

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: P563014

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-81-87-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P563014  
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-LD4-2STD-50-UNV-81-87-EDD-90  
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

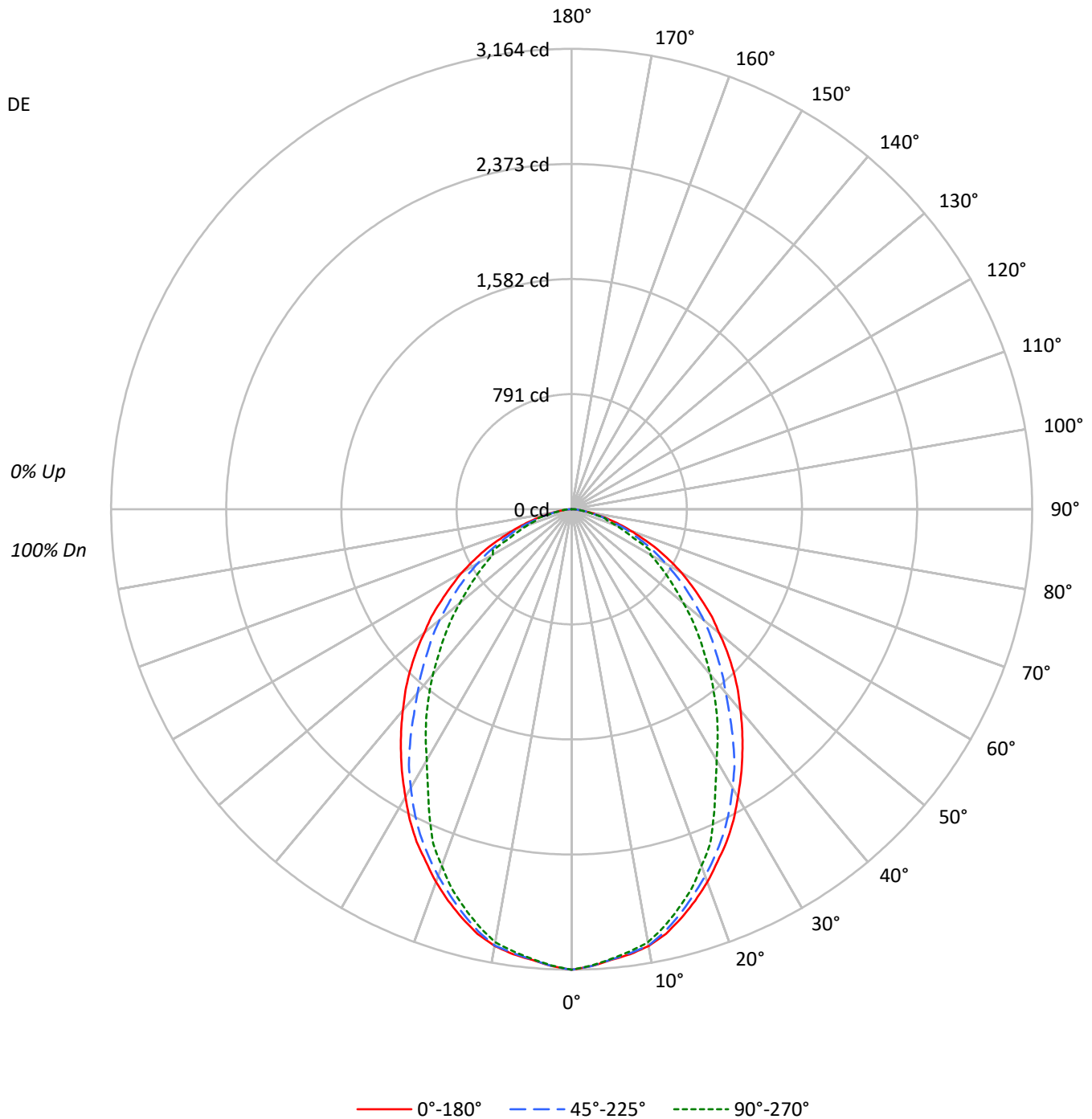
Lumens per Lamp: N/A  
Luminaire Lumens: 6212.0 lumens  
Efficiency: N/A  
Efficacy: 93.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 66.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4258	4258	4258
5°	4200	4195	4190
10°	4163	4158	4128
15°	4051	4010	3954
20°	3902	3839	3735
25°	3742	3660	3432
30°	3546	3433	3092
35°	3359	3173	2860
40°	3168	2891	2602
45°	2986	2673	2353
50°	2764	2481	2098
55°	2557	2248	1879
60°	2343	2008	1683
65°	2061	1759	1491
70°	1698	1540	1266
75°	1350	1179	1236
80°	907	850	793
85°	565	678	790

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2986 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	294.6	4.7
10°-20°	808.4	13.0
20°-30°	1119.1	18.0
30°-40°	1193.3	19.2
40°-50°	1088.7	17.5
50°-60°	852.9	13.7
60°-70°	555.9	8.9
70°-80°	246.3	4.0
80°-90°	52.9	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°	2222.1	35.8
0°-40°	3415.4	55.0
0°-60°	5357.0	86.2
0°-90°	6212.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6212.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3164	3164	3164	3164	3164	
5°	3109	3106	3106	3102	3102	295
15°	2908	2908	2879	2850	2839	818
25°	2520	2506	2466	2378	2312	1157
35°	2045	2030	1932	1785	1741	1278
45°	1569	1536	1405	1288	1236	1209
55°	1090	1057	958	845	801	978
65°	648	611	552	563	468	638
75°	260	241	227	216	238	278
85°	37	40	44	48	51	51
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3164.3	3164.3	3164.3	3164.3	3164.3
2.5°	3142.4	3142.4	3142.4	3138.7	3138.7
5°	3109.4	3105.8	3105.8	3102.1	3102.1
7.5°	3083.8	3080.2	3076.5	3072.9	3065.5
10°	3047.2	3047.2	3043.6	3025.3	3021.6
12.5°	2988.7	2985.1	2970.4	2944.8	2937.5
15°	2908.2	2908.2	2879.0	2849.7	2838.7
17.5°	2820.4	2816.8	2780.2	2750.9	2736.3
20°	2725.3	2718.0	2681.4	2633.9	2608.3
22.5°	2619.2	2619.2	2575.3	2513.2	2487.5
25°	2520.5	2505.8	2465.6	2377.8	2312.0
27.5°	2407.1	2385.1	2341.2	2216.8	2140.0
30°	2282.7	2271.7	2209.5	2048.6	1990.0
32.5°	2165.6	2147.3	2081.5	1913.2	1865.7
35°	2044.9	2030.3	1931.5	1785.2	1741.3
37.5°	1924.2	1905.9	1781.5	1664.5	1609.6
40°	1803.5	1781.5	1646.2	1540.1	1481.6
42.5°	1690.1	1660.8	1529.1	1415.7	1349.9
45°	1569.4	1536.4	1404.7	1287.7	1236.5
47.5°	1448.6	1419.4	1298.6	1177.9	1119.4
50°	1320.6	1295.0	1185.2	1064.5	1002.3
52.5°	1214.5	1174.3	1068.2	947.5	896.2
55°	1090.1	1057.2	958.4	845.0	801.1
57.5°	976.7	943.8	852.4	746.3	709.7
60°	870.6	823.1	746.3	654.8	625.5
62.5°	753.6	717.0	651.2	574.3	610.9
65°	647.5	610.9	552.4	563.4	468.2
67.5°	530.4	512.1	460.9	409.7	395.1
70°	431.7	409.7	391.4	336.6	321.9
72.5°	343.9	321.9	296.3	267.0	256.1
75°	259.7	241.4	226.8	215.8	237.8
77.5°	179.2	171.9	161.0	150.0	146.3
80°	117.1	113.4	109.7	106.1	102.4
82.5°	69.5	69.5	69.5	69.5	69.5
85°	36.6	40.2	43.9	47.6	51.2
87.5°	21.9	21.9	25.6	29.3	32.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)