

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: P563985

Luminaire Tested: FSR-24-4-LD4-4LO-50-UNV-82-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563985
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-LD4-4LO-50-UNV-82-84-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11134.0 lumens
Efficiency: N/A
Efficacy: 119.0 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

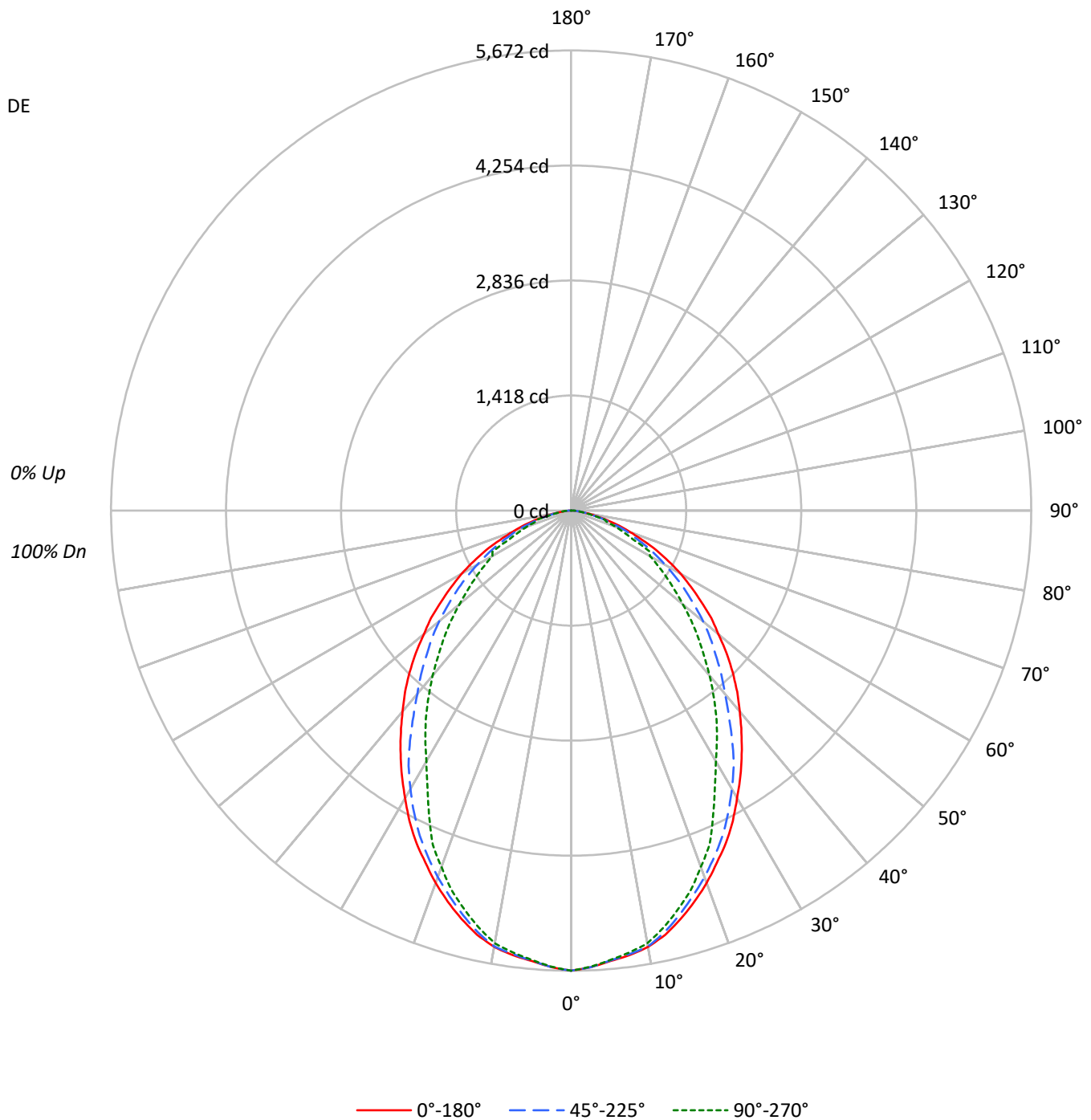
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563985

CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-82-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P563985

CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-82-84-EDD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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									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°	7631	7631	7631
5°	7527	7518	7509
10°	7462	7453	7399
15°	7261	7188	7087
20°	6994	6881	6694
25°	6707	6561	6152
30°	6357	6153	5542
35°	6020	5686	5126
40°	5677	5182	4664
45°	5352	4791	4217
50°	4955	4447	3760
55°	4583	4030	3368
60°	4199	3599	3017
65°	3695	3152	2672
70°	3044	2760	2270
75°	2420	2113	2216
80°	1626	1524	1423
85°	1013	1215	1417

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5352 cd/sqm



TEST NUMBER: P563985

CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-82-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	527.9	4.7
10°-20°	1448.9	13.0
20°-30°	2005.9	18.0
30°-40°	2138.9	19.2
40°-50°	1951.3	17.5
50°-60°	1528.7	13.7
60°-70°	996.3	8.9
70°-80°	441.4	4.0
80°-90°	94.8	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°	3982.7	35.8
0°-40°	6121.6	55.0
0°-60°	9601.5	86.2
0°-90°	11134.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11134.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5672	5672	5672	5672	5672	
5°	5573	5567	5567	5560	5560	529
15°	5212	5212	5160	5108	5088	1465
25°	4518	4491	4419	4262	4144	2074
35°	3665	3639	3462	3200	3121	2291
45°	2813	2754	2518	2308	2216	2167
55°	1954	1895	1718	1515	1436	1752
65°	1160	1095	990	1010	839	1144
75°	466	433	406	387	426	499
85°	66	72	79	85	92	91
90°	0	0	0	0	0	



TEST NUMBER: P563985

CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-82-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5671.5	5671.5	5671.5	5671.5	5671.5
2.5°	5632.2	5632.2	5632.2	5625.6	5625.6
5°	5573.2	5566.6	5566.6	5560.0	5560.0
7.5°	5527.3	5520.7	5514.2	5507.6	5494.5
10°	5461.7	5461.7	5455.1	5422.4	5415.8
12.5°	5356.8	5350.2	5324.0	5278.1	5265.0
15°	5212.5	5212.5	5160.1	5107.6	5088.0
17.5°	5055.2	5048.6	4983.1	4930.6	4904.4
20°	4884.7	4871.6	4806.0	4720.8	4674.9
22.5°	4694.6	4694.6	4615.9	4504.4	4458.5
25°	4517.5	4491.3	4419.2	4261.8	4143.8
27.5°	4314.3	4274.9	4196.3	3973.3	3835.6
30°	4091.4	4071.7	3960.2	3671.7	3566.8
32.5°	3881.5	3848.8	3730.7	3429.1	3343.9
35°	3665.2	3638.9	3461.9	3199.7	3121.0
37.5°	3448.8	3416.0	3193.1	2983.3	2884.9
40°	3232.4	3193.1	2950.5	2760.4	2655.4
42.5°	3029.2	2976.7	2740.7	2537.4	2419.4
45°	2812.8	2753.8	2517.8	2307.9	2216.2
47.5°	2596.4	2544.0	2327.6	2111.2	2006.3
50°	2367.0	2321.1	2124.4	1908.0	1796.5
52.5°	2176.8	2104.7	1914.5	1698.2	1606.4
55°	1953.9	1894.9	1717.8	1514.6	1435.9
57.5°	1750.6	1691.6	1527.7	1337.6	1272.0
60°	1560.5	1475.2	1337.6	1173.6	1121.2
62.5°	1350.7	1285.1	1167.1	1029.4	1095.0
65°	1160.5	1095.0	990.1	1009.7	839.3
67.5°	950.7	917.9	826.1	734.3	708.1
70°	773.7	734.3	701.6	603.2	577.0
72.5°	616.3	577.0	531.1	478.6	459.0
75°	465.5	432.7	406.5	386.8	426.2
77.5°	321.3	308.2	288.5	268.8	262.3
80°	209.8	203.3	196.7	190.1	183.6
82.5°	124.6	124.6	124.6	124.6	124.6
85°	65.6	72.1	78.7	85.2	91.8
87.5°	39.3	39.3	45.9	52.5	59.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)