

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: P564198

Luminaire Tested: FSR-24-4-LD4-4STD-50-UNV-93-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564198
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-93-87-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13105.0 lumens
Efficiency: N/A
Efficacy: 98.4 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

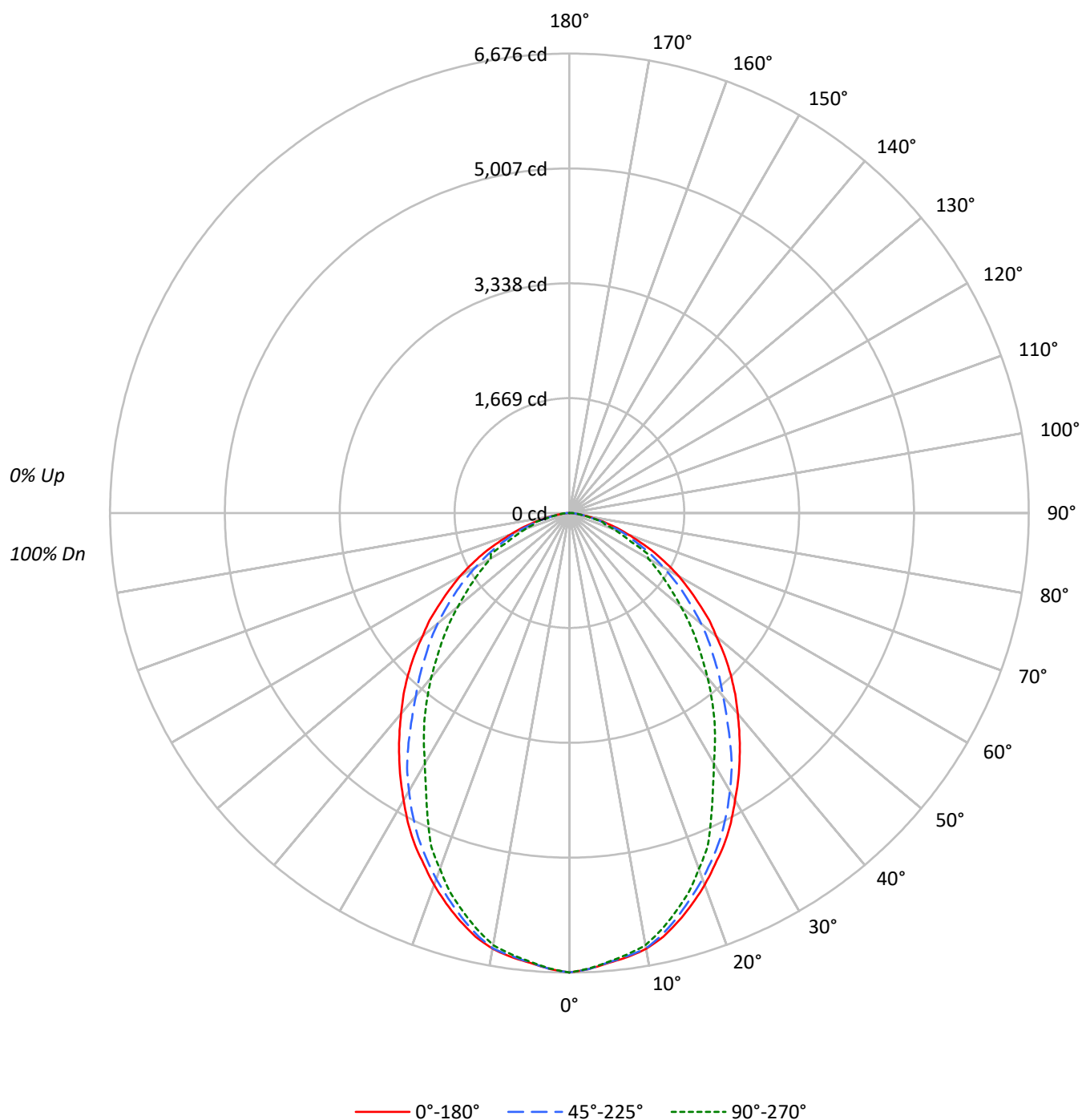
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P564198

CATALOG NUMBER: FSR-24-4-LD4-4STD-50-UNV-93-87-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P564198

CATALOG NUMBER: FSR-24-4-LD4-4STD-50-UNV-93-87-EDD-90

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20			
RC	80				70				50				30				10			
RW	70	50	30	10	70	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°	8982	8982	8982
5°	8860	8849	8839
10°	8783	8772	8709
15°	8546	8460	8342
20°	8232	8100	7879
25°	7894	7722	7241
30°	7482	7242	6522
35°	7086	6693	6034
40°	6683	6100	5490
45°	6300	5639	4963
50°	5832	5234	4426
55°	5395	4743	3965
60°	4943	4236	3551
65°	4349	3710	3145
70°	3582	3249	2672
75°	2848	2488	2608
80°	1914	1794	1674
85°	1192	1430	1667

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6300 cd/sqm

TEST NUMBER: P564198

CATALOG NUMBER: FSR-24-4-LD4-4STD-50-UNV-93-87-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	621.4	4.7
10°-20°	1705.4	13.0
20°-30°	2361.0	18.0
30°-40°	2517.5	19.2
40°-50°	2296.7	17.5
50°-60°	1799.3	13.7
60°-70°	1172.7	8.9
70°-80°	519.5	4.0
80°-90°	111.5	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°	4687.8	35.8
0°-40°	7205.3	55.0
0°-60°	11301.2	86.2
0°-90°	13105.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13105.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6676	6676	6676	6676	6676	
5°	6560	6552	6552	6544	6544	623
15°	6135	6135	6074	6012	5989	1725
25°	5317	5286	5202	5016	4877	2441
35°	4314	4283	4075	3766	3674	2697
45°	3311	3241	2964	2716	2608	2550
55°	2300	2230	2022	1783	1690	2063
65°	1366	1289	1165	1188	988	1346
75°	548	509	478	455	502	587
85°	77	85	93	100	108	107
90°	0	0	0	0	0	

TEST NUMBER: P564198

CATALOG NUMBER: FSR-24-4-LD4-4STD-50-UNV-93-87-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6675.5	6675.5	6675.5	6675.5	6675.5
2.5°	6629.2	6629.2	6629.2	6621.5	6621.5
5°	6559.8	6552.0	6552.0	6544.3	6544.3
7.5°	6505.7	6498.0	6490.3	6482.6	6467.1
10°	6428.6	6428.6	6420.8	6382.3	6374.5
12.5°	6305.1	6297.4	6266.5	6212.5	6197.0
15°	6135.3	6135.3	6073.6	6011.8	5988.7
17.5°	5950.1	5942.4	5865.2	5803.5	5772.6
20°	5749.4	5734.0	5656.8	5556.5	5502.5
22.5°	5525.6	5525.6	5433.0	5301.8	5247.8
25°	5317.3	5286.4	5201.5	5016.3	4877.4
27.5°	5078.0	5031.7	4939.1	4676.7	4514.7
30°	4815.6	4792.5	4661.3	4321.7	4198.2
32.5°	4568.7	4530.1	4391.2	4036.2	3935.9
35°	4314.0	4283.1	4074.8	3766.1	3673.5
37.5°	4059.3	4020.7	3758.4	3511.4	3395.6
40°	3804.7	3758.4	3472.8	3249.0	3125.5
42.5°	3565.4	3503.7	3225.9	2986.6	2847.7
45°	3310.7	3241.3	2963.5	2716.5	2608.5
47.5°	3056.1	2994.3	2739.7	2485.0	2361.5
50°	2786.0	2731.9	2500.4	2245.8	2114.6
52.5°	2562.2	2477.3	2253.5	1998.8	1890.8
55°	2299.8	2230.3	2021.9	1782.7	1690.1
57.5°	2060.5	1991.1	1798.1	1574.3	1497.2
60°	1836.7	1736.4	1574.3	1381.4	1319.7
62.5°	1589.8	1512.6	1373.7	1211.6	1288.8
65°	1366.0	1288.8	1165.3	1188.5	987.8
67.5°	1119.0	1080.4	972.4	864.3	833.5
70°	910.6	864.3	825.8	710.0	679.1
72.5°	725.4	679.1	625.1	563.4	540.2
75°	547.9	509.3	478.5	455.3	501.6
77.5°	378.2	362.7	339.6	316.4	308.7
80°	247.0	239.2	231.5	223.8	216.1
82.5°	146.6	146.6	146.6	146.6	146.6
85°	77.2	84.9	92.6	100.3	108.0
87.5°	46.3	46.3	54.0	61.7	69.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)