

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: P563974

Luminaire Tested: FSR-24-4-LD4-4LO-50-UNV-81-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563974
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-81-87-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9278.0 lumens
Efficiency: N/A
Efficacy: 99.1 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

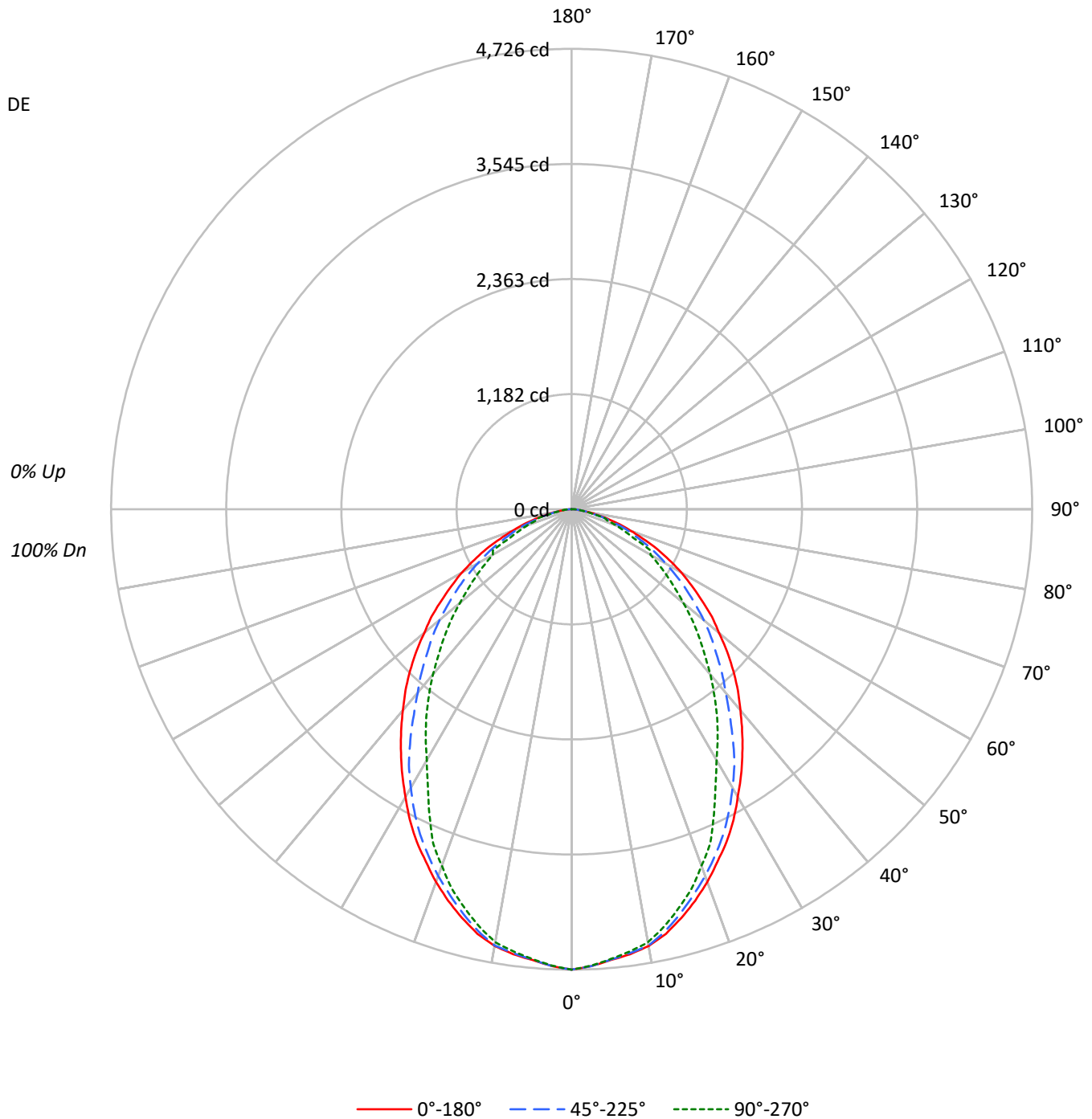
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563974

CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-81-87-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P563974

CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-81-87-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	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°	6359	6359	6359
5°	6272	6265	6258
10°	6218	6211	6166
15°	6050	5990	5906
20°	5828	5734	5578
25°	5589	5467	5126
30°	5297	5127	4618
35°	5017	4738	4272
40°	4731	4318	3887
45°	4460	3992	3514
50°	4129	3705	3134
55°	3819	3358	2807
60°	3499	2999	2514
65°	3079	2627	2227
70°	2536	2300	1891
75°	2017	1761	1846
80°	1354	1270	1185
85°	843	1013	1181

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4460 cd/sqm



TEST NUMBER: P563974

CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-81-87-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	439.9	4.7
10°-20°	1207.4	13.0
20°-30°	1671.5	18.0
30°-40°	1782.3	19.2
40°-50°	1626.0	17.5
50°-60°	1273.8	13.7
60°-70°	830.2	8.9
70°-80°	367.8	4.0
80°-90°	79.0	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°	3318.8	35.8
0°-40°	5101.1	55.0
0°-60°	8001.0	86.2
0°-90°	9278.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9278.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4726	4726	4726	4726	4726	
5°	4644	4639	4639	4633	4633	441
15°	4344	4344	4300	4256	4240	1221
25°	3764	3743	3682	3551	3453	1728
35°	3054	3032	2885	2666	2601	1909
45°	2344	2295	2098	1923	1847	1805
55°	1628	1579	1432	1262	1196	1460
65°	967	912	825	841	699	953
75°	388	361	339	322	355	416
85°	55	60	66	71	76	76
90°	0	0	0	0	0	



TEST NUMBER: P563974

CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-81-87-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4726.1	4726.1	4726.1	4726.1	4726.1
2.5°	4693.3	4693.3	4693.3	4687.8	4687.8
5°	4644.1	4638.7	4638.7	4633.2	4633.2
7.5°	4605.9	4600.4	4595.0	4589.5	4578.6
10°	4551.3	4551.3	4545.8	4518.5	4513.0
12.5°	4463.8	4458.4	4436.5	4398.3	4387.3
15°	4343.6	4343.6	4299.9	4256.2	4239.8
17.5°	4212.5	4207.0	4152.4	4108.7	4086.8
20°	4070.4	4059.5	4004.9	3933.9	3895.6
22.5°	3912.0	3912.0	3846.4	3753.6	3715.3
25°	3764.5	3742.6	3682.5	3551.4	3453.1
27.5°	3595.1	3562.3	3496.8	3311.0	3196.3
30°	3409.3	3392.9	3300.1	3059.7	2972.2
32.5°	3234.5	3207.2	3108.8	2857.5	2786.5
35°	3054.2	3032.3	2884.8	2666.3	2600.7
37.5°	2873.9	2846.6	2660.8	2486.0	2404.0
40°	2693.6	2660.8	2458.7	2300.2	2212.8
42.5°	2524.2	2480.5	2283.8	2114.4	2016.1
45°	2343.9	2294.7	2098.1	1923.2	1846.7
47.5°	2163.6	2119.9	1939.6	1759.3	1671.9
50°	1972.4	1934.1	1770.2	1589.9	1497.1
52.5°	1813.9	1753.8	1595.4	1415.1	1338.6
55°	1628.2	1579.0	1431.5	1262.1	1196.5
57.5°	1458.8	1409.6	1273.0	1114.6	1060.0
60°	1300.4	1229.3	1114.6	978.0	934.3
62.5°	1125.5	1070.9	972.5	857.8	912.4
65°	967.1	912.4	825.0	841.4	699.4
67.5°	792.2	764.9	688.4	611.9	590.1
70°	644.7	611.9	584.6	502.7	480.8
72.5°	513.6	480.8	442.6	398.8	382.5
75°	387.9	360.6	338.7	322.4	355.1
77.5°	267.7	256.8	240.4	224.0	218.5
80°	174.8	169.4	163.9	158.4	153.0
82.5°	103.8	103.8	103.8	103.8	103.8
85°	54.6	60.1	65.6	71.0	76.5
87.5°	32.8	32.8	38.2	43.7	49.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)