

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: P559203

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

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559203  
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-12-1-LD4-2HI-50-UNV-93-85-EDD  
Description: 1X1 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**

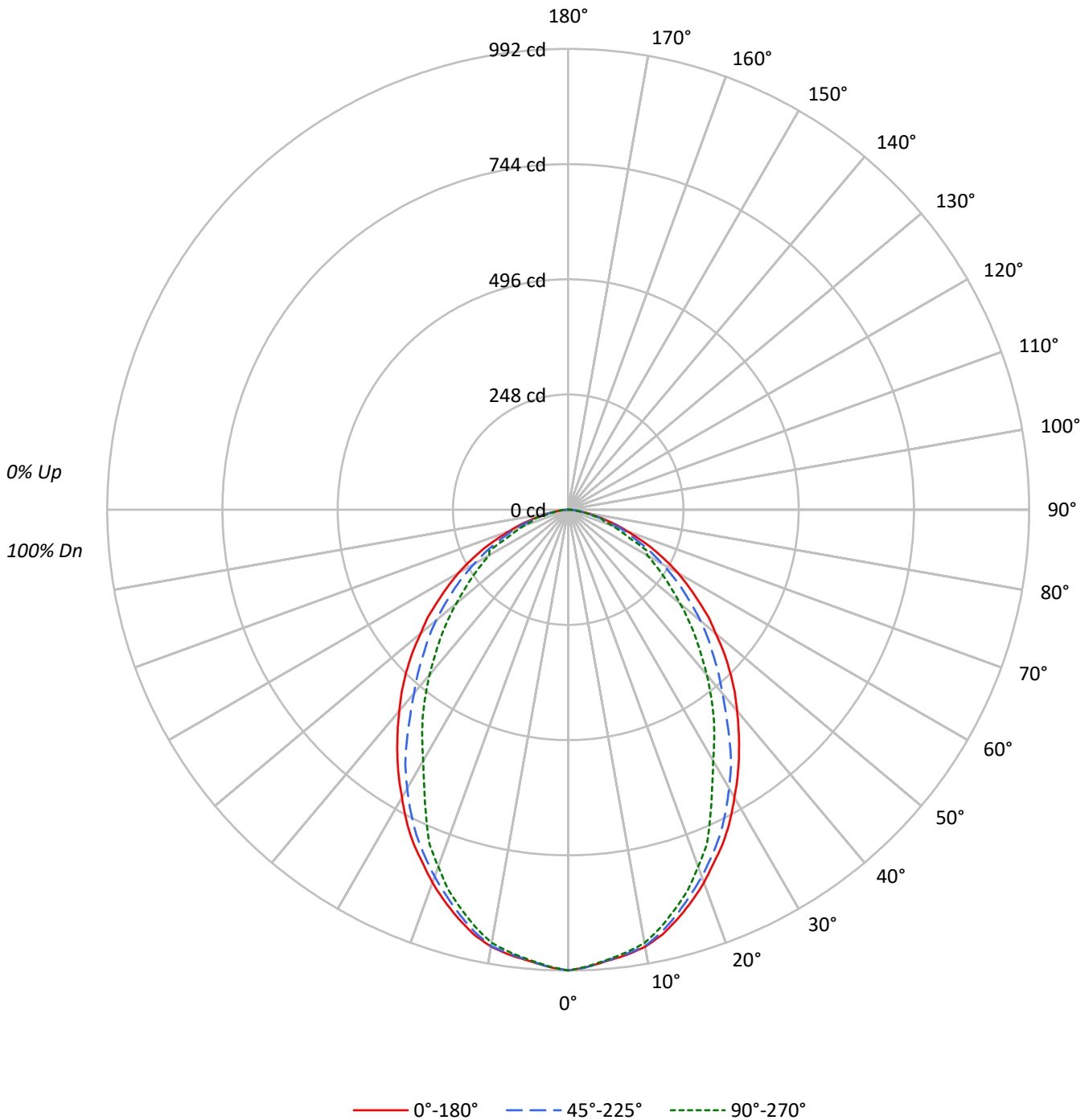
Lumens per Lamp: N/A  
Luminaire Lumens: 1947.0 lumens  
Efficiency: N/A  
Efficacy: 90.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	10676	10676	10676
5°	10531	10518	10506
10°	10439	10426	10352
15°	10157	10055	9914
20°	9785	9627	9364
25°	9383	9178	8606
30°	8893	8607	7752
35°	8422	7955	7172
40°	7943	7250	6525
45°	7488	6702	5899
50°	6931	6221	5261
55°	6412	5637	4712
60°	5875	5035	4222
65°	5168	4409	3739
70°	4258	3862	3175
75°	3385	2957	3098
80°	2275	2132	1990
85°	1420	1704	1988

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7488 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.3	4.7
10°-20°	253.4	13.0
20°-30°	350.8	18.0
30°-40°	374.0	19.2
40°-50°	341.2	17.5
50°-60°	267.3	13.7
60°-70°	174.2	8.9
70°-80°	77.2	4.0
80°-90°	16.6	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°	696.5	35.8
0°-40°	1070.5	55.0
0°-60°	1679.0	86.2
0°-90°	1947.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1947.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	992	992	992	992	992	
5°	975	973	973	972	972	93
15°	912	912	902	893	890	256
25°	790	785	773	745	725	363
35°	641	636	605	560	546	401
45°	492	482	440	404	388	379
55°	342	331	300	265	251	306
65°	203	192	173	177	147	200
75°	81	76	71	68	74	87
85°	12	13	14	15	16	16
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	991.8	991.8	991.8	991.8	991.8
2.5°	984.9	984.9	984.9	983.7	983.7
5°	974.6	973.4	973.4	972.3	972.3
7.5°	966.6	965.4	964.3	963.1	960.8
10°	955.1	955.1	953.9	948.2	947.1
12.5°	936.7	935.6	931.0	923.0	920.7
15°	911.5	911.5	902.3	893.2	889.7
17.5°	884.0	882.9	871.4	862.2	857.6
20°	854.2	851.9	840.4	825.5	817.5
22.5°	820.9	820.9	807.2	787.7	779.7
25°	790.0	785.4	772.8	745.3	724.6
27.5°	754.4	747.6	733.8	694.8	670.7
30°	715.5	712.0	692.5	642.1	623.7
32.5°	678.8	673.0	652.4	599.7	584.7
35°	640.9	636.3	605.4	559.5	545.8
37.5°	603.1	597.4	558.4	521.7	504.5
40°	565.3	558.4	516.0	482.7	464.4
42.5°	529.7	520.5	479.3	443.7	423.1
45°	491.9	481.6	440.3	403.6	387.5
47.5°	454.0	444.9	407.0	369.2	350.8
50°	413.9	405.9	371.5	333.6	314.2
52.5°	380.7	368.0	334.8	297.0	280.9
55°	341.7	331.4	300.4	264.9	251.1
57.5°	306.1	295.8	267.1	233.9	222.4
60°	272.9	258.0	233.9	205.2	196.1
62.5°	236.2	224.7	204.1	180.0	191.5
65°	202.9	191.5	173.1	176.6	146.8
67.5°	166.3	160.5	144.5	128.4	123.8
70°	135.3	128.4	122.7	105.5	100.9
72.5°	107.8	100.9	92.9	83.7	80.3
75°	81.4	75.7	71.1	67.6	74.5
77.5°	56.2	53.9	50.4	47.0	45.9
80°	36.7	35.5	34.4	33.3	32.1
82.5°	21.8	21.8	21.8	21.8	21.8
85°	11.5	12.6	13.8	14.9	16.1
87.5°	6.9	6.9	8.0	9.2	10.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)