

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: P560016

Luminaire Tested: FSR-12-2-LD4-1STD-35-UNV-82-84-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560016  
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-LD4-1STD-35-UNV-82-84-EDD-90  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

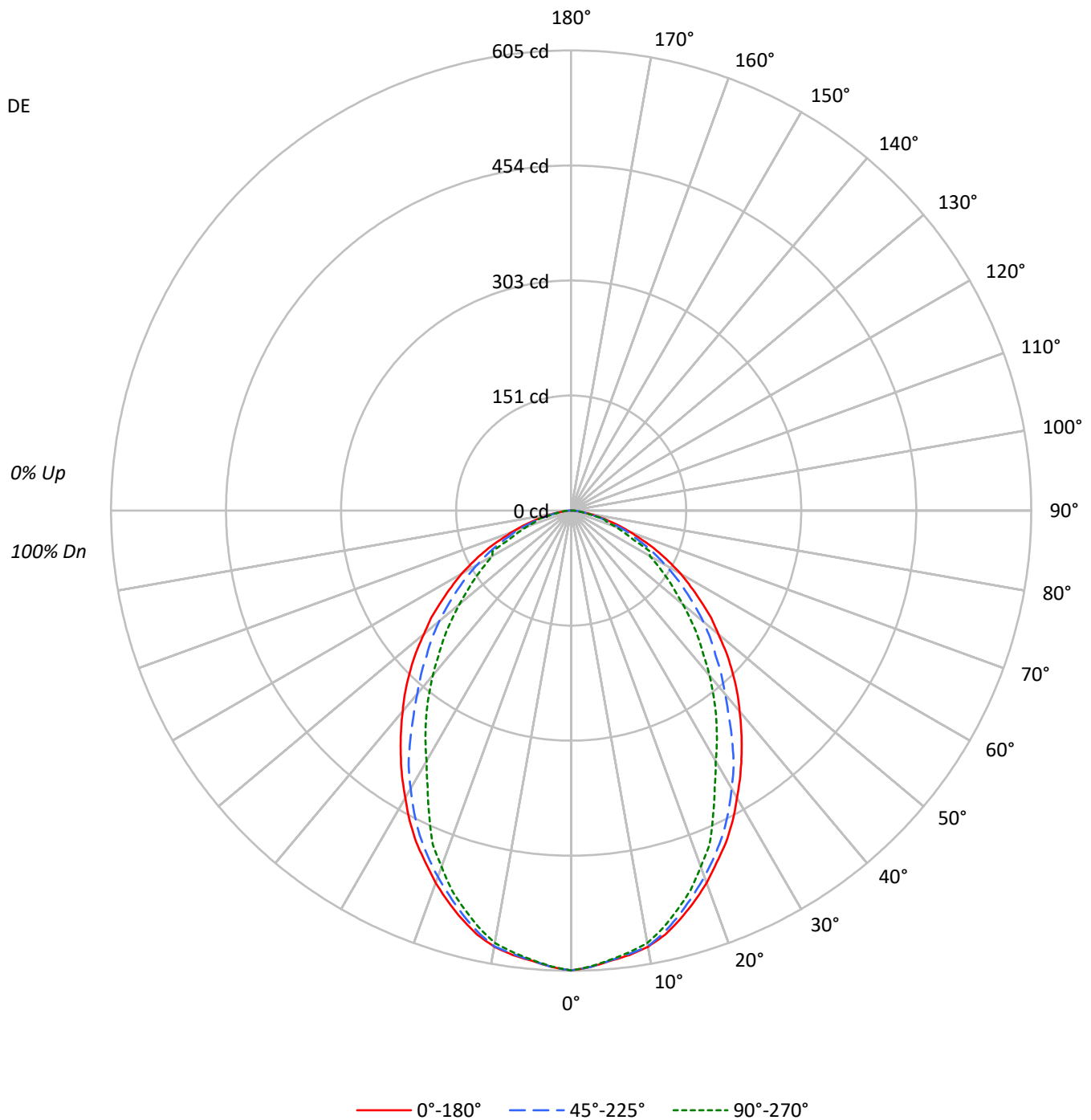
Lumens per Lamp: N/A  
Luminaire Lumens: 1187.0 lumens  
Efficiency: N/A  
Efficacy: 71.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	3254	3254	3254
5°	3210	3206	3203
10°	3182	3178	3155
15°	3096	3065	3022
20°	2983	2935	2855
25°	2860	2798	2624
30°	2711	2624	2363
35°	2567	2425	2186
40°	2421	2210	1989
45°	2283	2043	1799
50°	2112	1896	1603
55°	1955	1718	1437
60°	1791	1535	1286
65°	1575	1345	1140
70°	1298	1177	968
75°	1031	900	944
80°	694	651	607
85°	432	519	605

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2283 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.3	4.7
10°-20°	154.5	13.0
20°-30°	213.9	18.0
30°-40°	228.0	19.2
40°-50°	208.0	17.5
50°-60°	163.0	13.7
60°-70°	106.2	8.9
70°-80°	47.1	4.0
80°-90°	10.1	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°	424.6	35.8
0°-40°	652.6	55.0
0°-60°	1023.6	86.2
0°-90°	1187.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1187.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	605	605	605	605	605	
5°	594	594	594	593	593	56
15°	556	556	550	544	542	156
25°	482	479	471	454	442	221
35°	391	388	369	341	333	244
45°	300	294	268	246	236	231
55°	208	202	183	162	153	187
65°	124	117	106	108	90	122
75°	50	46	43	41	45	53
85°	7	8	8	9	10	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	604.6	604.6	604.6	604.6	604.6
2.5°	600.4	600.4	600.4	599.7	599.7
5°	594.2	593.5	593.5	592.8	592.8
7.5°	589.3	588.6	587.9	587.2	585.8
10°	582.3	582.3	581.6	578.1	577.4
12.5°	571.1	570.4	567.6	562.7	561.3
15°	555.7	555.7	550.1	544.5	542.4
17.5°	538.9	538.2	531.2	525.7	522.9
20°	520.8	519.4	512.4	503.3	498.4
22.5°	500.5	500.5	492.1	480.2	475.3
25°	481.6	478.8	471.1	454.4	441.8
27.5°	459.9	455.8	447.4	423.6	408.9
30°	436.2	434.1	422.2	391.4	380.3
32.5°	413.8	410.3	397.7	365.6	356.5
35°	390.7	387.9	369.1	341.1	332.7
37.5°	367.7	364.2	340.4	318.0	307.6
40°	344.6	340.4	314.6	294.3	283.1
42.5°	322.9	317.3	292.2	270.5	257.9
45°	299.9	293.6	268.4	246.1	236.3
47.5°	276.8	271.2	248.1	225.1	213.9
50°	252.3	247.4	226.5	203.4	191.5
52.5°	232.1	224.4	204.1	181.0	171.3
55°	208.3	202.0	183.1	161.5	153.1
57.5°	186.6	180.3	162.9	142.6	135.6
60°	166.4	157.3	142.6	125.1	119.5
62.5°	144.0	137.0	124.4	109.7	116.7
65°	123.7	116.7	105.6	107.6	89.5
67.5°	101.4	97.9	88.1	78.3	75.5
70°	82.5	78.3	74.8	64.3	61.5
72.5°	65.7	61.5	56.6	51.0	48.9
75°	49.6	46.1	43.3	41.2	45.4
77.5°	34.3	32.9	30.8	28.7	28.0
80°	22.4	21.7	21.0	20.3	19.6
82.5°	13.3	13.3	13.3	13.3	13.3
85°	7.0	7.7	8.4	9.1	9.8
87.5°	4.2	4.2	4.9	5.6	6.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)