

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: P563325

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-80-96-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P563325  
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-24-4-LD4-3LO-40-UNV-80-96-EDD  
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

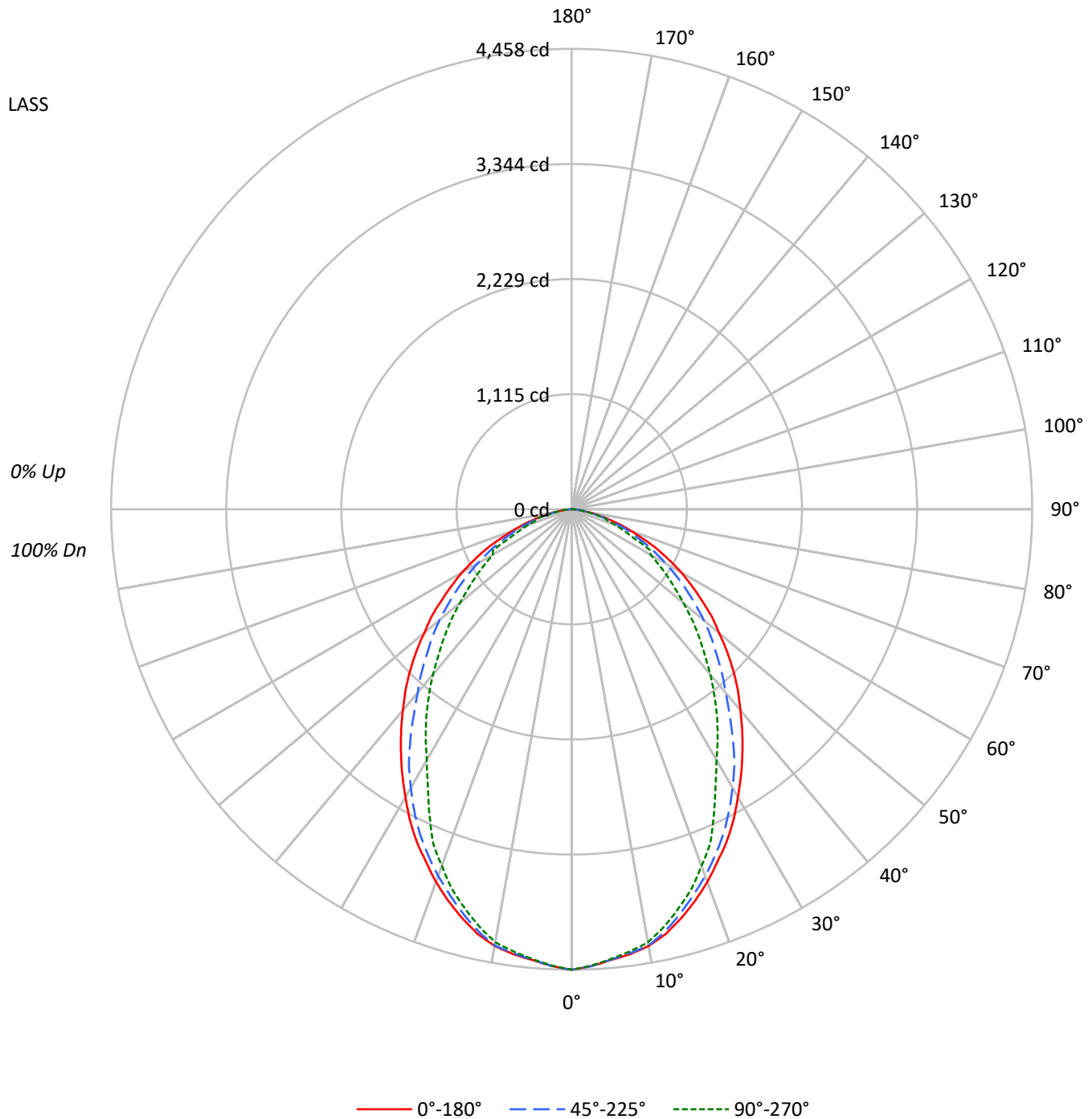
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8752.0 lumens  
Efficiency: N/A  
Efficacy: 124.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 70.2  
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	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°	5998	5998	5998
5°	5917	5910	5903
10°	5866	5859	5816
15°	5707	5650	5571
20°	5498	5409	5262
25°	5272	5157	4836
30°	4997	4836	4356
35°	4732	4470	4030
40°	4463	4074	3666
45°	4207	3766	3315
50°	3895	3495	2956
55°	3603	3168	2648
60°	3301	2829	2372
65°	2904	2478	2100
70°	2393	2170	1784
75°	1902	1661	1742
80°	1278	1198	1118
85°	795	954	1115

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4207 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	415.0	4.7
10°-20°	1138.9	13.0
20°-30°	1576.8	18.0
30°-40°	1681.3	19.2
40°-50°	1533.8	17.5
50°-60°	1201.6	13.7
60°-70°	783.2	8.9
70°-80°	347.0	4.0
80°-90°	74.5	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°	3130.7	35.8
0°-40°	4811.9	55.0
0°-60°	7547.4	86.2
0°-90°	8752.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8752.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4458	4458	4458	4458	4458	
5°	4381	4376	4376	4370	4370	416
15°	4097	4097	4056	4015	4000	1152
25°	3551	3530	3474	3350	3257	1630
35°	2881	2860	2721	2515	2453	1801
45°	2211	2165	1979	1814	1742	1703
55°	1536	1490	1350	1191	1129	1378
65°	912	861	778	794	660	899
75°	366	340	320	304	335	392
85°	52	57	62	67	72	71
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4458.2	4458.2	4458.2	4458.2	4458.2
2.5°	4427.2	4427.2	4427.2	4422.1	4422.1
5°	4380.8	4375.7	4375.7	4370.5	4370.5
7.5°	4344.8	4339.6	4334.5	4329.3	4319.0
10°	4293.2	4293.2	4288.1	4262.3	4257.1
12.5°	4210.8	4205.6	4185.0	4148.9	4138.6
15°	4097.4	4097.4	4056.1	4014.9	3999.5
17.5°	3973.7	3968.5	3917.0	3875.8	3855.1
20°	3839.7	3829.4	3777.8	3710.8	3674.8
22.5°	3690.2	3690.2	3628.4	3540.8	3504.7
25°	3551.1	3530.4	3473.8	3350.1	3257.3
27.5°	3391.3	3360.4	3298.5	3123.3	3015.1
30°	3216.1	3200.6	3113.0	2886.2	2803.7
32.5°	3051.1	3025.4	2932.6	2695.5	2628.5
35°	2881.0	2860.4	2721.3	2515.1	2453.3
37.5°	2711.0	2685.2	2510.0	2345.0	2267.7
40°	2540.9	2510.0	2319.3	2169.8	2087.3
42.5°	2381.1	2339.9	2154.3	1994.6	1901.8
45°	2211.0	2164.7	1979.1	1814.2	1742.0
47.5°	2041.0	1999.7	1829.6	1659.6	1577.1
50°	1860.6	1824.5	1669.9	1499.8	1412.2
52.5°	1711.1	1654.4	1504.9	1334.9	1262.7
55°	1535.9	1489.5	1350.3	1190.6	1128.7
57.5°	1376.1	1329.7	1200.9	1051.4	999.9
60°	1226.6	1159.6	1051.4	922.6	881.3
62.5°	1061.7	1010.2	917.4	809.2	860.7
65°	912.2	860.7	778.2	793.7	659.7
67.5°	747.3	721.6	649.4	577.2	556.6
70°	608.2	577.2	551.5	474.2	453.5
72.5°	484.5	453.5	417.5	376.2	360.8
75°	365.9	340.2	319.5	304.1	335.0
77.5°	252.5	242.2	226.8	211.3	206.2
80°	164.9	159.8	154.6	149.5	144.3
82.5°	97.9	97.9	97.9	97.9	97.9
85°	51.5	56.7	61.8	67.0	72.2
87.5°	30.9	30.9	36.1	41.2	46.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)