

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: P559459

Luminaire Tested: FSR-12-1-LD4-2STD-35-UNV-93-85-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559459  
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-LD4-2STD-35-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 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

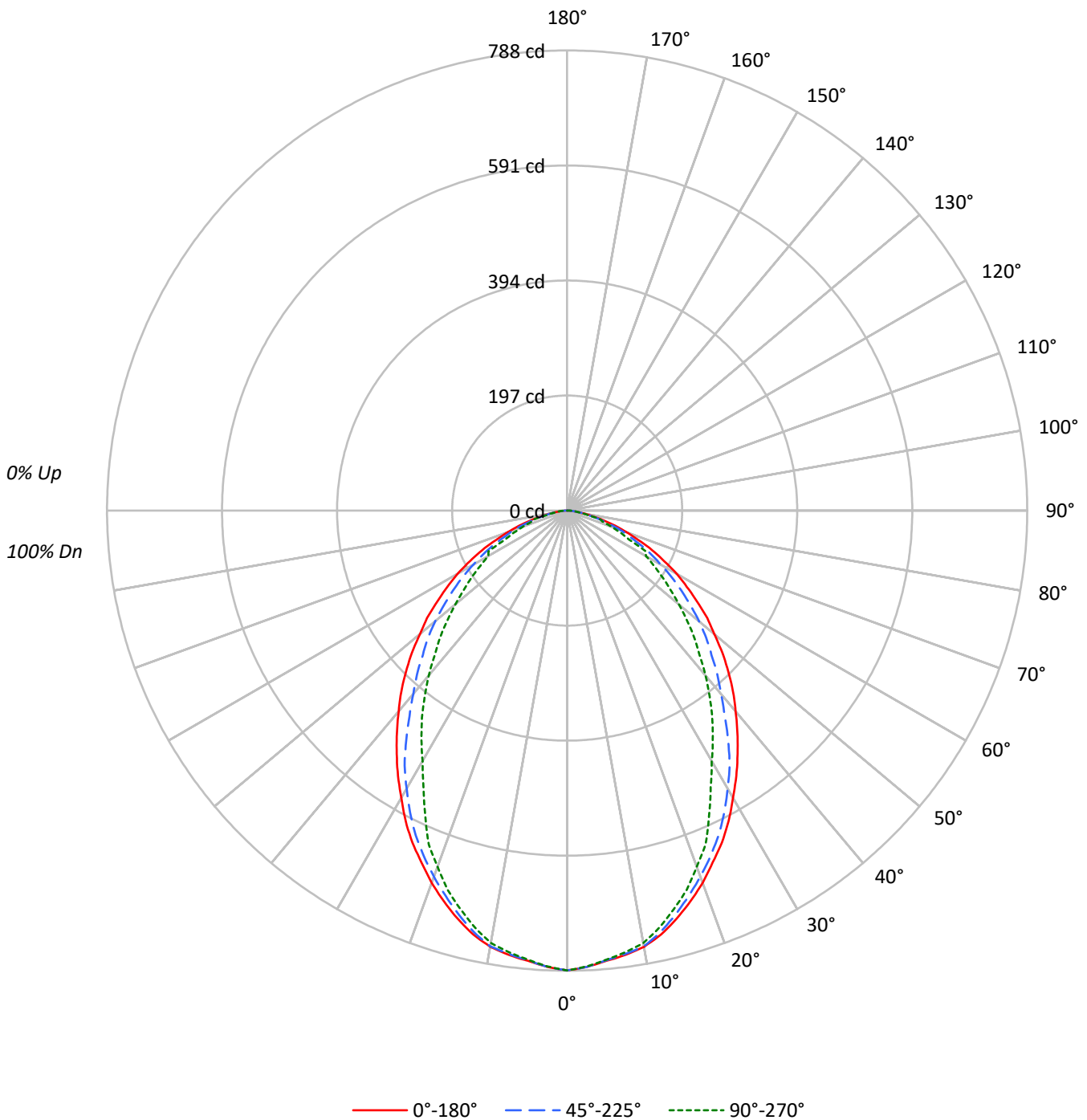
Lumens per Lamp: N/A  
Luminaire Lumens: 1546.0 lumens  
Efficiency: N/A  
Efficacy: 93.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	8477	8477	8477
5°	8362	8351	8341
10°	8289	8279	8219
15°	8066	7984	7873
20°	7770	7644	7435
25°	7450	7288	6834
30°	7061	6835	6156
35°	6687	6317	5695
40°	6306	5757	5181
45°	5946	5322	4684
50°	5504	4940	4178
55°	5091	4476	3742
60°	4665	3998	3352
65°	4103	3502	2967
70°	3380	3065	2521
75°	2687	2346	2462
80°	1804	1692	1581
85°	1124	1346	1568

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5946 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.3	4.7
10°-20°	201.2	13.0
20°-30°	278.5	18.0
30°-40°	297.0	19.2
40°-50°	270.9	17.5
50°-60°	212.3	13.7
60°-70°	138.3	8.9
70°-80°	61.3	4.0
80°-90°	13.2	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°	553.0	35.8
0°-40°	850.0	55.0
0°-60°	1333.2	86.2
0°-90°	1546.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1546.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	788	788	788	788	788	
5°	774	773	773	772	772	73
15°	724	724	716	709	706	203
25°	627	624	614	592	575	288
35°	509	505	481	444	433	318
45°	391	382	350	320	308	301
55°	271	263	238	210	199	243
65°	161	152	138	140	116	159
75°	65	60	56	54	59	69
85°	9	10	11	12	13	13
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	787.5	787.5	787.5	787.5	787.5
2.5°	782.0	782.0	782.0	781.1	781.1
5°	773.9	772.9	772.9	772.0	772.0
7.5°	767.5	766.6	765.7	764.8	762.9
10°	758.4	758.4	757.5	752.9	752.0
12.5°	743.8	742.9	739.3	732.9	731.1
15°	723.8	723.8	716.5	709.2	706.5
17.5°	701.9	701.0	691.9	684.6	681.0
20°	678.3	676.4	667.3	655.5	649.1
22.5°	651.9	651.9	640.9	625.5	619.1
25°	627.3	623.6	613.6	591.8	575.4
27.5°	599.1	593.6	582.7	551.7	532.6
30°	568.1	565.4	549.9	509.8	495.3
32.5°	539.0	534.4	518.0	476.1	464.3
35°	508.9	505.3	480.7	444.3	433.4
37.5°	478.9	474.3	443.4	414.2	400.6
40°	448.8	443.4	409.7	383.3	368.7
42.5°	420.6	413.3	380.6	352.3	335.9
45°	390.6	382.4	349.6	320.5	307.7
47.5°	360.5	353.2	323.2	293.2	278.6
50°	328.7	322.3	295.0	264.9	249.5
52.5°	302.3	292.2	265.8	235.8	223.1
55°	271.3	263.1	238.5	210.3	199.4
57.5°	243.1	234.9	212.1	185.7	176.6
60°	216.7	204.8	185.7	163.0	155.7
62.5°	187.5	178.4	162.1	142.9	152.0
65°	161.1	152.0	137.5	140.2	116.5
67.5°	132.0	127.5	114.7	102.0	98.3
70°	107.4	102.0	97.4	83.8	80.1
72.5°	85.6	80.1	73.7	66.5	63.7
75°	64.6	60.1	56.4	53.7	59.2
77.5°	44.6	42.8	40.1	37.3	36.4
80°	29.1	28.2	27.3	26.4	25.5
82.5°	17.3	17.3	17.3	17.3	17.3
85°	9.1	10.0	10.9	11.8	12.7
87.5°	5.5	5.5	6.4	7.3	8.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)