

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: P559937

Luminaire Tested: FSR-12-2-LD4-1LO-50-UNV-81-84-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559937  
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-LD4-1LO-50-UNV-81-84-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

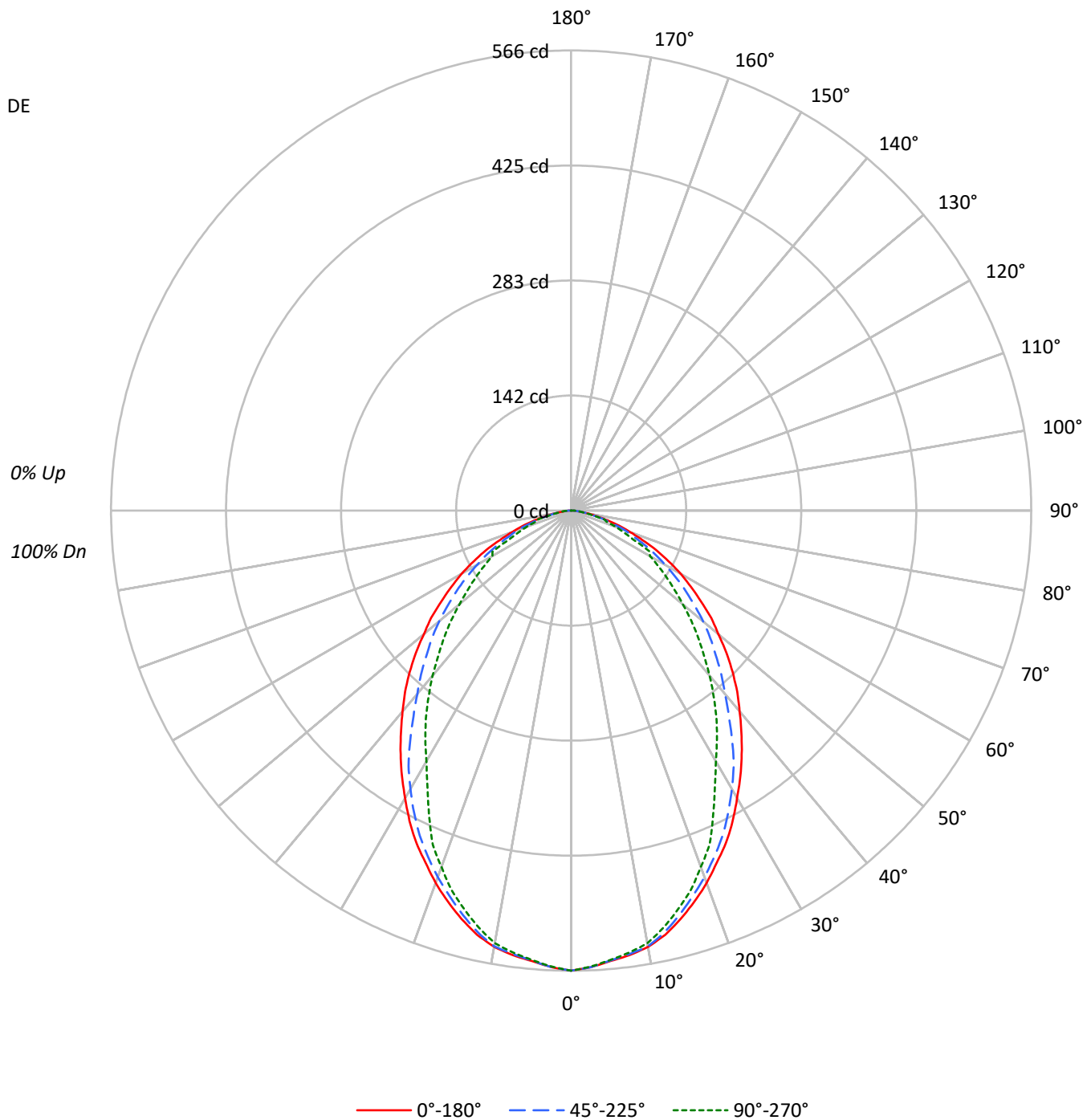
Lumens per Lamp: N/A  
Luminaire Lumens: 1111.0 lumens  
Efficiency: N/A  
Efficacy: 95.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	3046	3046	3046
5°	3004	3001	2997
10°	2978	2975	2953
15°	2898	2869	2829
20°	2792	2747	2672
25°	2677	2619	2456
30°	2537	2456	2212
35°	2403	2269	2046
40°	2266	2068	1862
45°	2136	1912	1683
50°	1978	1775	1501
55°	1830	1608	1345
60°	1676	1437	1204
65°	1475	1258	1066
70°	1215	1102	906
75°	967	844	884
80°	648	607	567
85°	401	488	568

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2136 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.7	4.7
10°-20°	144.6	13.0
20°-30°	200.2	18.0
30°-40°	213.4	19.2
40°-50°	194.7	17.5
50°-60°	152.5	13.7
60°-70°	99.4	8.9
70°-80°	44.1	4.0
80°-90°	9.4	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°	397.4	35.8
0°-40°	610.8	55.0
0°-60°	958.1	86.2
0°-90°	1111.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1111.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	566	566	566	566	566	
5°	556	556	556	555	555	53
15°	520	520	515	510	508	146
25°	451	448	441	425	414	207
35°	366	363	345	319	311	229
45°	281	275	251	230	221	216
55°	195	189	171	151	143	175
65°	116	109	99	101	84	114
75°	46	43	41	39	42	50
85°	6	7	8	8	9	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	565.9	565.9	565.9	565.9	565.9
2.5°	562.0	562.0	562.0	561.3	561.3
5°	556.1	555.5	555.5	554.8	554.8
7.5°	551.5	550.9	550.2	549.6	548.3
10°	545.0	545.0	544.3	541.1	540.4
12.5°	534.5	533.9	531.3	526.7	525.4
15°	520.1	520.1	514.9	509.7	507.7
17.5°	504.4	503.8	497.2	492.0	489.4
20°	487.4	486.1	479.6	471.1	466.5
22.5°	468.4	468.4	460.6	449.5	444.9
25°	450.8	448.2	441.0	425.3	413.5
27.5°	430.5	426.6	418.7	396.5	382.7
30°	408.3	406.3	395.2	366.4	355.9
32.5°	387.3	384.0	372.3	342.2	333.7
35°	365.7	363.1	345.4	319.3	311.4
37.5°	344.1	340.9	318.6	297.7	287.9
40°	322.5	318.6	294.4	275.4	265.0
42.5°	302.3	297.0	273.5	253.2	241.4
45°	280.7	274.8	251.2	230.3	221.1
47.5°	259.1	253.9	232.3	210.7	200.2
50°	236.2	231.6	212.0	190.4	179.3
52.5°	217.2	210.0	191.0	169.5	160.3
55°	195.0	189.1	171.4	151.1	143.3
57.5°	174.7	168.8	152.4	133.5	126.9
60°	155.7	147.2	133.5	117.1	111.9
62.5°	134.8	128.2	116.5	102.7	109.3
65°	115.8	109.3	98.8	100.8	83.7
67.5°	94.9	91.6	82.4	73.3	70.7
70°	77.2	73.3	70.0	60.2	57.6
72.5°	61.5	57.6	53.0	47.8	45.8
75°	46.5	43.2	40.6	38.6	42.5
77.5°	32.1	30.7	28.8	26.8	26.2
80°	20.9	20.3	19.6	19.0	18.3
82.5°	12.4	12.4	12.4	12.4	12.4
85°	6.5	7.2	7.9	8.5	9.2
87.5°	3.9	3.9	4.6	5.2	5.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)