

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: P559788

Luminaire Tested: FSR-12-2-LD4-1HI-50-UNV-93-96-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559788  
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-93-96-EDD-90  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER  
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

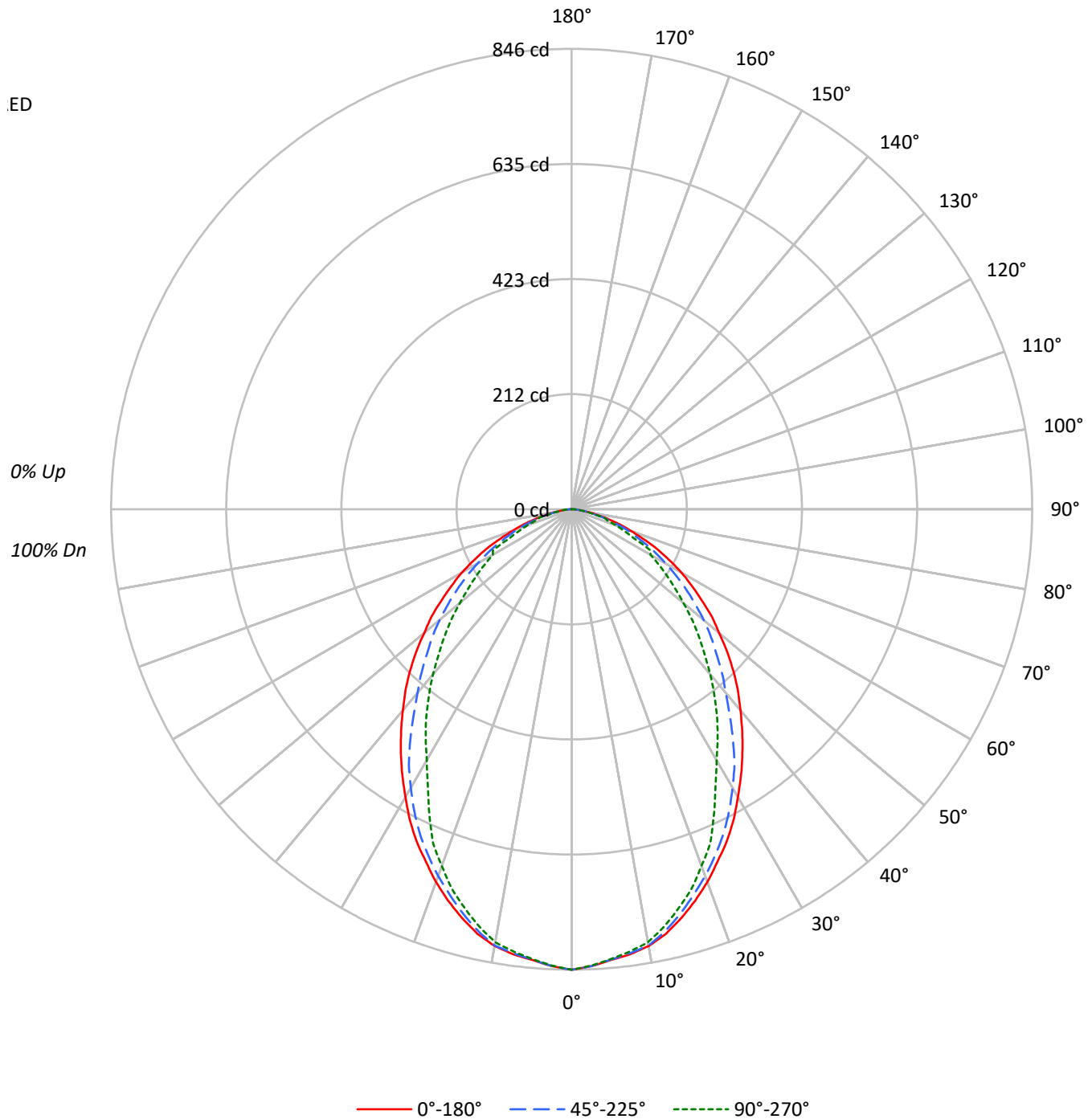
Lumens per Lamp: N/A  
Luminaire Lumens: 1661.0 lumens  
Efficiency: N/A  
Efficacy: 76.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	4554	4554	4554
5°	4492	4486	4481
10°	4453	4447	4415
15°	4333	4289	4229
20°	4174	4107	3994
25°	4002	3915	3671
30°	3793	3672	3307
35°	3593	3393	3059
40°	3388	3093	2783
45°	3194	2859	2516
50°	2956	2653	2244
55°	2735	2405	2010
60°	2506	2147	1801
65°	2204	1881	1594
70°	1816	1648	1355
75°	1443	1260	1323
80°	970	908	849
85°	605	722	846

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3194 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.8	4.7
10°-20°	216.1	13.0
20°-30°	299.2	18.0
30°-40°	319.1	19.2
40°-50°	291.1	17.5
50°-60°	228.1	13.7
60°-70°	148.6	8.9
70°-80°	65.8	4.0
80°-90°	14.1	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°	594.2	35.8
0°-40°	913.2	55.0
0°-60°	1432.4	86.2
0°-90°	1661.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1661.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	846	846	846	846	846	
5°	831	830	830	830	830	79
15°	778	778	770	762	759	219
25°	674	670	659	636	618	309
35°	547	543	516	477	466	342
45°	420	411	376	344	331	323
55°	292	283	256	226	214	261
65°	173	163	148	151	125	171
75°	69	65	61	58	64	74
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	846.1	846.1	846.1	846.1	846.1
2.5°	840.2	840.2	840.2	839.2	839.2
5°	831.4	830.4	830.4	829.5	829.5
7.5°	824.6	823.6	822.6	821.6	819.7
10°	814.8	814.8	813.8	808.9	807.9
12.5°	799.1	798.2	794.2	787.4	785.4
15°	777.6	777.6	769.8	762.0	759.0
17.5°	754.1	753.2	743.4	735.6	731.6
20°	728.7	726.8	717.0	704.3	697.4
22.5°	700.3	700.3	688.6	672.0	665.1
25°	673.9	670.0	659.3	635.8	618.2
27.5°	643.6	637.7	626.0	592.8	572.2
30°	610.4	607.4	590.8	547.8	532.1
32.5°	579.1	574.2	556.6	511.6	498.9
35°	546.8	542.9	516.5	477.3	465.6
37.5°	514.5	509.6	476.4	445.1	430.4
40°	482.2	476.4	440.2	411.8	396.1
42.5°	451.9	444.1	408.9	378.5	360.9
45°	419.6	410.8	375.6	344.3	330.6
47.5°	387.3	379.5	347.2	315.0	299.3
50°	353.1	346.3	316.9	284.6	268.0
52.5°	324.7	314.0	285.6	253.3	239.6
55°	291.5	282.7	256.3	226.0	214.2
57.5°	261.2	252.4	227.9	199.5	189.8
60°	232.8	220.1	199.5	175.1	167.3
62.5°	201.5	191.7	174.1	153.6	163.3
65°	173.1	163.3	147.7	150.6	125.2
67.5°	141.8	136.9	123.2	109.6	105.6
70°	115.4	109.6	104.7	90.0	86.1
72.5°	91.9	86.1	79.2	71.4	68.5
75°	69.4	64.6	60.6	57.7	63.6
77.5°	47.9	46.0	43.0	40.1	39.1
80°	31.3	30.3	29.3	28.4	27.4
82.5°	18.6	18.6	18.6	18.6	18.6
85°	9.8	10.8	11.7	12.7	13.7
87.5°	5.9	5.9	6.8	7.8	8.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)