

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: P560886

Luminaire Tested: FSR-12-4-LD4-1HI-50-UNV-80-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560886
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-12-4-LD4-1HI-50-UNV-80-87-EDD-90
Description: 1X4 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: 3414.0 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

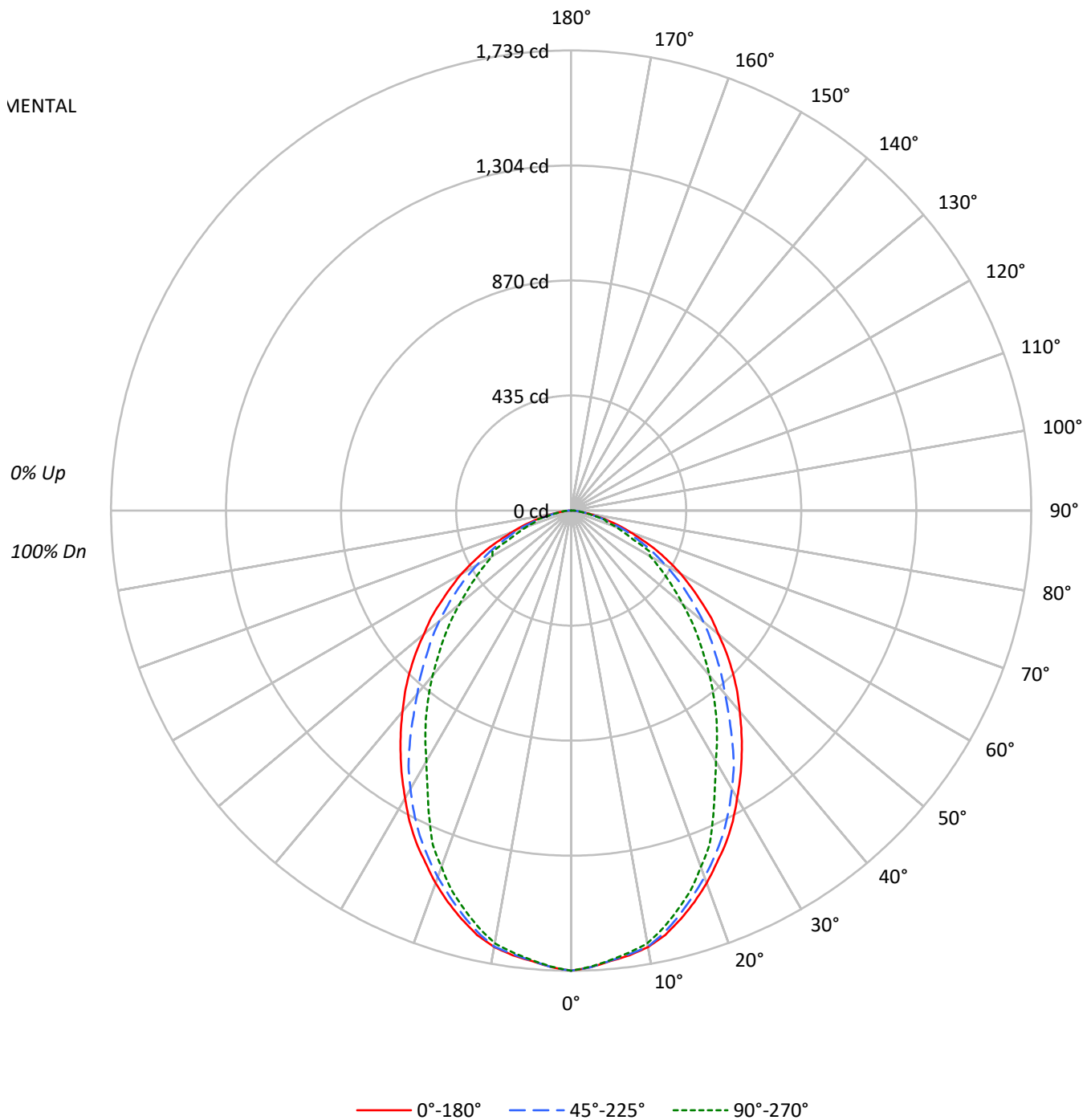
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P560886

CATALOG NUMBER: FSR-12-4-LD4-1HI-50-UNV-80-87-EDD-90

Luminous Intensity Polar Plot



TEST NUMBER: P560886

CATALOG NUMBER: FSR-12-4-LD4-1HI-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°	4680	4680	4680
5°	4616	4611	4605
10°	4576	4571	4538
15°	4453	4408	4346
20°	4289	4220	4105
25°	4113	4023	3773
30°	3898	3773	3398
35°	3692	3487	3144
40°	3482	3178	2860
45°	3282	2938	2586
50°	3039	2727	2306
55°	2811	2471	2066
60°	2575	2207	1850
65°	2266	1933	1638
70°	1866	1692	1392
75°	1484	1295	1359
80°	996	934	872
85°	621	744	868

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3282 cd/sqm



TEST NUMBER: P560886

CATALOG NUMBER: FSR-12-4-LD4-1HI-50-UNV-80-87-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.9	4.7
10°-20°	444.3	13.0
20°-30°	615.1	18.0
30°-40°	655.8	19.2
40°-50°	598.3	17.5
50°-60°	468.7	13.7
60°-70°	305.5	8.9
70°-80°	135.3	4.0
80°-90°	29.1	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°	1221.2	35.8
0°-40°	1877.1	55.0
0°-60°	2944.1	86.2
0°-90°	3414.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3414.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1739	1739	1739	1739	1739	
5°	1709	1707	1707	1705	1705	162
15°	1598	1598	1582	1566	1560	449
25°	1385	1377	1355	1307	1271	636
35°	1124	1116	1062	981	957	703
45°	862	844	772	708	680	664
55°	599	581	527	464	440	537
65°	356	336	304	310	257	351
75°	143	133	125	119	131	153
85°	20	22	24	26	28	28
90°	0	0	0	0	0	



TEST NUMBER: P560886

CATALOG NUMBER: FSR-12-4-LD4-1HI-50-UNV-80-87-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1739.0	1739.0	1739.0	1739.0	1739.0
2.5°	1727.0	1727.0	1727.0	1725.0	1725.0
5°	1708.9	1706.9	1706.9	1704.9	1704.9
7.5°	1694.8	1692.8	1690.8	1688.8	1684.8
10°	1674.7	1674.7	1672.7	1662.6	1660.6
12.5°	1642.5	1640.5	1632.5	1618.4	1614.4
15°	1598.3	1598.3	1582.2	1566.1	1560.1
17.5°	1550.1	1548.1	1527.9	1511.9	1503.8
20°	1497.8	1493.8	1473.7	1447.5	1433.5
22.5°	1439.5	1439.5	1415.4	1381.2	1367.1
25°	1385.2	1377.2	1355.0	1306.8	1270.6
27.5°	1322.9	1310.8	1286.7	1218.3	1176.1
30°	1254.5	1248.5	1214.3	1125.9	1093.7
32.5°	1190.2	1180.1	1144.0	1051.5	1025.3
35°	1123.8	1115.8	1061.5	981.1	957.0
37.5°	1057.5	1047.4	979.1	914.8	884.6
40°	991.2	979.1	904.7	846.4	814.2
42.5°	928.8	912.7	840.4	778.0	741.9
45°	862.5	844.4	772.0	707.7	679.5
47.5°	796.1	780.1	713.7	647.4	615.2
50°	725.8	711.7	651.4	585.0	550.9
52.5°	667.5	645.4	587.1	520.7	492.6
55°	599.1	581.0	526.7	464.4	440.3
57.5°	536.8	518.7	468.4	410.1	390.0
60°	478.5	452.4	410.1	359.9	343.8
62.5°	414.2	394.0	357.9	315.6	335.7
65°	355.9	335.7	303.6	309.6	257.3
67.5°	291.5	281.5	253.3	225.2	217.1
70°	237.2	225.2	215.1	185.0	176.9
72.5°	189.0	176.9	162.8	146.8	140.7
75°	142.7	132.7	124.6	118.6	130.7
77.5°	98.5	94.5	88.5	82.4	80.4
80°	64.3	62.3	60.3	58.3	56.3
82.5°	38.2	38.2	38.2	38.2	38.2
85°	20.1	22.1	24.1	26.1	28.1
87.5°	12.1	12.1	14.1	16.1	18.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)