

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: P563610

Luminaire Tested: FSR-24-4-LD4-3STD-50-UNV-82-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563610
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-LD4-3STD-50-UNV-82-94-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9752.0 lumens
Efficiency: N/A
Efficacy: 97.6 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

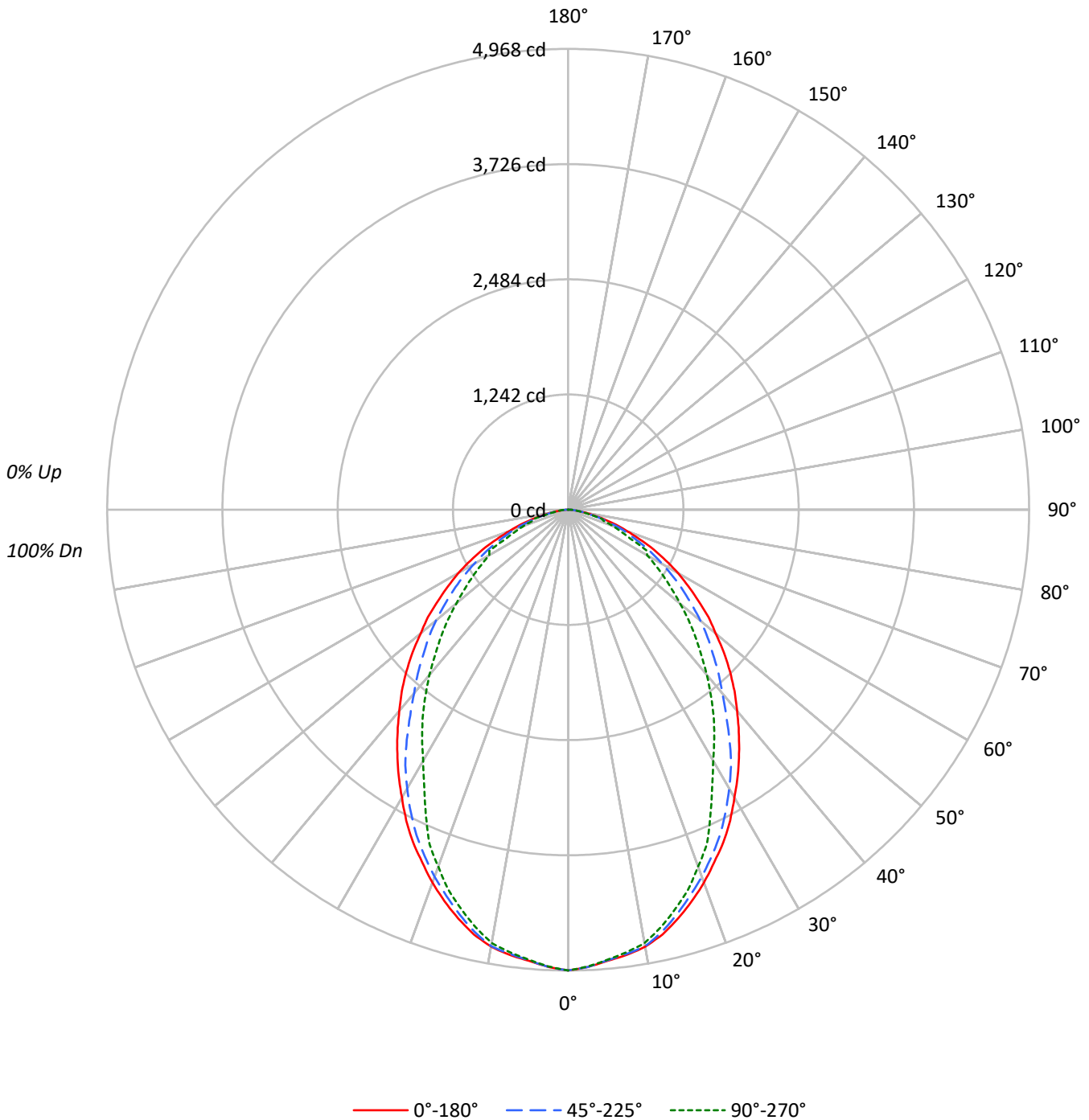
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6684	6684	6684
5°	6593	6585	6577
10°	6536	6528	6481
15°	6360	6296	6208
20°	6126	6027	5863
25°	5874	5746	5388
30°	5567	5389	4854
35°	5273	4981	4490
40°	4973	4539	4085
45°	4688	4196	3694
50°	4340	3895	3294
55°	4015	3529	2950
60°	3678	3152	2643
65°	3236	2761	2340
70°	2666	2417	1988
75°	2119	1851	1941
80°	1424	1335	1246
85°	886	1064	1241

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4688 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	462.4	4.7
10°-20°	1269.0	13.0
20°-30°	1756.9	18.0
30°-40°	1873.4	19.2
40°-50°	1709.1	17.5
50°-60°	1338.9	13.7
60°-70°	872.6	8.9
70°-80°	386.6	4.0
80°-90°	83.0	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°	3488.4	35.8
0°-40°	5361.7	55.0
0°-60°	8409.7	86.2
0°-90°	9752.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9752.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4968	4968	4968	4968	4968	
5°	4881	4876	4876	4870	4870	463
15°	4566	4566	4520	4474	4456	1283
25°	3957	3934	3871	3733	3630	1817
35°	3210	3187	3032	2802	2734	2007
45°	2464	2412	2205	2022	1941	1898
55°	1711	1660	1505	1327	1258	1535
65°	1016	959	867	884	735	1002
75°	408	379	356	339	373	437
85°	57	63	69	75	80	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4967.5	4967.5	4967.5	4967.5	4967.5
2.5°	4933.1	4933.1	4933.1	4927.3	4927.3
5°	4881.4	4875.7	4875.7	4869.9	4869.9
7.5°	4841.2	4835.5	4829.7	4824.0	4812.5
10°	4783.8	4783.8	4778.0	4749.3	4743.6
12.5°	4691.9	4686.1	4663.2	4623.0	4611.5
15°	4565.5	4565.5	4519.6	4473.7	4456.4
17.5°	4427.7	4422.0	4364.5	4318.6	4295.6
20°	4278.4	4266.9	4209.5	4134.8	4094.6
22.5°	4111.9	4111.9	4042.9	3945.3	3905.1
25°	3956.8	3933.8	3870.7	3732.8	3629.5
27.5°	3778.8	3744.3	3675.4	3480.1	3359.5
30°	3583.5	3566.3	3468.7	3216.0	3124.1
32.5°	3399.7	3371.0	3267.7	3003.5	2928.8
35°	3210.2	3187.3	3032.2	2802.5	2733.6
37.5°	3020.7	2992.0	2796.8	2613.0	2526.8
40°	2831.2	2796.8	2584.3	2417.7	2325.8
42.5°	2653.2	2607.2	2400.5	2222.5	2119.1
45°	2463.7	2412.0	2205.2	2021.5	1941.1
47.5°	2274.2	2228.2	2038.7	1849.2	1757.3
50°	2073.2	2033.0	1860.7	1671.2	1573.5
52.5°	1906.6	1843.4	1676.9	1487.4	1407.0
55°	1711.4	1659.7	1504.6	1326.6	1257.7
57.5°	1533.3	1481.6	1338.1	1171.5	1114.1
60°	1366.8	1292.1	1171.5	1028.0	982.0
62.5°	1183.0	1125.6	1022.2	901.6	959.1
65°	1016.5	959.1	867.2	884.4	735.1
67.5°	832.7	804.0	723.6	643.2	620.2
70°	677.7	643.2	614.5	528.3	505.4
72.5°	539.8	505.4	465.2	419.2	402.0
75°	407.7	379.0	356.1	338.8	373.3
77.5°	281.4	269.9	252.7	235.5	229.7
80°	183.8	178.0	172.3	166.5	160.8
82.5°	109.1	109.1	109.1	109.1	109.1
85°	57.4	63.2	68.9	74.7	80.4
87.5°	34.5	34.5	40.2	45.9	51.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)