

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: P564094

Luminaire Tested: FSR-24-4-LD4-4STD-40-UNV-80-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564094
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-40-UNV-80-97-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12660.0 lumens
Efficiency: N/A
Efficacy: 95.0 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

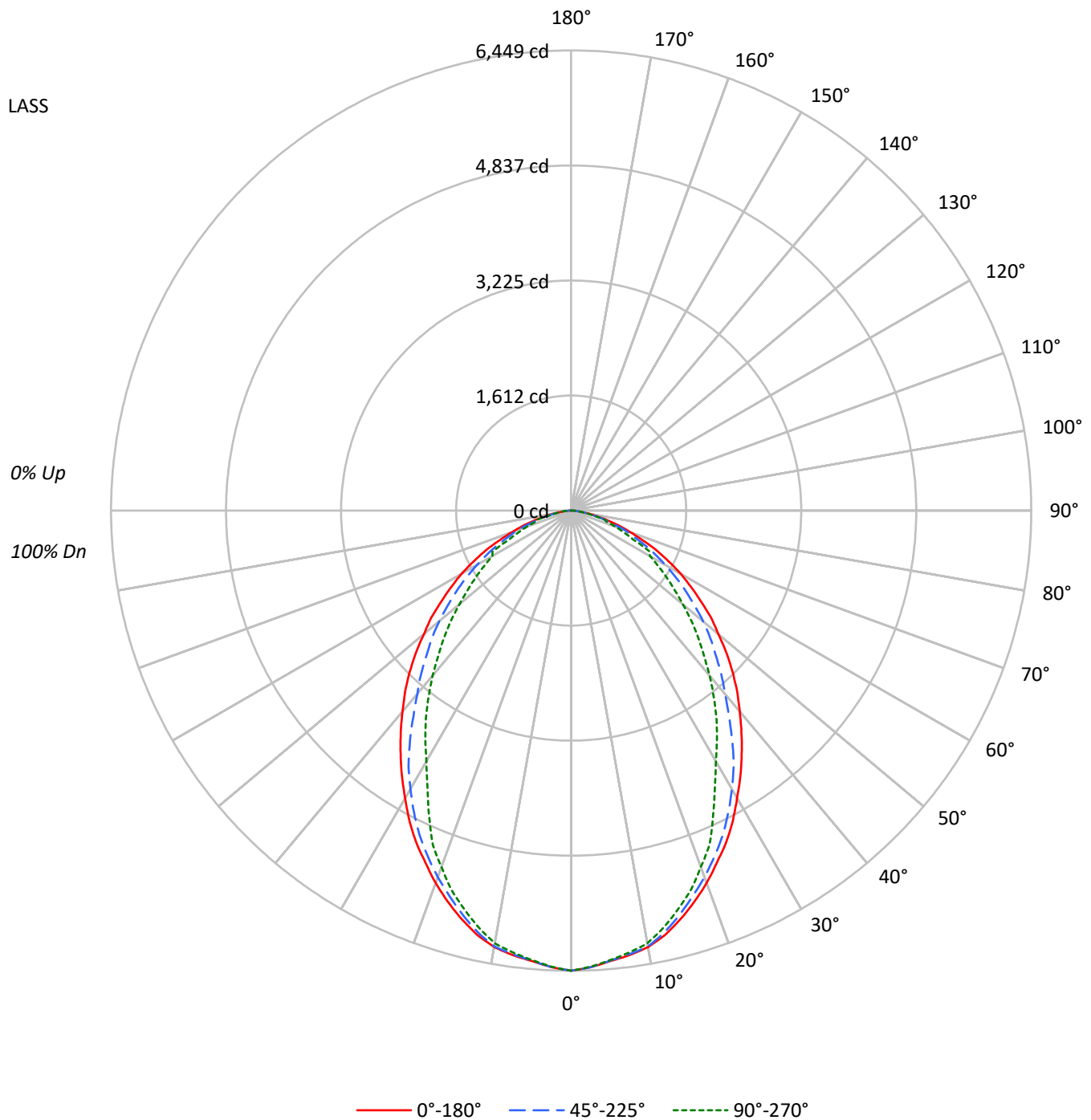
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P564094

CATALOG NUMBER: FSR-24-4-LD4-4STD-40-UNV-80-97-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P564094

CATALOG NUMBER: FSR-24-4-LD4-4STD-40-UNV-80-97-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	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°	8677	8677	8677
5°	8559	8549	8539
10°	8485	8475	8413
15°	8256	8173	8059
20°	7953	7825	7611
25°	7626	7460	6995
30°	7228	6996	6301
35°	6845	6466	5829
40°	6456	5893	5303
45°	6086	5447	4795
50°	5634	5056	4276
55°	5212	4582	3830
60°	4775	4093	3431
65°	4201	3584	3038
70°	3461	3138	2581
75°	2752	2403	2519
80°	1849	1733	1617
85°	1152	1382	1612

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6086 cd/sqm



TEST NUMBER: P564094

CATALOG NUMBER: FSR-24-4-LD4-4STD-40-UNV-80-97-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	600.3	4.7
10°-20°	1647.5	13.0
20°-30°	2280.8	18.0
30°-40°	2432.0	19.2
40°-50°	2218.7	17.5
50°-60°	1738.2	13.7
60°-70°	1132.9	8.9
70°-80°	501.9	4.0
80°-90°	107.8	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°	4528.6	35.8
0°-40°	6960.6	55.0
0°-60°	10917.5	86.2
0°-90°	12660.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12660.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6449	6449	6449	6449	6449	
5°	6337	6330	6330	6322	6322	602
15°	5927	5927	5867	5808	5785	1666
25°	5137	5107	5025	4846	4712	2358
35°	4168	4138	3936	3638	3549	2605
45°	3198	3131	2863	2624	2520	2464
55°	2222	2155	1953	1722	1633	1993
65°	1320	1245	1126	1148	954	1300
75°	529	492	462	440	485	567
85°	75	82	90	97	104	103
90°	0	0	0	0	0	



TEST NUMBER: P564094

CATALOG NUMBER: FSR-24-4-LD4-4STD-40-UNV-80-97-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6448.8	6448.8	6448.8	6448.8	6448.8
2.5°	6404.1	6404.1	6404.1	6396.6	6396.6
5°	6337.0	6329.6	6329.6	6322.1	6322.1
7.5°	6284.8	6277.4	6269.9	6262.5	6247.5
10°	6210.3	6210.3	6202.8	6165.5	6158.1
12.5°	6091.0	6083.5	6053.7	6001.5	5986.6
15°	5927.0	5927.0	5867.3	5807.7	5785.3
17.5°	5748.0	5740.6	5666.0	5606.4	5576.6
20°	5554.2	5539.3	5464.7	5367.8	5315.6
22.5°	5338.0	5338.0	5248.5	5121.8	5069.6
25°	5136.7	5106.9	5024.9	4845.9	4711.7
27.5°	4905.6	4860.9	4771.4	4517.9	4361.4
30°	4652.1	4629.7	4503.0	4175.0	4055.7
32.5°	4413.5	4376.3	4242.1	3899.1	3802.2
35°	4167.5	4137.7	3936.4	3638.2	3548.7
37.5°	3921.5	3884.2	3630.7	3392.2	3280.3
40°	3675.5	3630.7	3354.9	3138.7	3019.4
42.5°	3444.3	3384.7	3116.3	2885.2	2751.0
45°	3198.3	3131.2	2862.8	2624.3	2519.9
47.5°	2952.3	2892.7	2646.6	2400.6	2281.3
50°	2691.4	2639.2	2415.5	2169.5	2042.8
52.5°	2475.2	2393.2	2176.9	1930.9	1826.5
55°	2221.7	2154.6	1953.3	1722.2	1632.7
57.5°	1990.6	1923.5	1737.1	1520.9	1446.3
60°	1774.4	1677.4	1520.9	1334.5	1274.9
62.5°	1535.8	1461.2	1327.0	1170.5	1245.0
65°	1319.6	1245.0	1125.8	1148.1	954.3
67.5°	1081.0	1043.7	939.4	835.0	805.2
70°	879.7	835.0	797.7	685.9	656.1
72.5°	700.8	656.1	603.9	544.2	521.9
75°	529.3	492.0	462.2	439.9	484.6
77.5°	365.3	350.4	328.0	305.7	298.2
80°	238.6	231.1	223.7	216.2	208.7
82.5°	141.7	141.7	141.7	141.7	141.7
85°	74.6	82.0	89.5	96.9	104.4
87.5°	44.7	44.7	52.2	59.6	67.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)