

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: P558466

Luminaire Tested: FSR-12-1-LD4-1HI-35-UNV-81-85-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558466  
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-LD4-1HI-35-UNV-81-85-EDD-90  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

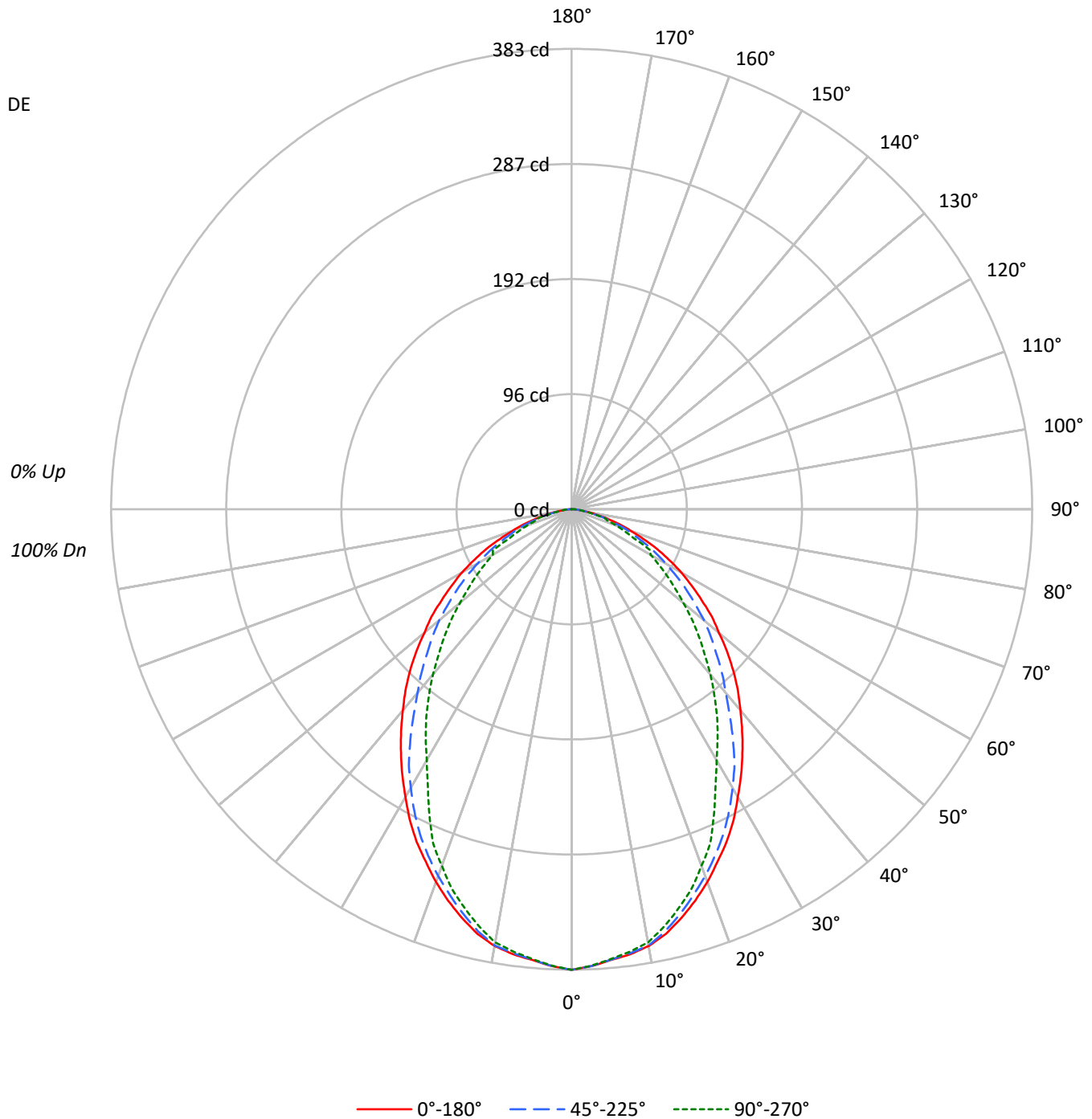
Lumens per Lamp: N/A  
Luminaire Lumens: 752.0 lumens  
Efficiency: N/A  
Efficacy: 69.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 10.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	4124	4124	4124
5°	4067	4063	4057
10°	4032	4027	3998
15°	3924	3884	3829
20°	3779	3718	3616
25°	3624	3545	3324
30°	3434	3325	2994
35°	3252	3072	2770
40°	3067	2800	2521
45°	2892	2589	2279
50°	2678	2403	2031
55°	2477	2177	1820
60°	2269	1944	1630
65°	1997	1704	1444
70°	1646	1492	1227
75°	1306	1144	1198
80°	880	824	769
85°	543	655	766

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2892 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.7	4.7
10°-20°	97.9	13.0
20°-30°	135.5	18.0
30°-40°	144.5	19.2
40°-50°	131.8	17.5
50°-60°	103.3	13.7
60°-70°	67.3	8.9
70°-80°	29.8	4.0
80°-90°	6.4	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°	269.0	35.8
0°-40°	413.5	55.0
0°-60°	648.5	86.2
0°-90°	752.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	752.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	383	383	383	383	383	
5°	376	376	376	376	376	36
15°	352	352	348	345	344	99
25°	305	303	298	288	280	140
35°	248	246	234	216	211	155
45°	190	186	170	156	150	146
55°	132	128	116	102	97	118
65°	78	74	67	68	57	77
75°	31	29	28	26	29	34
85°	4	5	5	6	6	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	383.1	383.1	383.1	383.1	383.1
2.5°	380.4	380.4	380.4	380.0	380.0
5°	376.4	376.0	376.0	375.5	375.5
7.5°	373.3	372.9	372.4	372.0	371.1
10°	368.9	368.9	368.4	366.2	365.8
12.5°	361.8	361.4	359.6	356.5	355.6
15°	352.1	352.1	348.5	345.0	343.6
17.5°	341.4	341.0	336.6	333.0	331.2
20°	329.9	329.0	324.6	318.8	315.7
22.5°	317.1	317.1	311.8	304.2	301.1
25°	305.1	303.3	298.5	287.8	279.9
27.5°	291.4	288.7	283.4	268.4	259.1
30°	276.3	275.0	267.5	248.0	240.9
32.5°	262.2	259.9	252.0	231.6	225.8
35°	247.5	245.8	233.8	216.1	210.8
37.5°	232.9	230.7	215.7	201.5	194.9
40°	218.3	215.7	199.3	186.4	179.4
42.5°	204.6	201.1	185.1	171.4	163.4
45°	190.0	186.0	170.1	155.9	149.7
47.5°	175.4	171.8	157.2	142.6	135.5
50°	159.9	156.8	143.5	128.9	121.3
52.5°	147.0	142.2	129.3	114.7	108.5
55°	132.0	128.0	116.0	102.3	97.0
57.5°	118.2	114.3	103.2	90.3	85.9
60°	105.4	99.6	90.3	79.3	75.7
62.5°	91.2	86.8	78.8	69.5	74.0
65°	78.4	74.0	66.9	68.2	56.7
67.5°	64.2	62.0	55.8	49.6	47.8
70°	52.3	49.6	47.4	40.7	39.0
72.5°	41.6	39.0	35.9	32.3	31.0
75°	31.4	29.2	27.5	26.1	28.8
77.5°	21.7	20.8	19.5	18.2	17.7
80°	14.2	13.7	13.3	12.8	12.4
82.5°	8.4	8.4	8.4	8.4	8.4
85°	4.4	4.9	5.3	5.8	6.2
87.5°	2.7	2.7	3.1	3.5	4.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)