

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: P560520

Luminaire Tested: FSR-12-2-LD4-2LO-50-UNV-81-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560520
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-12-2-LD4-2LO-50-UNV-81-88-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

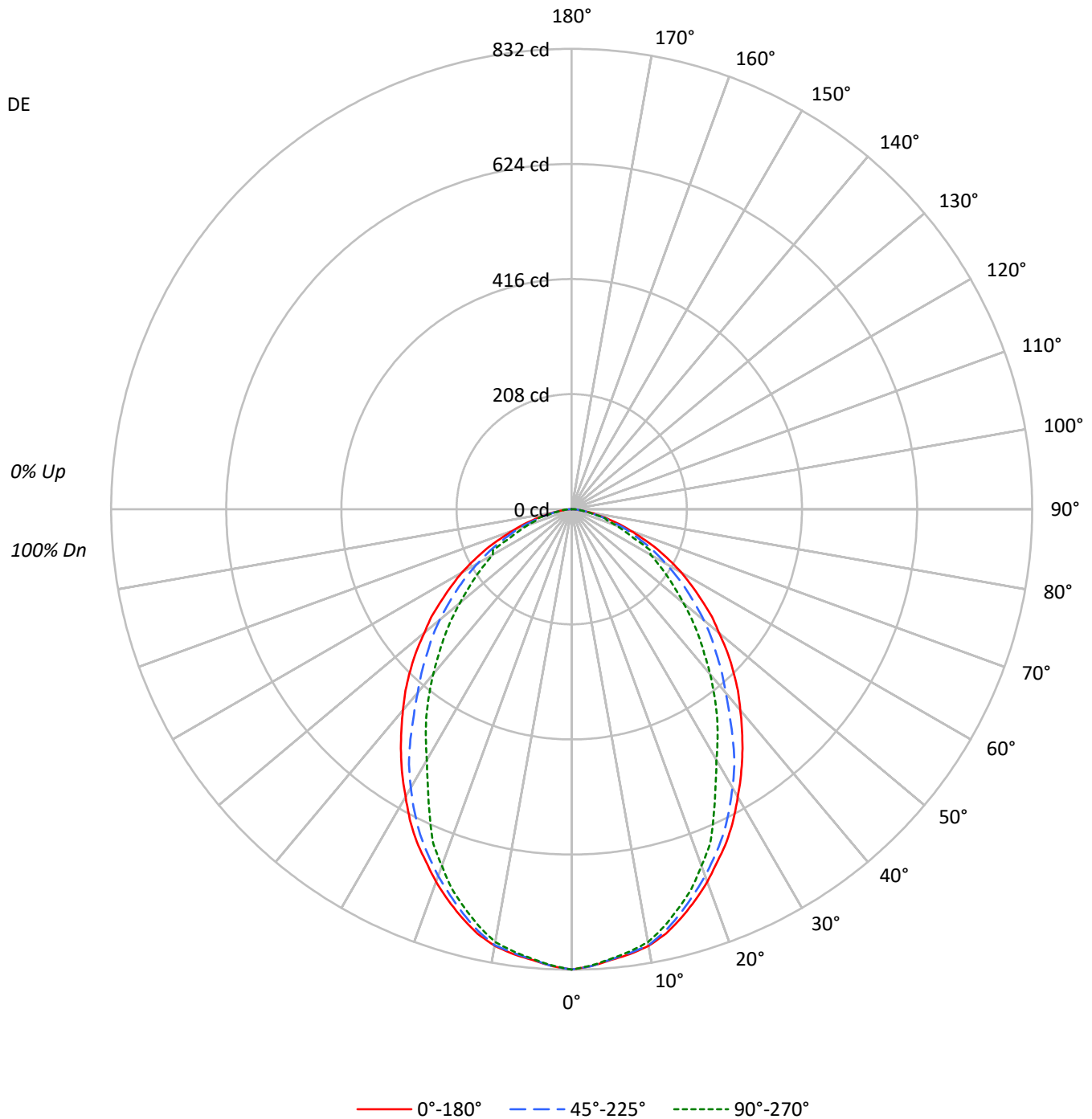
Lumens per Lamp: N/A
Luminaire Lumens: 1633.0 lumens
Efficiency: N/A
Efficacy: 69.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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: P560520
CATALOG NUMBER: FSR-12-2-LD4-2LO-50-UNV-81-88-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P560520

CATALOG NUMBER: FSR-12-2-LD4-2LO-50-UNV-81-88-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	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°	4477	4477	4477
5°	4416	4411	4406
10°	4378	4373	4341
15°	4260	4217	4158
20°	4103	4037	3927
25°	3935	3849	3609
30°	3729	3609	3251
35°	3532	3336	3007
40°	3331	3040	2736
45°	3140	2811	2474
50°	2907	2609	2206
55°	2689	2365	1976
60°	2464	2112	1770
65°	2167	1849	1568
70°	1786	1619	1331
75°	1420	1239	1300
80°	955	893	834
85°	593	710	834

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3140 cd/sqm



TEST NUMBER: P560520

CATALOG NUMBER: FSR-12-2-LD4-2LO-50-UNV-81-88-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.4	4.7
10°-20°	212.5	13.0
20°-30°	294.2	18.0
30°-40°	313.7	19.2
40°-50°	286.2	17.5
50°-60°	224.2	13.7
60°-70°	146.1	8.9
70°-80°	64.7	4.0
80°-90°	13.9	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°	584.1	35.8
0°-40°	897.8	55.0
0°-60°	1408.3	86.2
0°-90°	1633.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1633.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	832	832	832	832	832	
5°	817	816	816	816	816	78
15°	764	764	757	749	746	215
25°	663	659	648	625	608	304
35°	538	534	508	469	458	336
45°	412	404	369	338	325	318
55°	287	278	252	222	211	257
65°	170	161	145	148	123	168
75°	68	64	60	57	62	73
85°	10	11	12	12	14	13
90°	0	0	0	0	0	



TEST NUMBER: P560520

CATALOG NUMBER: FSR-12-2-LD4-2LO-50-UNV-81-88-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	831.8	831.8	831.8	831.8	831.8
2.5°	826.1	826.1	826.1	825.1	825.1
5°	817.4	816.4	816.4	815.5	815.5
7.5°	810.7	809.7	808.7	807.8	805.9
10°	801.1	801.1	800.1	795.3	794.3
12.5°	785.7	784.7	780.9	774.1	772.2
15°	764.5	764.5	756.8	749.1	746.2
17.5°	741.4	740.5	730.9	723.2	719.3
20°	716.4	714.5	704.9	692.4	685.7
22.5°	688.5	688.5	677.0	660.7	653.9
25°	662.6	658.7	648.2	625.1	607.8
27.5°	632.8	627.0	615.5	582.8	562.6
30°	600.1	597.2	580.8	538.5	523.1
32.5°	569.3	564.5	547.2	502.9	490.4
35°	537.6	533.7	507.8	469.3	457.7
37.5°	505.8	501.0	468.3	437.6	423.1
40°	474.1	468.3	432.7	404.9	389.5
42.5°	444.3	436.6	402.0	372.2	354.8
45°	412.5	403.9	369.3	338.5	325.0
47.5°	380.8	373.1	341.4	309.7	294.3
50°	347.2	340.4	311.6	279.8	263.5
52.5°	319.3	308.7	280.8	249.1	235.6
55°	286.6	277.9	252.0	222.1	210.6
57.5°	256.8	248.1	224.1	196.2	186.6
60°	228.9	216.4	196.2	172.1	164.4
62.5°	198.1	188.5	171.2	151.0	160.6
65°	170.2	160.6	145.2	148.1	123.1
67.5°	139.4	134.6	121.2	107.7	103.9
70°	113.5	107.7	102.9	88.5	84.6
72.5°	90.4	84.6	77.9	70.2	67.3
75°	68.3	63.5	59.6	56.7	62.5
77.5°	47.1	45.2	42.3	39.4	38.5
80°	30.8	29.8	28.8	27.9	26.9
82.5°	18.3	18.3	18.3	18.3	18.3
85°	9.6	10.6	11.5	12.5	13.5
87.5°	5.8	5.8	6.7	7.7	8.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)