

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: P559191

Luminaire Tested: FSR-12-1-LD4-2HI-50-UNV-82-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559191  
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-LD4-2HI-50-UNV-82-87-EDD  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

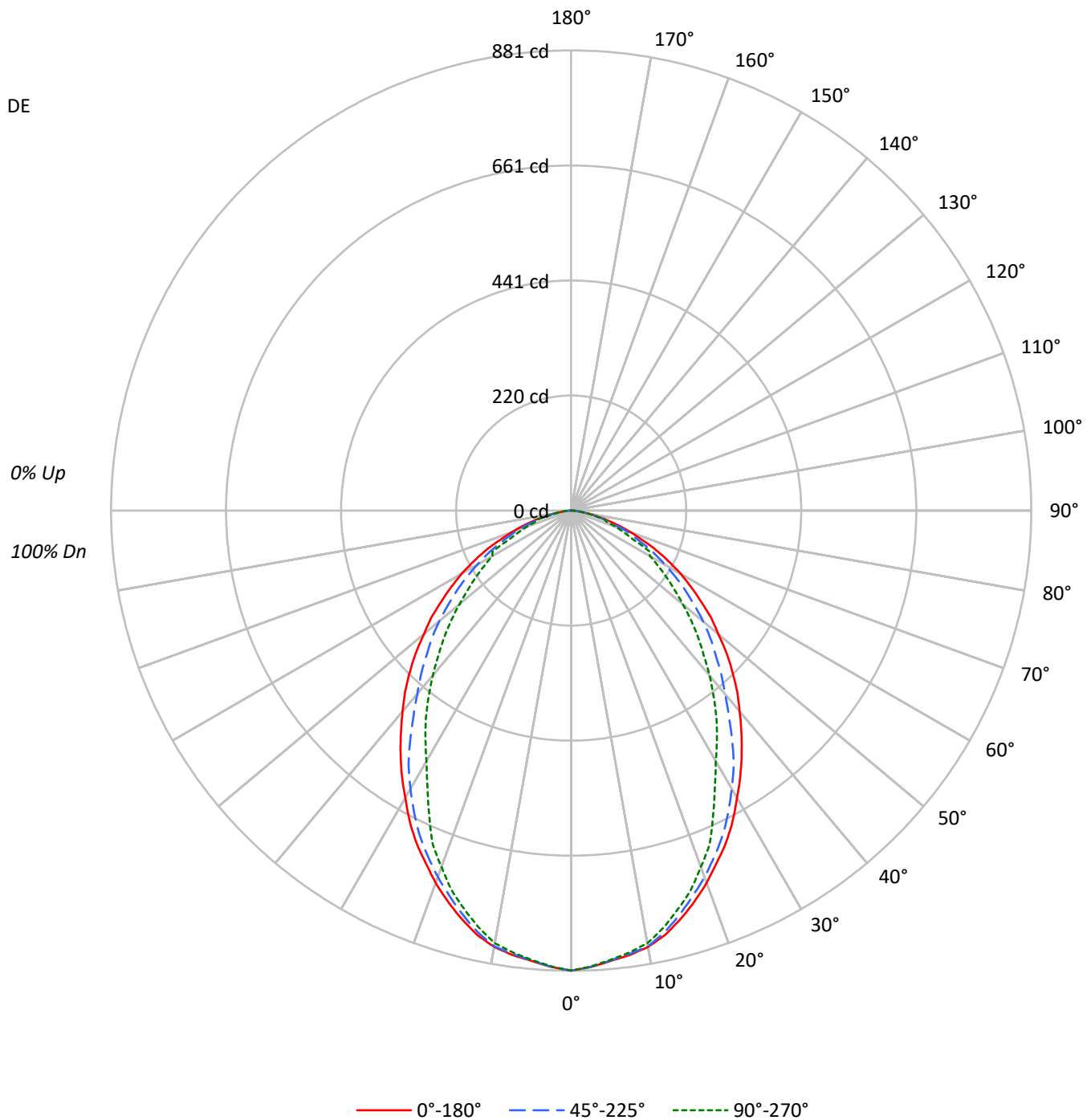
Lumens per Lamp: N/A  
Luminaire Lumens: 1729.0 lumens  
Efficiency: N/A  
Efficacy: 80.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	9480	9480	9480
5°	9352	9340	9329
10°	9270	9259	9192
15°	9021	8929	8805
20°	8688	8549	8316
25°	8331	8151	7643
30°	7896	7644	6884
35°	7479	7064	6369
40°	7054	6438	5795
45°	6649	5952	5238
50°	6156	5524	4672
55°	5694	5007	4185
60°	5216	4471	3748
65°	4590	3915	3319
70°	3780	3427	2820
75°	3007	2624	2753
80°	2021	1891	1767
85°	1260	1507	1766

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6649 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.0	4.7
10°-20°	225.0	13.0
20°-30°	311.5	18.0
30°-40°	332.2	19.2
40°-50°	303.0	17.5
50°-60°	237.4	13.7
60°-70°	154.7	8.9
70°-80°	68.5	4.0
80°-90°	14.7	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°	618.5	35.8
0°-40°	950.6	55.0
0°-60°	1491.0	86.2
0°-90°	1729.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1729.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	881	881	881	881	881	
5°	866	864	864	863	863	82
15°	810	810	801	793	790	228
25°	702	698	686	662	644	322
35°	569	565	538	497	485	356
45°	437	428	391	358	344	336
55°	303	294	267	235	223	272
65°	180	170	154	157	130	178
75°	72	67	63	60	66	77
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°	880.7	880.7	880.7	880.7	880.7
2.5°	874.6	874.6	874.6	873.6	873.6
5°	865.5	864.4	864.4	863.4	863.4
7.5°	858.3	857.3	856.3	855.3	853.2
10°	848.1	848.1	847.1	842.0	841.0
12.5°	831.9	830.8	826.8	819.6	817.6
15°	809.5	809.5	801.3	793.2	790.1
17.5°	785.0	784.0	773.8	765.7	761.6
20°	758.5	756.5	746.3	733.1	726.0
22.5°	729.0	729.0	716.8	699.5	692.4
25°	701.5	697.5	686.3	661.8	643.5
27.5°	670.0	663.9	651.6	617.0	595.6
30°	635.3	632.3	615.0	570.2	553.9
32.5°	602.8	597.7	579.3	532.5	519.3
35°	569.2	565.1	537.6	496.9	484.7
37.5°	535.6	530.5	495.9	463.3	448.0
40°	502.0	495.9	458.2	428.7	412.4
42.5°	470.4	462.3	425.6	394.0	375.7
45°	436.8	427.6	391.0	358.4	344.1
47.5°	403.2	395.1	361.5	327.9	311.6
50°	367.6	360.4	329.9	296.3	279.0
52.5°	338.0	326.8	297.3	263.7	249.5
55°	303.4	294.3	266.8	235.2	223.0
57.5°	271.9	262.7	237.2	207.7	197.5
60°	242.3	229.1	207.7	182.3	174.1
62.5°	209.7	199.6	181.2	159.9	170.0
65°	180.2	170.0	153.7	156.8	130.3
67.5°	147.6	142.5	128.3	114.0	110.0
70°	120.1	114.0	108.9	93.7	89.6
72.5°	95.7	89.6	82.5	74.3	71.3
75°	72.3	67.2	63.1	60.1	66.2
77.5°	49.9	47.9	44.8	41.7	40.7
80°	32.6	31.6	30.5	29.5	28.5
82.5°	19.3	19.3	19.3	19.3	19.3
85°	10.2	11.2	12.2	13.2	14.3
87.5°	6.1	6.1	7.1	8.1	9.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)