

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: P564148

Luminaire Tested: FSR-24-4-LD4-4STD-50-UNV-80-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564148
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-LD4-4STD-50-UNV-80-86-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13517.0 lumens
Efficiency: N/A
Efficacy: 101.5 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

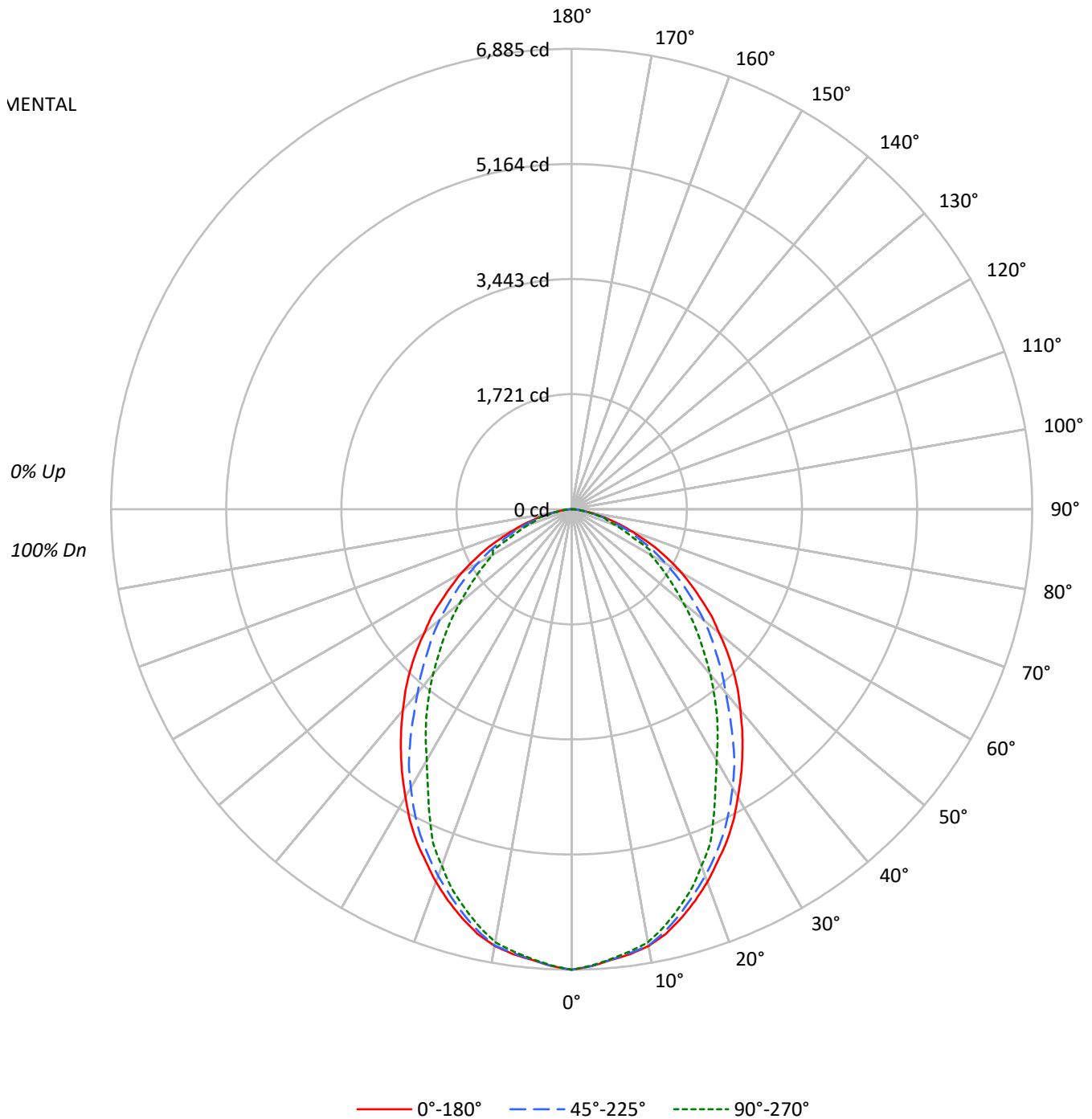
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P564148

CATALOG NUMBER: FSR-24-4-LD4-4STD-50-UNV-80-86-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P564148

CATALOG NUMBER: FSR-24-4-LD4-4STD-50-UNV-80-86-EDD-90

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																												
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°	9264	9264	9264
5°	9138	9128	9117
10°	9059	9048	8983
15°	8815	8726	8604
20°	8491	8354	8126
25°	8142	7965	7468
30°	7717	7470	6728
35°	7309	6903	6223
40°	6893	6291	5662
45°	6498	5816	5120
50°	6015	5398	4565
55°	5564	4892	4089
60°	5098	4370	3663
65°	4486	3827	3244
70°	3695	3351	2756
75°	2938	2565	2690
80°	1974	1850	1727
85°	1229	1474	1720

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6498 cd/sqm



TEST NUMBER: P564148

CATALOG NUMBER: FSR-24-4-LD4-4STD-50-UNV-80-86-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	640.9	4.7
10°-20°	1759.0	13.0
20°-30°	2435.2	18.0
30°-40°	2596.6	19.2
40°-50°	2368.9	17.5
50°-60°	1855.8	13.7
60°-70°	1209.6	8.9
70°-80°	535.9	4.0
80°-90°	115.0	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°	4835.1	35.8
0°-40°	7431.8	55.0
0°-60°	11656.5	86.2
0°-90°	13517.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13517.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6885	6885	6885	6885	6885	
5°	6766	6758	6758	6750	6750	642
15°	6328	6328	6264	6201	6177	1779
25°	5484	5453	5365	5174	5031	2518
35°	4450	4418	4203	3884	3789	2782
45°	3415	3343	3057	2802	2690	2630
55°	2372	2300	2086	1839	1743	2128
65°	1409	1329	1202	1226	1019	1389
75°	565	525	494	470	517	606
85°	80	88	96	104	111	110
90°	0	0	0	0	0	



TEST NUMBER: P564148

CATALOG NUMBER: FSR-24-4-LD4-4STD-50-UNV-80-86-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6885.4	6885.4	6885.4	6885.4	6885.4
2.5°	6837.6	6837.6	6837.6	6829.7	6829.7
5°	6766.0	6758.0	6758.0	6750.1	6750.1
7.5°	6710.3	6702.3	6694.3	6686.4	6670.5
10°	6630.7	6630.7	6622.7	6582.9	6574.9
12.5°	6503.3	6495.3	6463.5	6407.8	6391.9
15°	6328.2	6328.2	6264.5	6200.8	6176.9
17.5°	6137.1	6129.2	6049.6	5985.9	5954.1
20°	5930.2	5914.3	5834.7	5731.2	5675.5
22.5°	5699.3	5699.3	5603.8	5468.5	5412.8
25°	5484.4	5452.6	5365.0	5174.0	5030.7
27.5°	5237.7	5189.9	5094.4	4823.7	4656.6
30°	4967.0	4943.1	4807.8	4457.6	4330.2
32.5°	4712.3	4672.5	4529.2	4163.1	4059.6
35°	4449.6	4417.8	4202.9	3884.5	3788.9
37.5°	4186.9	4147.1	3876.5	3621.8	3502.4
40°	3924.3	3876.5	3582.0	3351.1	3223.8
42.5°	3677.5	3613.8	3327.3	3080.5	2937.2
45°	3414.8	3343.2	3056.6	2801.9	2690.5
47.5°	3152.2	3088.5	2825.8	2563.1	2435.8
50°	2873.6	2817.8	2579.0	2316.4	2181.0
52.5°	2642.7	2555.2	2324.3	2061.6	1950.2
55°	2372.1	2300.4	2085.5	1838.8	1743.2
57.5°	2125.3	2053.7	1854.7	1623.8	1544.2
60°	1894.5	1791.0	1623.8	1424.8	1361.2
62.5°	1639.8	1560.2	1416.9	1249.7	1329.3
65°	1408.9	1329.3	1202.0	1225.8	1018.9
67.5°	1154.2	1114.4	1003.0	891.5	859.7
70°	939.3	891.5	851.7	732.3	700.5
72.5°	748.2	700.5	644.8	581.1	557.2
75°	565.2	525.4	493.5	469.6	517.4
77.5°	390.0	374.1	350.2	326.4	318.4
80°	254.7	246.8	238.8	230.8	222.9
82.5°	151.2	151.2	151.2	151.2	151.2
85°	79.6	87.6	95.5	103.5	111.4
87.5°	47.8	47.8	55.7	63.7	71.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)