

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: P563214

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-81-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563214
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-LD4-3HI-50-UNV-81-97-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 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: 11650.0 lumens
Efficiency: N/A
Efficacy: 89.9 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

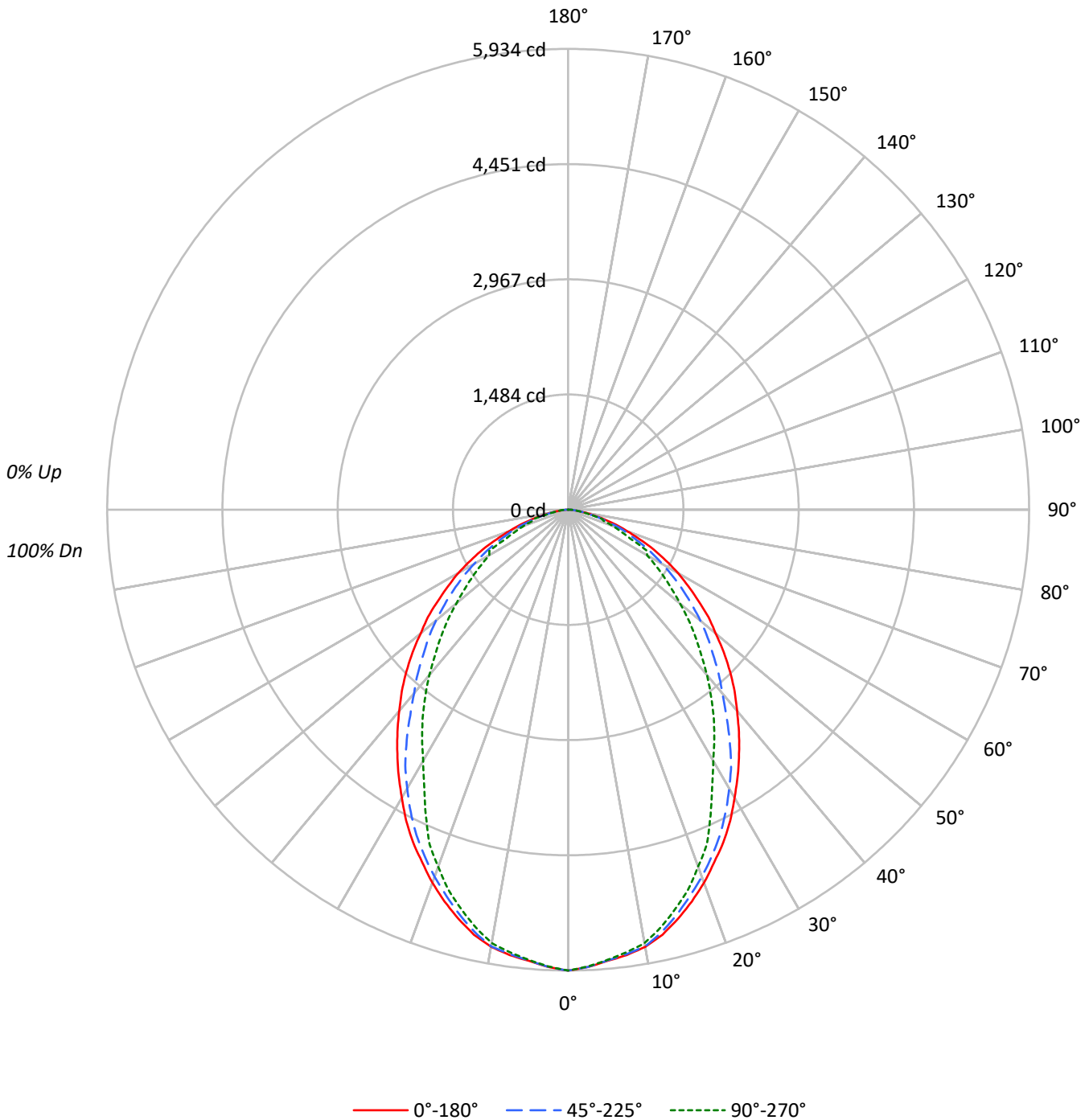
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563214

CATALOG NUMBER: FSR-24-4-LD4-3HI-50-UNV-81-97-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P563214

CATALOG NUMBER: FSR-24-4-LD4-3HI-50-UNV-81-97-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°	7985	7985	7985
5°	7876	7867	7858
10°	7808	7799	7742
15°	7597	7521	7416
20°	7318	7200	7004
25°	7017	6865	6437
30°	6651	6438	5798
35°	6299	5950	5364
40°	5941	5422	4880
45°	5600	5013	4412
50°	5184	4653	3935
55°	4796	4217	3525
60°	4394	3766	3157
65°	3866	3298	2796
70°	3185	2888	2375
75°	2532	2211	2318
80°	1701	1595	1488
85°	1059	1271	1482

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5600 cd/sqm



TEST NUMBER: P563214

CATALOG NUMBER: FSR-24-4-LD4-3HI-50-UNV-81-97-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	552.4	4.7
10°-20°	1516.0	13.0
20°-30°	2098.9	18.0
30°-40°	2238.0	19.2
40°-50°	2041.7	17.5
50°-60°	1599.5	13.7
60°-70°	1042.5	8.9
70°-80°	461.9	4.0
80°-90°	99.2	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°	4167.3	35.8
0°-40°	6405.3	55.0
0°-60°	10046.5	86.2
0°-90°	11650.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11650.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5934	5934	5934	5934	5934	
5°	5831	5825	5825	5818	5818	554
15°	5454	5454	5399	5344	5324	1533
25°	4727	4700	4624	4459	4336	2170
35°	3835	3808	3622	3348	3266	2398
45°	2943	2881	2634	2415	2319	2267
55°	2044	1983	1798	1585	1502	1834
65°	1214	1146	1036	1056	878	1197
75°	487	453	425	405	446	522
85°	69	76	82	89	96	95
90°	0	0	0	0	0	



TEST NUMBER: P563214

CATALOG NUMBER: FSR-24-4-LD4-3HI-50-UNV-81-97-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5934.4	5934.4	5934.4	5934.4	5934.4
2.5°	5893.2	5893.2	5893.2	5886.3	5886.3
5°	5831.4	5824.6	5824.6	5817.7	5817.7
7.5°	5783.4	5776.6	5769.7	5762.8	5749.1
10°	5714.8	5714.8	5708.0	5673.7	5666.8
12.5°	5605.0	5598.2	5570.7	5522.7	5509.0
15°	5454.1	5454.1	5399.2	5344.3	5323.8
17.5°	5289.5	5282.6	5214.0	5159.1	5131.7
20°	5111.1	5097.4	5028.8	4939.6	4891.6
22.5°	4912.1	4912.1	4829.8	4713.2	4665.2
25°	4726.9	4699.5	4624.0	4459.3	4335.9
27.5°	4514.2	4473.1	4390.7	4157.5	4013.4
30°	4281.0	4260.4	4143.8	3841.9	3732.1
32.5°	4061.4	4027.1	3903.6	3588.1	3498.9
35°	3835.0	3807.6	3622.4	3347.9	3265.6
37.5°	3608.6	3574.3	3341.1	3121.5	3018.6
40°	3382.2	3341.1	3087.2	2888.3	2778.5
42.5°	3169.6	3114.7	2867.7	2655.0	2531.5
45°	2943.2	2881.4	2634.4	2414.9	2318.9
47.5°	2716.8	2661.9	2435.5	2209.1	2099.3
50°	2476.6	2428.6	2222.8	1996.4	1879.8
52.5°	2277.7	2202.2	2003.3	1776.9	1680.8
55°	2044.4	1982.7	1797.5	1584.8	1502.5
57.5°	1831.8	1770.0	1598.5	1399.5	1330.9
60°	1632.8	1543.6	1399.5	1228.0	1173.1
62.5°	1413.3	1344.7	1221.2	1077.1	1145.7
65°	1214.3	1145.7	1035.9	1056.5	878.1
67.5°	994.8	960.5	864.4	768.4	740.9
70°	809.5	768.4	734.1	631.2	603.7
72.5°	644.9	603.7	555.7	500.8	480.2
75°	487.1	452.8	425.4	404.8	445.9
77.5°	336.2	322.4	301.9	281.3	274.4
80°	219.5	212.7	205.8	199.0	192.1
82.5°	130.3	130.3	130.3	130.3	130.3
85°	68.6	75.5	82.3	89.2	96.0
87.5°	41.2	41.2	48.0	54.9	61.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)