

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: P562803

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-80-85-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P562803  
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-LD4-2LO-50-UNV-80-85-EDD  
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONM  
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

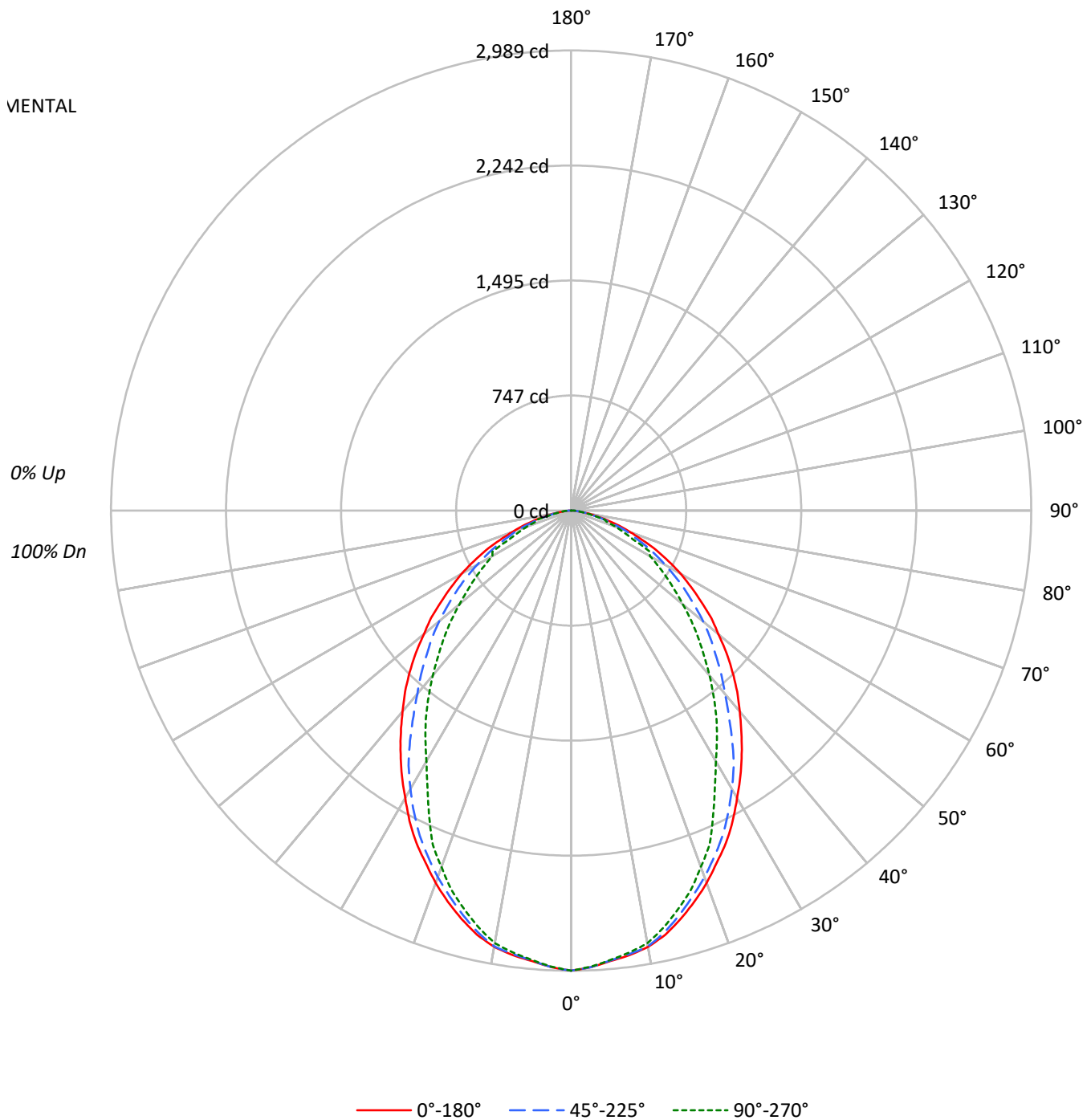
Lumens per Lamp: N/A  
Luminaire Lumens: 5867.0 lumens  
Efficiency: N/A  
Efficacy: 125.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 46.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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																		
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°	4021	4021	4021
5°	3966	3962	3957
10°	3932	3927	3899
15°	3826	3788	3735
20°	3686	3626	3527
25°	3534	3457	3242
30°	3349	3242	2920
35°	3172	2996	2701
40°	2992	2731	2458
45°	2820	2524	2222
50°	2611	2343	1982
55°	2415	2123	1775
60°	2213	1897	1590
65°	1947	1661	1408
70°	1604	1454	1196
75°	1275	1114	1168
80°	857	803	749
85°	533	641	747

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2820 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	278.2	4.7
10°-20°	763.5	13.0
20°-30°	1057.0	18.0
30°-40°	1127.1	19.2
40°-50°	1028.2	17.5
50°-60°	805.5	13.7
60°-70°	525.0	8.9
70°-80°	232.6	4.0
80°-90°	49.9	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°	2098.7	35.8
0°-40°	3225.7	55.0
0°-60°	5059.5	86.2
0°-90°	5867.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5867.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2989	2989	2989	2989	2989	
5°	2937	2933	2933	2930	2930	279
15°	2747	2747	2719	2691	2681	772
25°	2380	2367	2329	2246	2184	1093
35°	1931	1918	1824	1686	1645	1207
45°	1482	1451	1327	1216	1168	1142
55°	1030	998	905	798	757	923
65°	612	577	522	532	442	603
75°	245	228	214	204	225	263
85°	34	38	42	45	48	48
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2988.6	2988.6	2988.6	2988.6	2988.6
2.5°	2967.8	2967.8	2967.8	2964.4	2964.4
5°	2936.7	2933.3	2933.3	2929.8	2929.8
7.5°	2912.6	2909.1	2905.7	2902.2	2895.3
10°	2878.0	2878.0	2874.6	2857.3	2853.8
12.5°	2822.7	2819.3	2805.5	2781.3	2774.4
15°	2746.7	2746.7	2719.1	2691.4	2681.1
17.5°	2663.8	2660.3	2625.8	2598.2	2584.3
20°	2574.0	2567.1	2532.5	2487.6	2463.4
22.5°	2473.8	2473.8	2432.3	2373.6	2349.4
25°	2380.5	2366.7	2328.7	2245.7	2183.6
27.5°	2273.4	2252.7	2211.2	2093.7	2021.2
30°	2155.9	2145.6	2086.8	1934.8	1879.5
32.5°	2045.4	2028.1	1965.9	1807.0	1762.0
35°	1931.3	1917.5	1824.2	1686.0	1644.6
37.5°	1817.3	1800.1	1682.6	1572.0	1520.2
40°	1703.3	1682.6	1554.7	1454.6	1399.3
42.5°	1596.2	1568.6	1444.2	1337.1	1274.9
45°	1482.2	1451.1	1326.7	1216.2	1167.8
47.5°	1368.2	1340.5	1226.5	1112.5	1057.2
50°	1247.3	1223.1	1119.4	1005.4	946.7
52.5°	1147.1	1109.1	1008.9	894.8	846.5
55°	1029.6	998.5	905.2	798.1	756.6
57.5°	922.5	891.4	805.0	704.8	670.3
60°	822.3	777.4	704.8	618.4	590.8
62.5°	711.7	677.2	615.0	542.4	577.0
65°	611.5	577.0	521.7	532.1	442.2
67.5°	501.0	483.7	435.3	387.0	373.1
70°	407.7	387.0	369.7	317.9	304.0
72.5°	324.8	304.0	279.9	252.2	241.8
75°	245.3	228.0	214.2	203.8	224.6
77.5°	169.3	162.4	152.0	141.7	138.2
80°	110.6	107.1	103.6	100.2	96.7
82.5°	65.6	65.6	65.6	65.6	65.6
85°	34.5	38.0	41.5	44.9	48.4
87.5°	20.7	20.7	24.2	27.6	31.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)