

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: P559759

Luminaire Tested: FSR-12-2-LD4-1HI-50-UNV-81-97-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559759  
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-81-97-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

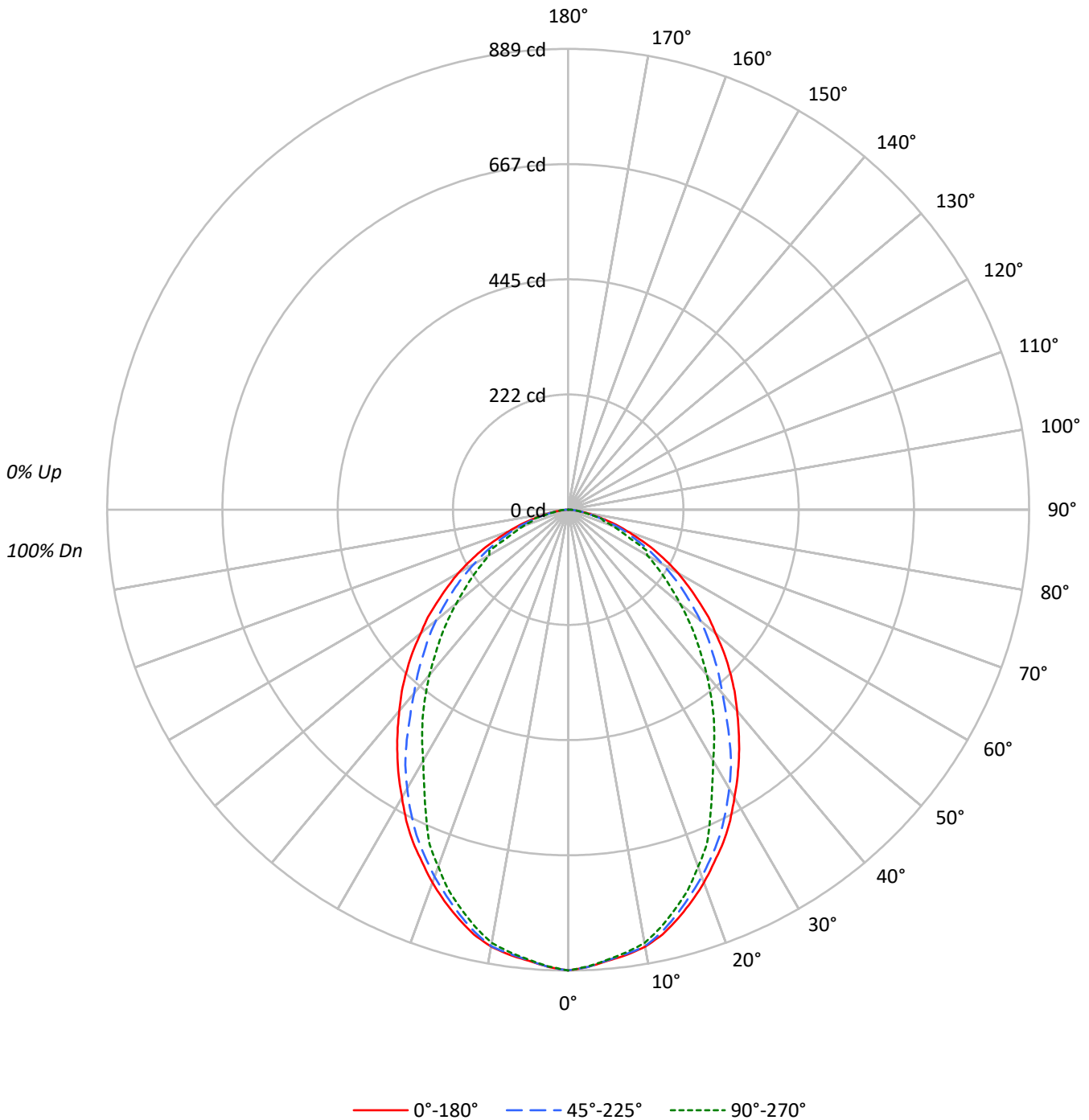
Lumens per Lamp: N/A  
Luminaire Lumens: 1745.0 lumens  
Efficiency: N/A  
Efficacy: 80.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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													100															
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87													87															
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75													75															
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65													65															
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56													56															
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50													50															
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44													44															
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40													40															
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36													36															
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33													33															
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30													30															

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4784	4784	4784
5°	4719	4713	4708
10°	4678	4673	4639
15°	4552	4506	4443
20°	4385	4314	4196
25°	4204	4113	3856
30°	3985	3857	3474
35°	3774	3565	3213
40°	3559	3249	2924
45°	3355	3003	2643
50°	3106	2787	2358
55°	2873	2526	2111
60°	2633	2256	1891
65°	2316	1976	1675
70°	1909	1731	1423
75°	1518	1325	1389
80°	1020	955	893
85°	636	760	889

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3355 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.7	4.7
10°-20°	227.1	13.0
20°-30°	314.4	18.0
30°-40°	335.2	19.2
40°-50°	305.8	17.5
50°-60°	239.6	13.7
60°-70°	156.2	8.9
70°-80°	69.2	4.0
80°-90°	14.9	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°	624.2	35.8
0°-40°	959.4	55.0
0°-60°	1504.8	86.2
0°-90°	1745.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1745.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	889	889	889	889	889	
5°	874	872	872	871	871	83
15°	817	817	809	800	797	230
25°	708	704	693	668	649	325
35°	574	570	543	502	489	359
45°	441	432	395	362	347	340
55°	306	297	269	237	225	275
65°	182	172	155	158	132	179
75°	73	68	64	61	67	78
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°	888.9	888.9	888.9	888.9	888.9
2.5°	882.7	882.7	882.7	881.7	881.7
5°	873.5	872.4	872.4	871.4	871.4
7.5°	866.3	865.2	864.2	863.2	861.1
10°	856.0	856.0	855.0	849.8	848.8
12.5°	839.6	838.5	834.4	827.2	825.2
15°	816.9	816.9	808.7	800.5	797.4
17.5°	792.3	791.3	781.0	772.8	768.6
20°	765.6	763.5	753.2	739.9	732.7
22.5°	735.8	735.8	723.4	706.0	698.8
25°	708.0	703.9	692.6	667.9	649.4
27.5°	676.2	670.0	657.7	622.7	601.1
30°	641.2	638.1	620.7	575.5	559.0
32.5°	608.3	603.2	584.7	537.4	524.1
35°	574.4	570.3	542.6	501.5	489.1
37.5°	540.5	535.4	500.4	467.6	452.1
40°	506.6	500.4	462.4	432.6	416.2
42.5°	474.8	466.5	429.5	397.7	379.2
45°	440.8	431.6	394.6	361.7	347.3
47.5°	406.9	398.7	364.8	330.9	314.4
50°	371.0	363.8	332.9	299.0	281.6
52.5°	341.2	329.9	300.1	266.2	251.8
55°	306.2	297.0	269.2	237.4	225.0
57.5°	274.4	265.1	239.4	209.6	199.4
60°	244.6	231.2	209.6	183.9	175.7
62.5°	211.7	201.4	182.9	161.3	171.6
65°	181.9	171.6	155.2	158.3	131.5
67.5°	149.0	143.9	129.5	115.1	111.0
70°	121.3	115.1	110.0	94.5	90.4
72.5°	96.6	90.4	83.2	75.0	71.9
75°	73.0	67.8	63.7	60.6	66.8
77.5°	50.4	48.3	45.2	42.1	41.1
80°	32.9	31.9	30.8	29.8	28.8
82.5°	19.5	19.5	19.5	19.5	19.5
85°	10.3	11.3	12.3	13.4	14.4
87.5°	6.2	6.2	7.2	8.2	9.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)