

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: P559661

Luminaire Tested: FSR-12-2-LD4-1HI-35-UNV-93-96-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559661  
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-35-UNV-93-96-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER  
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

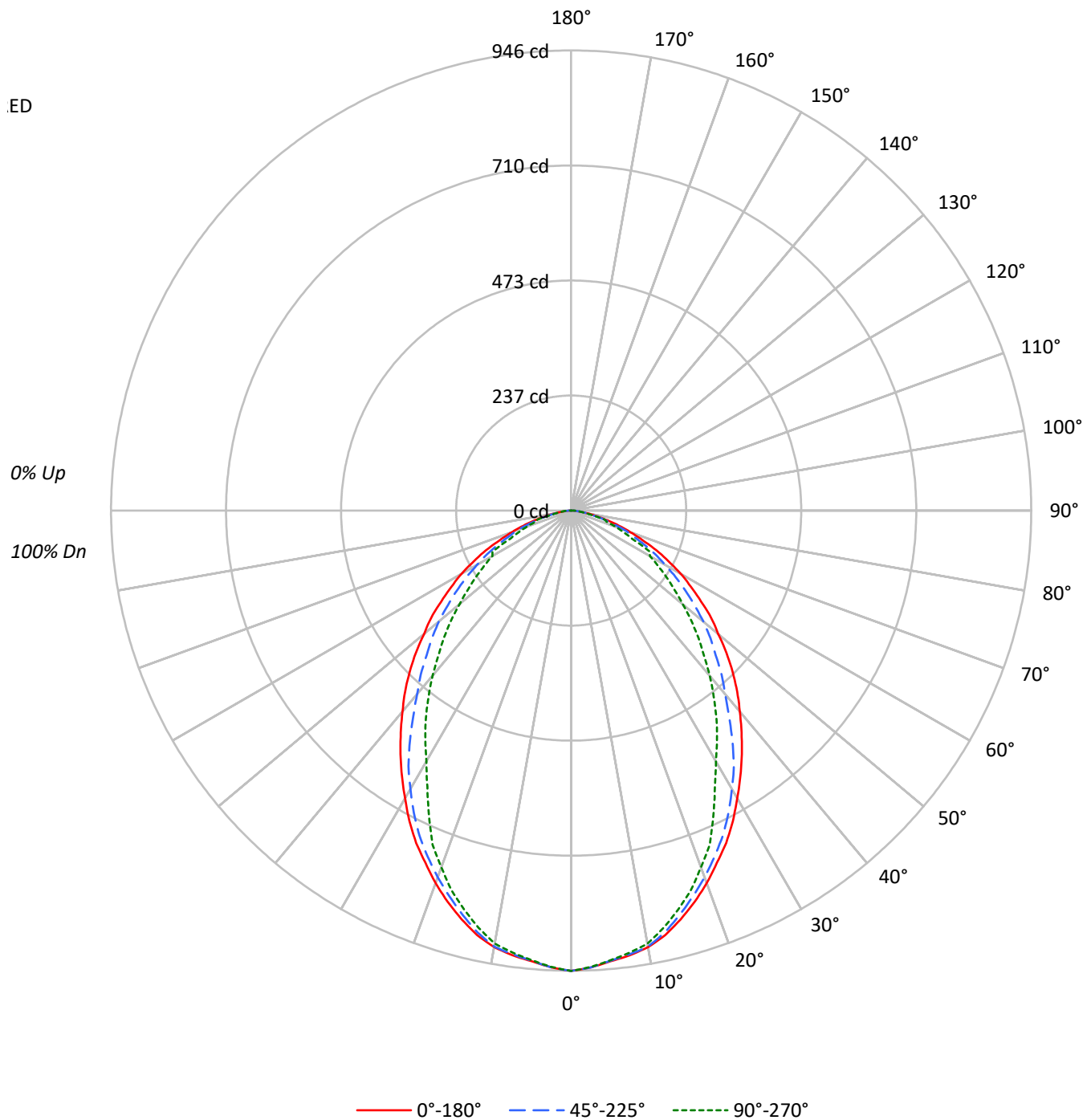
Lumens per Lamp: N/A  
Luminaire Lumens: 1858.0 lumens  
Efficiency: N/A  
Efficacy: 86.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	5093	5093	5093
5°	5024	5018	5012
10°	4981	4975	4939
15°	4846	4798	4731
20°	4668	4593	4468
25°	4477	4380	4106
30°	4243	4107	3699
35°	4018	3796	3422
40°	3790	3459	3113
45°	3573	3198	2815
50°	3307	2968	2510
55°	3060	2690	2248
60°	2803	2403	2014
65°	2467	2104	1784
70°	2031	1843	1515
75°	1616	1410	1478
80°	1085	1017	948
85°	673	809	945

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3573 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.1	4.7
10°-20°	241.8	13.0
20°-30°	334.7	18.0
30°-40°	356.9	19.2
40°-50°	325.6	17.5
50°-60°	255.1	13.7
60°-70°	166.3	8.9
70°-80°	73.7	4.0
80°-90°	15.8	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°	664.6	35.8
0°-40°	1021.6	55.0
0°-60°	1602.3	86.2
0°-90°	1858.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1858.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	946	946	946	946	946	
5°	930	929	929	928	928	88
15°	870	870	861	852	849	245
25°	754	750	738	711	692	346
35°	612	607	578	534	521	382
45°	469	460	420	385	370	362
55°	326	316	287	253	240	292
65°	194	183	165	168	140	191
75°	78	72	68	65	71	83
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°	946.4	946.4	946.4	946.4	946.4
2.5°	939.9	939.9	939.9	938.8	938.8
5°	930.0	928.9	928.9	927.8	927.8
7.5°	922.4	921.3	920.2	919.1	916.9
10°	911.4	911.4	910.3	904.9	903.8
12.5°	893.9	892.8	888.5	880.8	878.6
15°	869.8	869.8	861.1	852.3	849.1
17.5°	843.6	842.5	831.6	822.8	818.4
20°	815.1	813.0	802.0	787.8	780.1
22.5°	783.4	783.4	770.3	751.7	744.0
25°	753.9	749.5	737.5	711.2	691.5
27.5°	720.0	713.4	700.3	663.1	640.1
30°	682.8	679.5	660.9	612.7	595.2
32.5°	647.7	642.3	622.6	572.2	558.0
35°	611.6	607.3	577.7	533.9	520.8
37.5°	575.5	570.1	532.9	497.8	481.4
40°	539.4	532.9	492.4	460.6	443.1
42.5°	505.5	496.7	457.4	423.4	403.7
45°	469.4	459.5	420.2	385.1	369.8
47.5°	433.3	424.5	388.4	352.3	334.8
50°	395.0	387.3	354.5	318.4	299.8
52.5°	363.3	351.2	319.5	283.4	268.1
55°	326.1	316.2	286.7	252.7	239.6
57.5°	292.1	282.3	254.9	223.2	212.3
60°	260.4	246.2	223.2	195.9	187.1
62.5°	225.4	214.5	194.8	171.8	182.7
65°	193.7	182.7	165.2	168.5	140.1
67.5°	158.7	153.2	137.9	122.5	118.2
70°	129.1	122.5	117.1	100.7	96.3
72.5°	102.9	96.3	88.6	79.9	76.6
75°	77.7	72.2	67.8	64.6	71.1
77.5°	53.6	51.4	48.1	44.9	43.8
80°	35.0	33.9	32.8	31.7	30.6
82.5°	20.8	20.8	20.8	20.8	20.8
85°	10.9	12.0	13.1	14.2	15.3
87.5°	6.6	6.6	7.7	8.8	9.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)