

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: P563382

Luminaire Tested: FSR-24-4-LD4-3LO-50-UNV-80-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563382
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-LD4-3LO-50-UNV-80-87-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

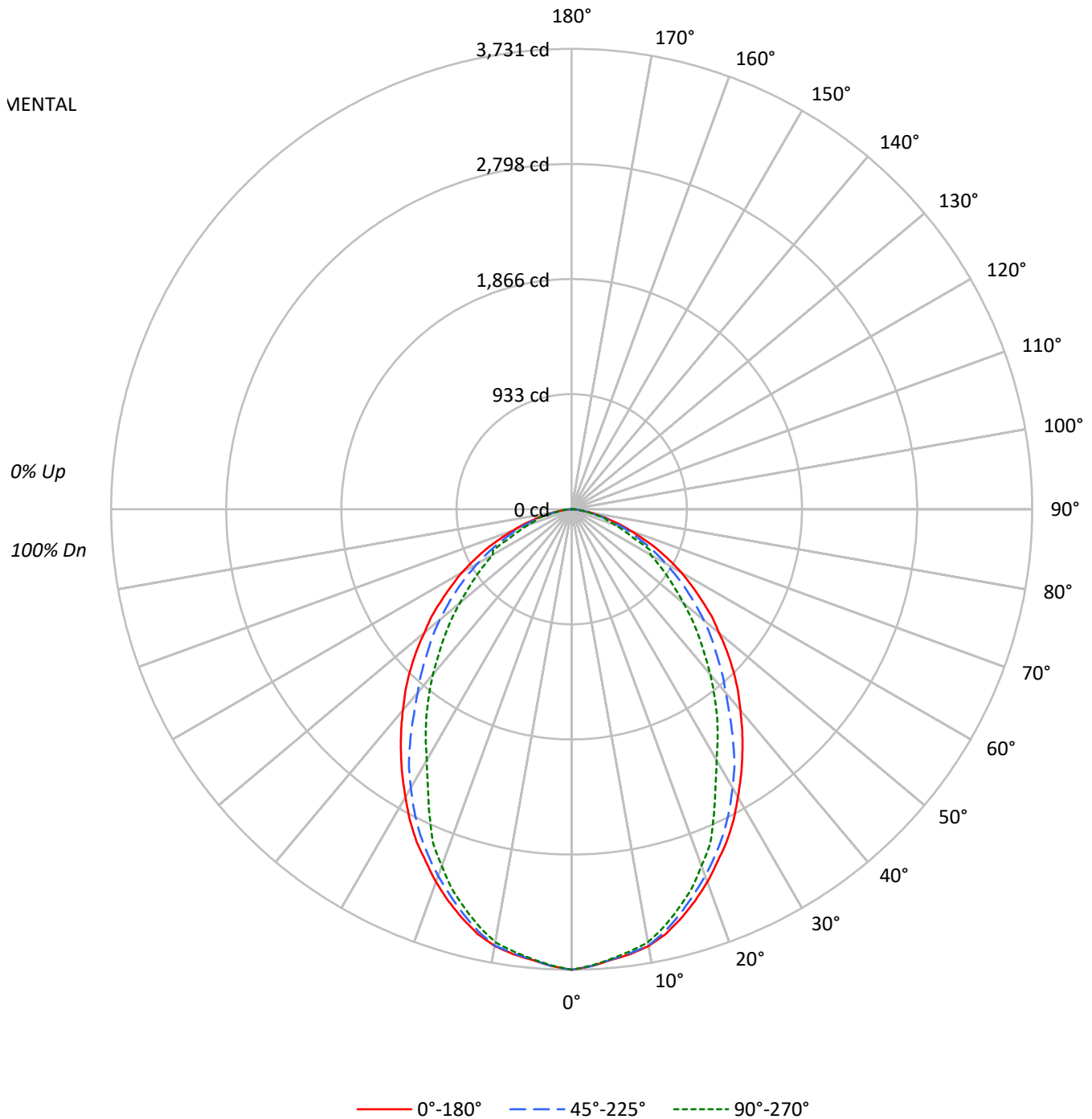
Lumens per Lamp: N/A
Luminaire Lumens: 7325.0 lumens
Efficiency: N/A
Efficacy: 104.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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: P563382
CATALOG NUMBER: FSR-24-4-LD4-3LO-50-UNV-80-87-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P563382

CATALOG NUMBER: FSR-24-4-LD4-3LO-50-UNV-80-87-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°	5020	5020	5020
5°	4952	4946	4940
10°	4909	4903	4868
15°	4777	4729	4663
20°	4601	4527	4404
25°	4412	4316	4047
30°	4182	4048	3646
35°	3961	3741	3373
40°	3735	3409	3068
45°	3521	3152	2774
50°	3260	2925	2474
55°	3016	2651	2216
60°	2763	2368	1985
65°	2431	2074	1758
70°	2002	1816	1493
75°	1592	1390	1458
80°	1069	1003	936
85°	665	800	932

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3521 cd/sqm



TEST NUMBER: P563382

CATALOG NUMBER: FSR-24-4-LD4-3LO-50-UNV-80-87-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	347.3	4.7
10°-20°	953.2	13.0
20°-30°	1319.7	18.0
30°-40°	1407.1	19.2
40°-50°	1283.7	17.5
50°-60°	1005.7	13.7
60°-70°	655.5	8.9
70°-80°	290.4	4.0
80°-90°	62.4	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°	2620.2	35.8
0°-40°	4027.3	55.0
0°-60°	6316.8	86.2
0°-90°	7325.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7325.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3731	3731	3731	3731	3731	
5°	3667	3662	3662	3658	3658	348
15°	3429	3429	3395	3360	3347	964
25°	2972	2955	2907	2804	2726	1364
35°	2411	2394	2278	2105	2053	1507
45°	1850	1812	1656	1518	1458	1425
55°	1286	1247	1130	996	945	1153
65°	764	720	651	664	552	752
75°	306	285	267	254	280	328
85°	43	47	52	56	60	60
90°	0	0	0	0	0	



TEST NUMBER: P563382

CATALOG NUMBER: FSR-24-4-LD4-3LO-50-UNV-80-87-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3731.3	3731.3	3731.3	3731.3	3731.3
2.5°	3705.4	3705.4	3705.4	3701.1	3701.1
5°	3666.6	3662.2	3662.2	3657.9	3657.9
7.5°	3636.4	3632.0	3627.7	3623.4	3614.8
10°	3593.2	3593.2	3588.9	3567.3	3563.0
12.5°	3524.2	3519.9	3502.6	3472.4	3463.8
15°	3429.3	3429.3	3394.8	3360.3	3347.3
17.5°	3325.8	3321.5	3278.3	3243.8	3226.6
20°	3213.6	3205.0	3161.9	3105.8	3075.6
22.5°	3088.5	3088.5	3036.8	2963.4	2933.2
25°	2972.1	2954.8	2907.4	2803.8	2726.2
27.5°	2838.3	2812.5	2760.7	2614.0	2523.5
30°	2691.7	2678.7	2605.4	2415.6	2346.6
32.5°	2553.6	2532.1	2454.4	2256.0	2199.9
35°	2411.3	2394.0	2277.6	2105.0	2053.3
37.5°	2268.9	2247.4	2100.7	1962.7	1898.0
40°	2126.6	2100.7	1941.1	1816.0	1747.0
42.5°	1992.9	1958.4	1803.1	1669.4	1591.7
45°	1850.5	1811.7	1656.4	1518.4	1458.0
47.5°	1708.2	1673.7	1531.3	1389.0	1320.0
50°	1557.2	1527.0	1397.6	1255.3	1181.9
52.5°	1432.1	1384.7	1259.6	1117.2	1056.8
55°	1285.5	1246.6	1130.2	996.4	944.7
57.5°	1151.7	1112.9	1005.1	880.0	836.8
60°	1026.6	970.6	880.0	772.1	737.6
62.5°	888.6	845.5	767.8	677.2	720.4
65°	763.5	720.4	651.4	664.3	552.1
67.5°	625.5	603.9	543.5	483.1	465.9
70°	509.0	483.1	461.6	396.9	379.6
72.5°	405.5	379.6	349.4	314.9	302.0
75°	306.3	284.7	267.4	254.5	280.4
77.5°	211.4	202.7	189.8	176.9	172.5
80°	138.0	133.7	129.4	125.1	120.8
82.5°	82.0	82.0	82.0	82.0	82.0
85°	43.1	47.4	51.8	56.1	60.4
87.5°	25.9	25.9	30.2	34.5	38.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)