	519.7
15°	514.5	514.5	509.3	504.2	502.2
17.5°	499.0	498.3	491.9	486.7	484.1
20°	482.2	480.9	474.4	466.0	461.4
22.5°	463.4	463.4	455.6	444.6	440.1
25°	445.9	443.3	436.2	420.7	409.0
27.5°	425.8	422.0	414.2	392.2	378.6
30°	403.8	401.9	390.9	362.4	352.1
32.5°	383.1	379.9	368.2	338.5	330.1
35°	361.8	359.2	341.7	315.8	308.1
37.5°	340.4	337.2	315.2	294.5	284.8
40°	319.1	315.2	291.2	272.5	262.1
42.5°	299.0	293.8	270.5	250.5	238.8
45°	277.6	271.8	248.5	227.8	218.7
47.5°	256.3	251.1	229.8	208.4	198.0
50°	233.6	229.1	209.7	188.3	177.3
52.5°	214.9	207.7	189.0	167.6	158.6
55°	192.9	187.0	169.6	149.5	141.7
57.5°	172.8	167.0	150.8	132.0	125.6
60°	154.0	145.6	132.0	115.8	110.7
62.5°	133.3	126.8	115.2	101.6	108.1
65°	114.6	108.1	97.7	99.7	82.8
67.5°	93.8	90.6	81.5	72.5	69.9
70°	76.4	72.5	69.2	59.5	57.0
72.5°	60.8	57.0	52.4	47.2	45.3
75°	46.0	42.7	40.1	38.2	42.1
77.5°	31.7	30.4	28.5	26.5	25.9
80°	20.7	20.1	19.4	18.8	18.1
82.5°	12.3	12.3	12.3	12.3	12.3
85°	6.5	7.1	7.8	8.4	9.1
87.5°	3.9	3.9	4.5	5.2	5.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)