

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: P559781

Luminaire Tested: FSR-12-2-LD4-1HI-50-UNV-93-86-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559781  
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-LD4-1HI-50-UNV-93-86-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

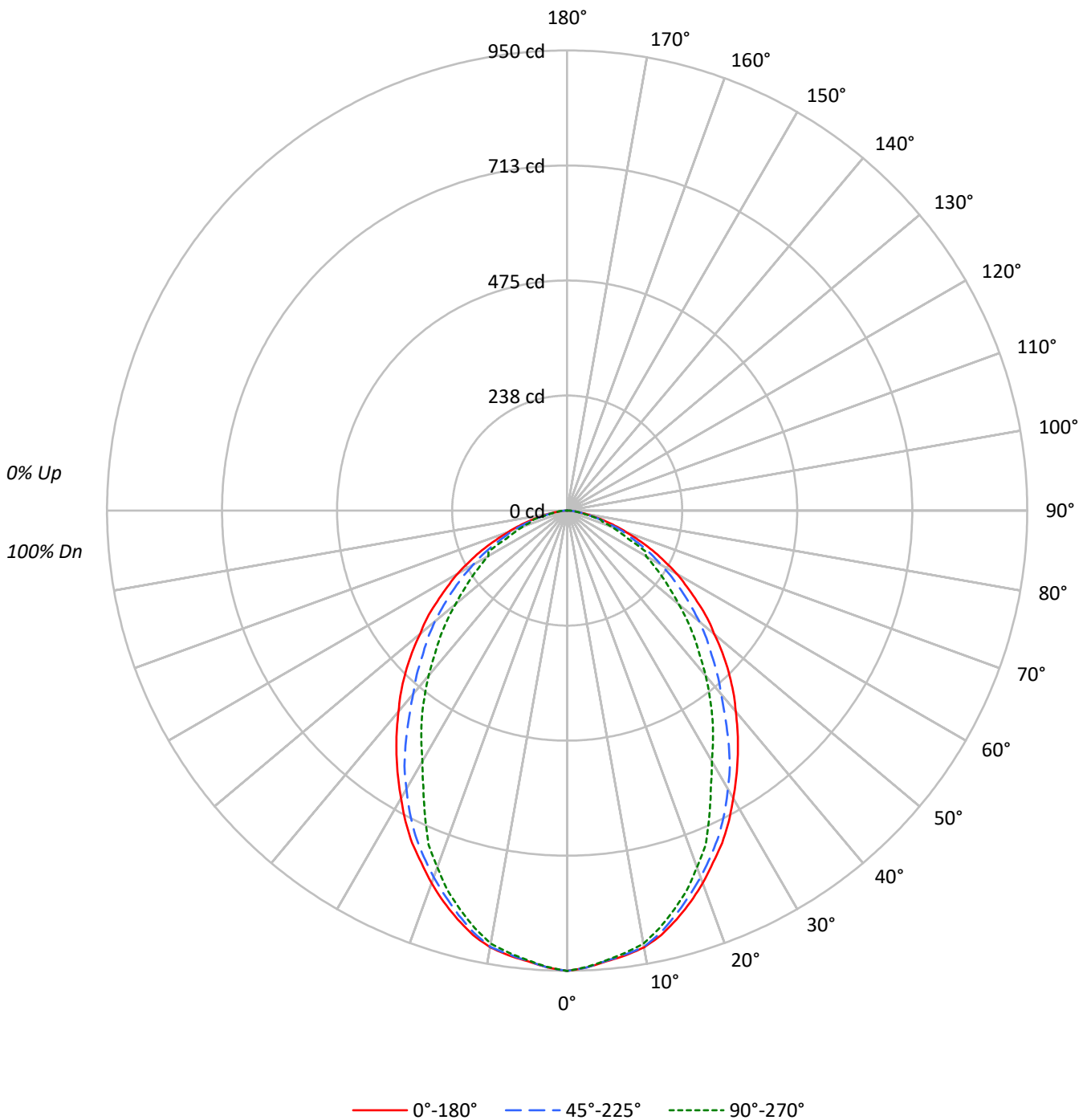
Lumens per Lamp: N/A  
Luminaire Lumens: 1866.0 lumens  
Efficiency: N/A  
Efficacy: 86.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	5116	5116	5116
5°	5046	5040	5034
10°	5003	4997	4961
15°	4868	4819	4751
20°	4689	4613	4487
25°	4496	4398	4124
30°	4261	4125	3715
35°	4036	3812	3437
40°	3806	3474	3126
45°	3588	3212	2827
50°	3322	2981	2521
55°	3073	2701	2259
60°	2815	2413	2023
65°	2477	2113	1792
70°	2041	1851	1522
75°	1622	1416	1485
80°	1091	1023	955
85°	679	815	951

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3588 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.5	4.7
10°-20°	242.8	13.0
20°-30°	336.2	18.0
30°-40°	358.5	19.2
40°-50°	327.0	17.5
50°-60°	256.2	13.7
60°-70°	167.0	8.9
70°-80°	74.0	4.0
80°-90°	15.9	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°	667.5	35.8
0°-40°	1025.9	55.0
0°-60°	1609.2	86.2
0°-90°	1866.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1866.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	950	950	950	950	950	
5°	934	933	933	932	932	89
15°	874	874	865	856	853	246
25°	757	753	741	714	694	348
35°	614	610	580	536	523	384
45°	471	462	422	387	371	363
55°	328	318	288	254	241	294
65°	194	184	166	169	141	192
75°	78	72	68	65	71	84
85°	11	12	13	14	15	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	950.5	950.5	950.5	950.5	950.5
2.5°	943.9	943.9	943.9	942.8	942.8
5°	934.0	932.9	932.9	931.8	931.8
7.5°	926.3	925.2	924.1	923.0	920.8
10°	915.4	915.4	914.3	908.8	907.7
12.5°	897.8	896.7	892.3	884.6	882.4
15°	873.6	873.6	864.8	856.0	852.7
17.5°	847.2	846.1	835.1	826.3	821.9
20°	818.7	816.5	805.5	791.2	783.5
22.5°	786.8	786.8	773.6	754.9	747.2
25°	757.1	752.7	740.6	714.3	694.5
27.5°	723.1	716.5	703.3	665.9	642.8
30°	685.7	682.4	663.7	615.4	597.8
32.5°	650.5	645.0	625.3	574.7	560.4
35°	614.3	609.9	580.2	536.2	523.1
37.5°	578.0	572.5	535.1	500.0	483.5
40°	541.7	535.1	494.5	462.6	445.0
42.5°	507.7	498.9	459.3	425.3	405.5
45°	471.4	461.5	422.0	386.8	371.4
47.5°	435.1	426.4	390.1	353.8	336.3
50°	396.7	389.0	356.0	319.8	301.1
52.5°	364.8	352.7	320.9	284.6	269.2
55°	327.5	317.6	287.9	253.8	240.7
57.5°	293.4	283.5	256.0	224.2	213.2
60°	261.5	247.2	224.2	196.7	187.9
62.5°	226.4	215.4	195.6	172.5	183.5
65°	194.5	183.5	165.9	169.2	140.7
67.5°	159.3	153.8	138.5	123.1	118.7
70°	129.7	123.1	117.6	101.1	96.7
72.5°	103.3	96.7	89.0	80.2	76.9
75°	78.0	72.5	68.1	64.8	71.4
77.5°	53.8	51.6	48.3	45.1	44.0
80°	35.2	34.1	33.0	31.9	30.8
82.5°	20.9	20.9	20.9	20.9	20.9
85°	11.0	12.1	13.2	14.3	15.4
87.5°	6.6	6.6	7.7	8.8	9.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)