

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: P564113

Luminaire Tested: FSR-24-4-LD4-4STD-40-UNV-82-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564113
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-82-84-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14662.0 lumens
Efficiency: N/A
Efficacy: 110.1 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

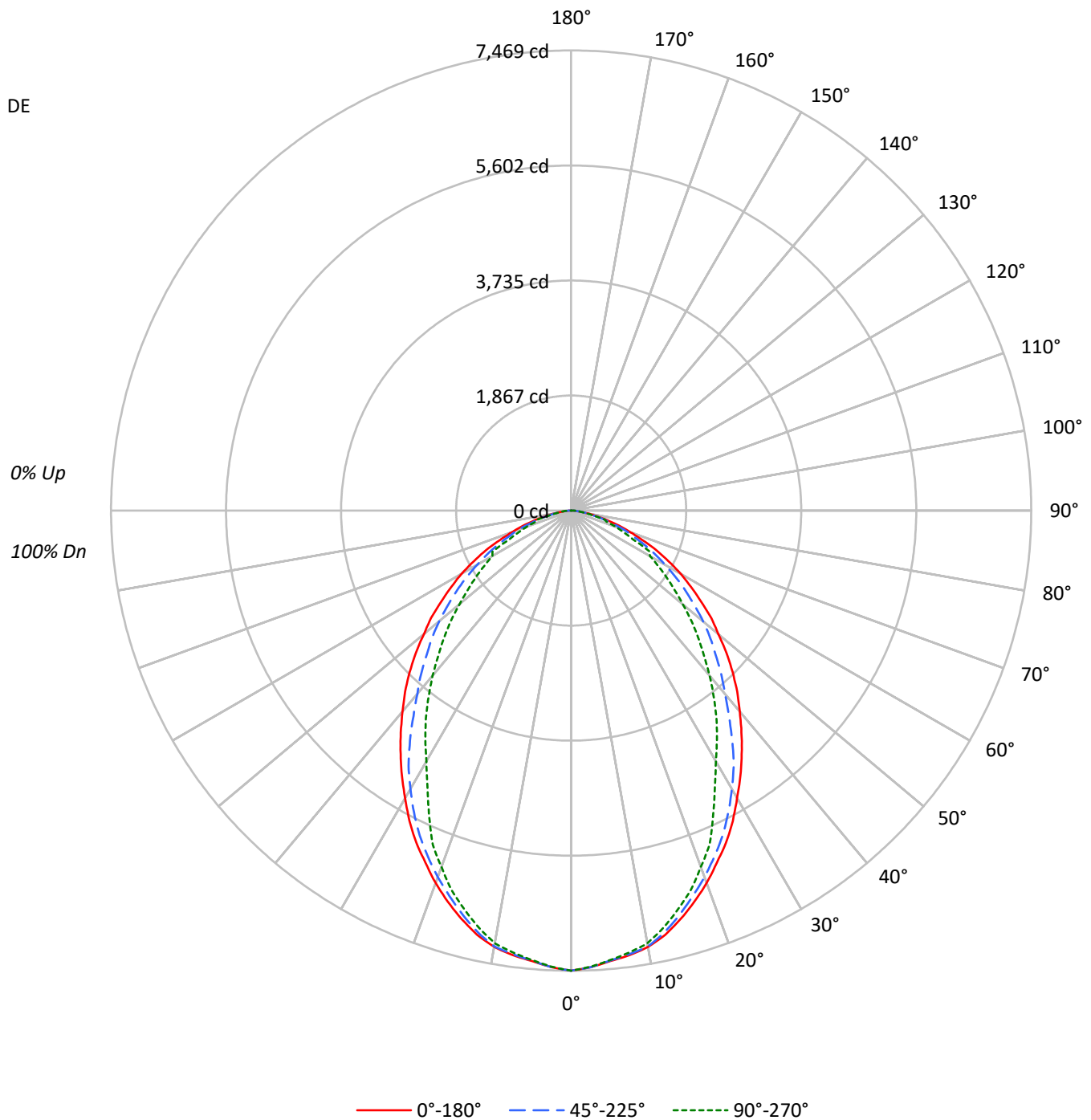
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P564113

CATALOG NUMBER: FSR-24-4-LD4-4STD-40-UNV-82-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P564113

CATALOG NUMBER: FSR-24-4-LD4-4STD-40-UNV-82-84-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°	10049	10049	10049
5°	9912	9901	9889
10°	9826	9815	9744
15°	9562	9465	9333
20°	9210	9062	8815
25°	8832	8640	8101
30°	8371	8102	7297
35°	7928	7488	6751
40°	7477	6824	6142
45°	7048	6309	5553
50°	6525	5856	4952
55°	6036	5307	4436
60°	5530	4740	3973
65°	4866	4151	3519
70°	4008	3635	2989
75°	3187	2783	2917
80°	2141	2007	1874
85°	1332	1599	1866

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7048 cd/sqm



TEST NUMBER: P564113

CATALOG NUMBER: FSR-24-4-LD4-4STD-40-UNV-82-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	695.2	4.7
10°-20°	1908.0	13.0
20°-30°	2641.5	18.0
30°-40°	2816.6	19.2
40°-50°	2569.6	17.5
50°-60°	2013.0	13.7
60°-70°	1312.0	8.9
70°-80°	581.3	4.0
80°-90°	124.8	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°	5244.7	35.8
0°-40°	8061.3	55.0
0°-60°	12643.9	86.2
0°-90°	14662.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14662.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7469	7469	7469	7469	7469	
5°	7339	7330	7330	7322	7322	697
15°	6864	6864	6795	6726	6700	1930
25°	5949	5914	5820	5612	5457	2731
35°	4826	4792	4559	4214	4110	3017
45°	3704	3626	3316	3039	2918	2853
55°	2573	2495	2262	1994	1891	2308
65°	1528	1442	1304	1330	1105	1506
75°	613	570	535	509	561	657
85°	86	95	104	112	121	120
90°	0	0	0	0	0	



TEST NUMBER: P564113

CATALOG NUMBER: FSR-24-4-LD4-4STD-40-UNV-82-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7468.6	7468.6	7468.6	7468.6	7468.6
2.5°	7416.8	7416.8	7416.8	7408.2	7408.2
5°	7339.1	7330.5	7330.5	7321.8	7321.8
7.5°	7278.7	7270.0	7261.4	7252.8	7235.5
10°	7192.3	7192.3	7183.7	7140.5	7131.9
12.5°	7054.2	7045.5	7011.0	6950.6	6933.3
15°	6864.2	6864.2	6795.2	6726.1	6700.2
17.5°	6657.0	6648.4	6562.0	6493.0	6458.4
20°	6432.5	6415.2	6328.9	6216.7	6156.2
22.5°	6182.1	6182.1	6078.5	5931.7	5871.3
25°	5949.0	5914.5	5819.5	5612.3	5456.8
27.5°	5681.3	5629.5	5525.9	5232.4	5051.0
30°	5387.8	5361.9	5215.1	4835.2	4697.0
32.5°	5111.5	5068.3	4912.9	4515.7	4403.5
35°	4826.5	4792.0	4558.9	4213.5	4109.9
37.5°	4541.6	4498.4	4204.9	3928.6	3799.1
40°	4256.7	4204.9	3885.4	3635.0	3496.9
42.5°	3989.0	3919.9	3609.1	3341.5	3186.0
45°	3704.1	3626.4	3315.6	3039.3	2918.4
47.5°	3419.2	3350.1	3065.2	2780.2	2642.1
50°	3117.0	3056.5	2797.5	2512.6	2365.8
52.5°	2866.6	2771.6	2521.2	2236.3	2115.4
55°	2573.0	2495.3	2262.2	1994.5	1890.9
57.5°	2305.3	2227.6	2011.8	1761.4	1675.0
60°	2055.0	1942.7	1761.4	1545.5	1476.5
62.5°	1778.7	1692.3	1536.9	1355.6	1441.9
65°	1528.3	1441.9	1303.8	1329.7	1105.2
67.5°	1252.0	1208.8	1087.9	967.0	932.5
70°	1018.8	967.0	923.9	794.4	759.8
72.5°	811.6	759.8	699.4	630.3	604.4
75°	613.0	569.9	535.3	509.4	561.2
77.5°	423.1	405.8	379.9	354.0	345.4
80°	276.3	267.7	259.0	250.4	241.8
82.5°	164.1	164.1	164.1	164.1	164.1
85°	86.3	95.0	103.6	112.2	120.9
87.5°	51.8	51.8	60.4	69.1	77.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)