

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: P563051

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-93-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563051
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-LD4-2STD-50-UNV-93-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8051.0 lumens
Efficiency: N/A
Efficacy: 120.9 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

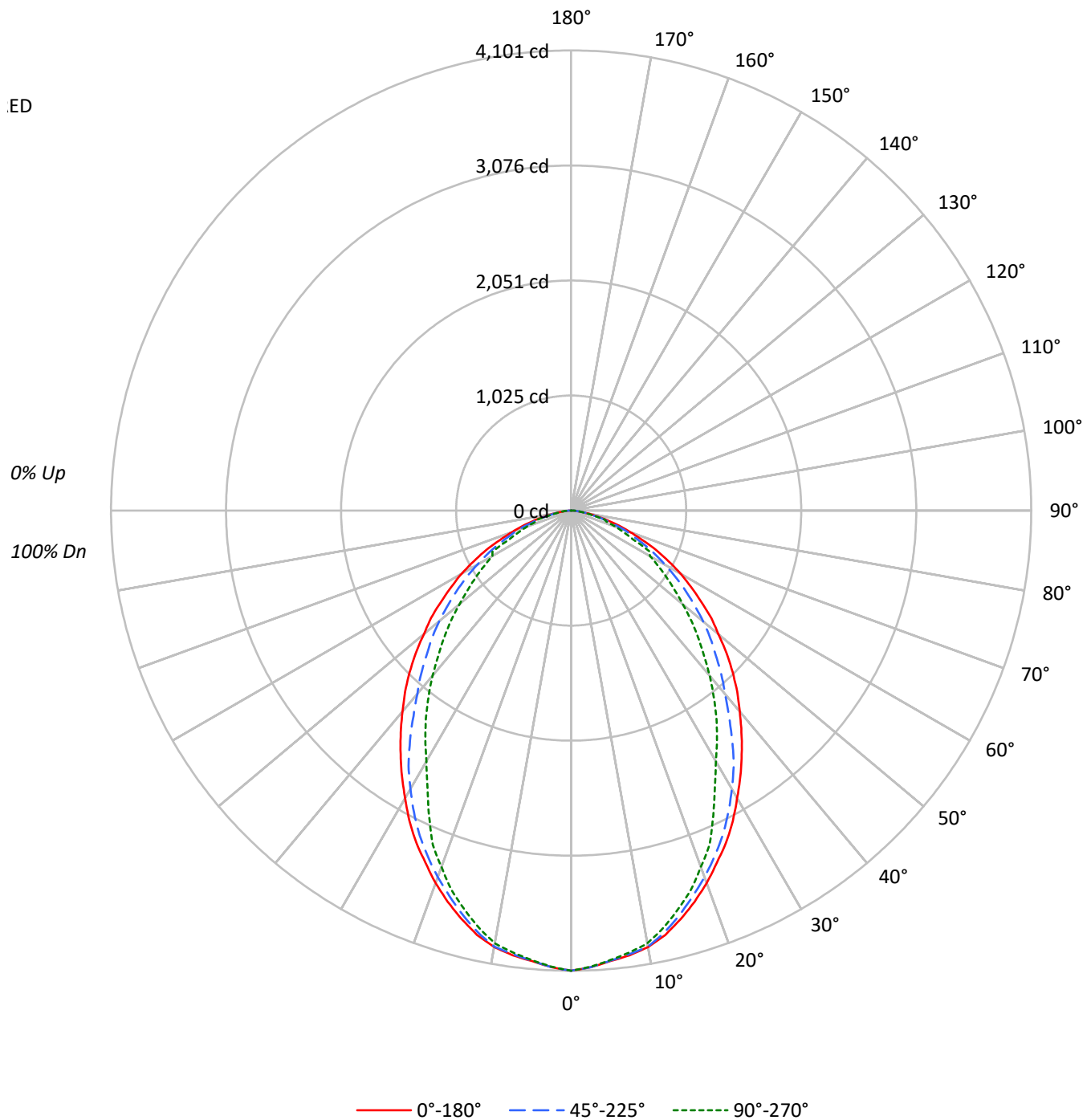
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563051

CATALOG NUMBER: FSR-24-4-LD4-2STD-50-UNV-93-94-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P563051

CATALOG NUMBER: FSR-24-4-LD4-2STD-50-UNV-93-94-EDD

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	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°	5518	5518	5518
5°	5443	5437	5430
10°	5396	5389	5350
15°	5250	5198	5125
20°	5057	4976	4840
25°	4850	4744	4448
30°	4596	4449	4007
35°	4353	4112	3707
40°	4105	3747	3373
45°	3870	3464	3049
50°	3583	3215	2719
55°	3314	2914	2436
60°	3037	2603	2182
65°	2672	2279	1932
70°	2201	1996	1641
75°	1750	1528	1602
80°	1175	1102	1029
85°	732	878	1025

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3870 cd/sqm



TEST NUMBER: P563051

CATALOG NUMBER: FSR-24-4-LD4-2STD-50-UNV-93-94-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	381.8	4.7
10°-20°	1047.7	13.0
20°-30°	1450.5	18.0
30°-40°	1546.6	19.2
40°-50°	1411.0	17.5
50°-60°	1105.4	13.7
60°-70°	720.4	8.9
70°-80°	319.2	4.0
80°-90°	68.5	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°	2879.9	35.8
0°-40°	4426.5	55.0
0°-60°	6942.9	86.2
0°-90°	8051.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8051.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4101	4101	4101	4101	4101	
5°	4030	4025	4025	4020	4020	383
15°	3769	3769	3731	3693	3679	1060
25°	3267	3248	3196	3082	2996	1500
35°	2650	2631	2503	2314	2257	1657
45°	2034	1991	1821	1669	1602	1567
55°	1413	1370	1242	1095	1038	1267
65°	839	792	716	730	607	827
75°	337	313	294	280	308	361
85°	47	52	57	62	66	66
90°	0	0	0	0	0	



TEST NUMBER: P563051

CATALOG NUMBER: FSR-24-4-LD4-2STD-50-UNV-93-94-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4101.1	4101.1	4101.1	4101.1	4101.1
2.5°	4072.6	4072.6	4072.6	4067.9	4067.9
5°	4030.0	4025.2	4025.2	4020.5	4020.5
7.5°	3996.8	3992.0	3987.3	3982.5	3973.1
10°	3949.4	3949.4	3944.6	3920.9	3916.2
12.5°	3873.5	3868.8	3849.8	3816.6	3807.1
15°	3769.2	3769.2	3731.3	3693.3	3679.1
17.5°	3655.4	3650.7	3603.3	3565.3	3546.4
20°	3532.1	3522.7	3475.2	3413.6	3380.4
22.5°	3394.6	3394.6	3337.8	3257.2	3224.0
25°	3266.6	3247.7	3195.5	3081.7	2996.4
27.5°	3119.7	3091.2	3034.3	2873.1	2773.6
30°	2958.5	2944.2	2863.6	2655.0	2579.2
32.5°	2806.7	2783.0	2697.7	2479.6	2418.0
35°	2650.3	2631.3	2503.3	2313.7	2256.8
37.5°	2493.8	2470.1	2308.9	2157.2	2086.1
40°	2337.4	2308.9	2133.5	1996.0	1920.2
42.5°	2190.4	2152.5	1981.8	1834.8	1749.5
45°	2033.9	1991.3	1820.6	1668.9	1602.5
47.5°	1877.5	1839.6	1683.1	1526.6	1450.8
50°	1711.5	1678.4	1536.1	1379.7	1299.1
52.5°	1574.1	1521.9	1384.4	1228.0	1161.6
55°	1412.9	1370.2	1242.2	1095.2	1038.3
57.5°	1265.9	1223.2	1104.7	967.2	919.8
60°	1128.4	1066.8	967.2	848.7	810.7
62.5°	976.7	929.3	843.9	744.4	791.8
65°	839.2	791.8	715.9	730.1	606.9
67.5°	687.5	663.8	597.4	531.0	512.0
70°	559.5	531.0	507.3	436.2	417.2
72.5°	445.7	417.2	384.0	346.1	331.9
75°	336.6	312.9	293.9	279.7	308.2
77.5°	232.3	222.8	208.6	194.4	189.6
80°	151.7	147.0	142.2	137.5	132.8
82.5°	90.1	90.1	90.1	90.1	90.1
85°	47.4	52.2	56.9	61.6	66.4
87.5°	28.4	28.4	33.2	37.9	42.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)