

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: P559944

Luminaire Tested: FSR-12-2-LD4-1LO-50-UNV-81-88-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559944  
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-81-88-EDD-90  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

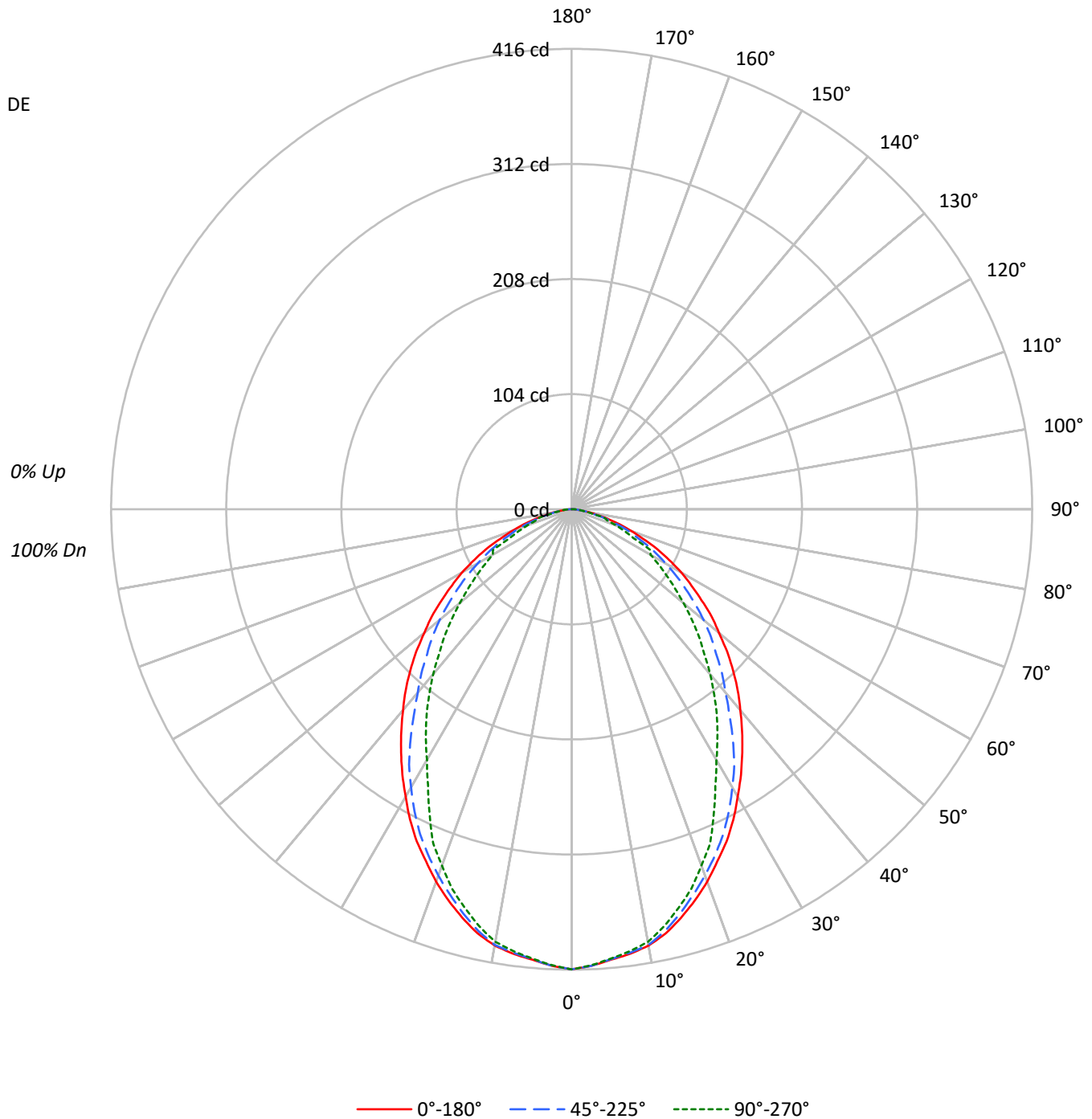
Lumens per Lamp: N/A  
Luminaire Lumens: 816.0 lumens  
Efficiency: N/A  
Efficacy: 69.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	2237	2237	2237
5°	2207	2204	2202
10°	2188	2185	2169
15°	2128	2107	2078
20°	2050	2017	1962
25°	1966	1923	1803
30°	1864	1803	1624
35°	1765	1667	1503
40°	1664	1519	1367
45°	1569	1404	1236
50°	1453	1304	1103
55°	1344	1181	987
60°	1231	1055	885
65°	1084	925	783
70°	892	809	666
75°	709	620	649
80°	477	446	418
85°	296	358	414

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1569 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.7	4.7
10°-20°	106.2	13.0
20°-30°	147.0	18.0
30°-40°	156.8	19.2
40°-50°	143.0	17.5
50°-60°	112.0	13.7
60°-70°	73.0	8.9
70°-80°	32.3	4.0
80°-90°	6.9	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°	291.9	35.8
0°-40°	448.6	55.0
0°-60°	703.7	86.2
0°-90°	816.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	816.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	416	416	416	416	416	
5°	408	408	408	408	408	39
15°	382	382	378	374	373	107
25°	331	329	324	312	304	152
35°	269	267	254	234	229	168
45°	206	202	184	169	162	159
55°	143	139	126	111	105	128
65°	85	80	73	74	62	84
75°	34	32	30	28	31	37
85°	5	5	6	6	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	415.7	415.7	415.7	415.7	415.7
2.5°	412.8	412.8	412.8	412.3	412.3
5°	408.5	408.0	408.0	407.5	407.5
7.5°	405.1	404.6	404.1	403.6	402.7
10°	400.3	400.3	399.8	397.4	396.9
12.5°	392.6	392.1	390.2	386.8	385.9
15°	382.0	382.0	378.2	374.3	372.9
17.5°	370.5	370.0	365.2	361.4	359.4
20°	358.0	357.0	352.2	346.0	342.6
22.5°	344.1	344.1	338.3	330.1	326.8
25°	331.1	329.2	323.9	312.3	303.7
27.5°	316.2	313.3	307.5	291.2	281.1
30°	299.9	298.4	290.2	269.1	261.4
32.5°	284.5	282.1	273.4	251.3	245.1
35°	268.6	266.7	253.7	234.5	228.7
37.5°	252.8	250.4	234.0	218.6	211.4
40°	236.9	234.0	216.2	202.3	194.6
42.5°	222.0	218.2	200.9	186.0	177.3
45°	206.1	201.8	184.5	169.1	162.4
47.5°	190.3	186.4	170.6	154.7	147.0
50°	173.5	170.1	155.7	139.8	131.7
52.5°	159.5	154.3	140.3	124.5	117.7
55°	143.2	138.9	125.9	111.0	105.2
57.5°	128.3	124.0	112.0	98.0	93.2
60°	114.4	108.1	98.0	86.0	82.2
62.5°	99.0	94.2	85.5	75.4	80.2
65°	85.1	80.2	72.6	74.0	61.5
67.5°	69.7	67.3	60.5	53.8	51.9
70°	56.7	53.8	51.4	44.2	42.3
72.5°	45.2	42.3	38.9	35.1	33.6
75°	34.1	31.7	29.8	28.4	31.2
77.5°	23.5	22.6	21.1	19.7	19.2
80°	15.4	14.9	14.4	13.9	13.5
82.5°	9.1	9.1	9.1	9.1	9.1
85°	4.8	5.3	5.8	6.2	6.7
87.5°	2.9	2.9	3.4	3.8	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)