

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: P561292

Luminaire Tested: FSR-12-4-LD4-1STD-50-UNV-81-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561292
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-LD4-1STD-50-UNV-81-96-EDD-90
Description: 1X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2795.0 lumens
Efficiency: N/A
Efficacy: 83.9 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

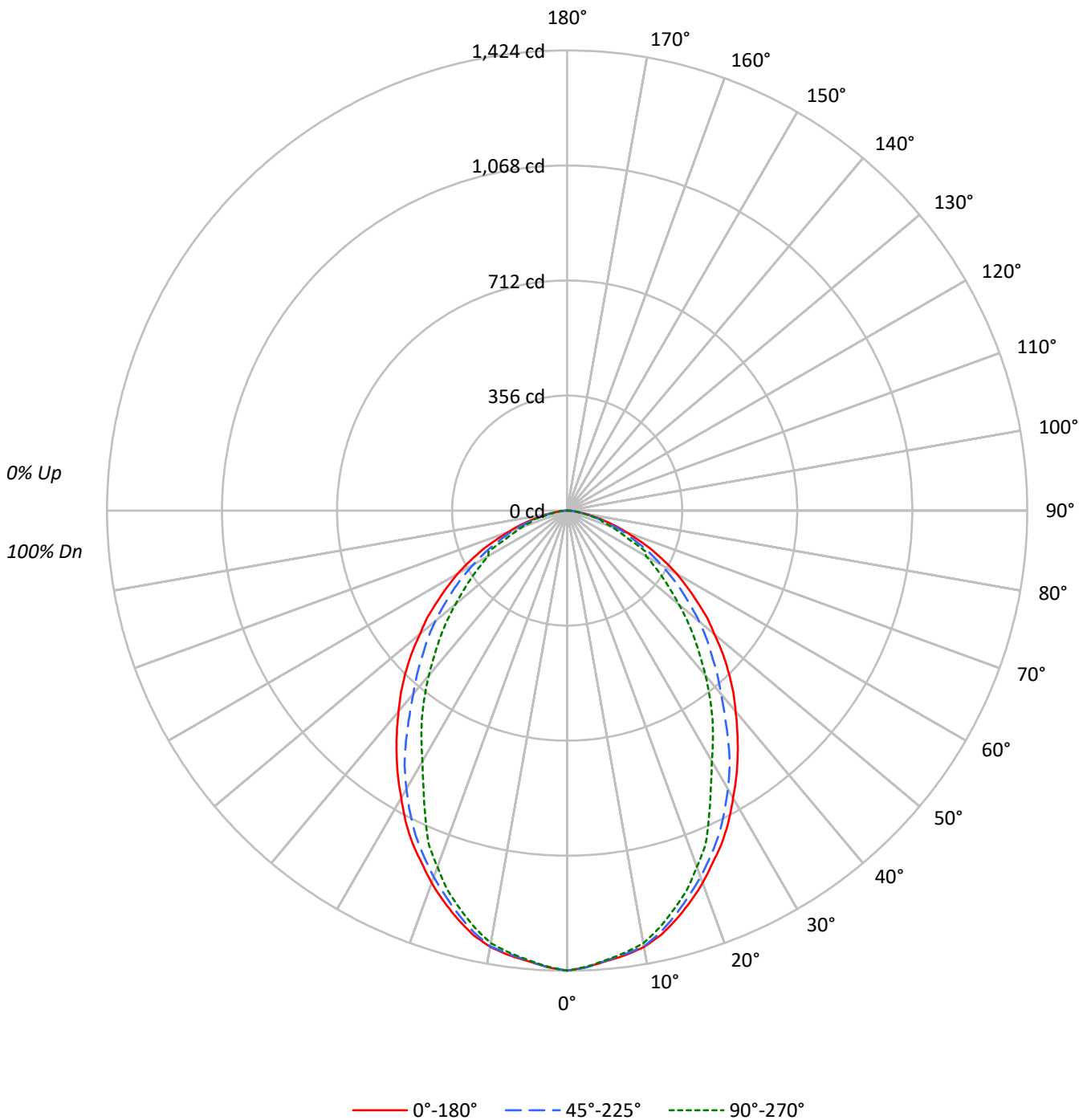
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P561292

CATALOG NUMBER: FSR-12-4-LD4-1STD-50-UNV-81-96-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P561292

CATALOG NUMBER: FSR-12-4-LD4-1STD-50-UNV-81-96-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°	3831	3831	3831
5°	3779	3775	3770
10°	3747	3742	3715
15°	3645	3609	3558
20°	3511	3455	3361
25°	3367	3294	3089
30°	3191	3089	2782
35°	3023	2855	2574
40°	2850	2602	2342
45°	2687	2405	2117
50°	2488	2233	1888
55°	2301	2023	1691
60°	2108	1807	1515
65°	1855	1582	1342
70°	1528	1386	1139
75°	1215	1061	1112
80°	817	766	714
85°	509	611	710

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2687 cd/sqm



TEST NUMBER: P561292

CATALOG NUMBER: FSR-12-4-LD4-1STD-50-UNV-81-96-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.5	4.7
10°-20°	363.7	13.0
20°-30°	503.5	18.0
30°-40°	536.9	19.2
40°-50°	489.8	17.5
50°-60°	383.8	13.7
60°-70°	250.1	8.9
70°-80°	110.8	4.0
80°-90°	23.8	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°	999.8	35.8
0°-40°	1536.7	55.0
0°-60°	2410.3	86.2
0°-90°	2795.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2795.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1424	1424	1424	1424	1424	
5°	1399	1397	1397	1396	1396	133
15°	1308	1308	1295	1282	1277	368
25°	1134	1128	1109	1070	1040	521
35°	920	914	869	803	784	575
45°	706	691	632	579	556	544
55°	490	476	431	380	360	440
65°	291	275	248	254	211	287
75°	117	109	102	97	107	125
85°	16	18	20	21	23	23
90°	0	0	0	0	0	



TEST NUMBER: P561292

CATALOG NUMBER: FSR-12-4-LD4-1STD-50-UNV-81-96-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1423.7	1423.7	1423.7	1423.7	1423.7
2.5°	1413.9	1413.9	1413.9	1412.2	1412.2
5°	1399.0	1397.4	1397.4	1395.8	1395.8
7.5°	1387.5	1385.9	1384.2	1382.6	1379.3
10°	1371.1	1371.1	1369.4	1361.2	1359.5
12.5°	1344.7	1343.1	1336.5	1325.0	1321.7
15°	1308.5	1308.5	1295.4	1282.2	1277.2
17.5°	1269.0	1267.4	1250.9	1237.7	1231.2
20°	1226.2	1222.9	1206.5	1185.1	1173.6
22.5°	1178.5	1178.5	1158.7	1130.8	1119.2
25°	1134.1	1127.5	1109.4	1069.9	1040.2
27.5°	1083.0	1073.2	1053.4	997.4	962.9
30°	1027.1	1022.1	994.1	921.7	895.4
32.5°	974.4	966.2	936.5	860.8	839.4
35°	920.1	913.5	869.1	803.2	783.5
37.5°	865.8	857.5	801.6	748.9	724.2
40°	811.4	801.6	740.7	692.9	666.6
42.5°	760.4	747.3	688.0	637.0	607.4
45°	706.1	691.3	632.0	579.4	556.3
47.5°	651.8	638.6	584.3	530.0	503.7
50°	594.2	582.7	533.3	479.0	451.0
52.5°	546.5	528.3	480.6	426.3	403.3
55°	490.5	475.7	431.2	380.2	360.5
57.5°	439.5	424.7	383.5	335.8	319.3
60°	391.7	370.3	335.8	294.6	281.5
62.5°	339.1	322.6	293.0	258.4	274.9
65°	291.3	274.9	248.5	253.5	210.7
67.5°	238.7	230.4	207.4	184.3	177.8
70°	194.2	184.3	176.1	151.4	144.8
72.5°	154.7	144.8	133.3	120.2	115.2
75°	116.9	108.6	102.0	97.1	107.0
77.5°	80.7	77.4	72.4	67.5	65.8
80°	52.7	51.0	49.4	47.7	46.1
82.5°	31.3	31.3	31.3	31.3	31.3
85°	16.5	18.1	19.8	21.4	23.0
87.5°	9.9	9.9	11.5	13.2	14.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)