

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: P561469

Luminaire Tested: FSR-12-4-LD4-2HI-50-UNV-80-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561469
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-LD4-2HI-50-UNV-80-96-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8296.0 lumens
Efficiency: N/A
Efficacy: 96.0 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

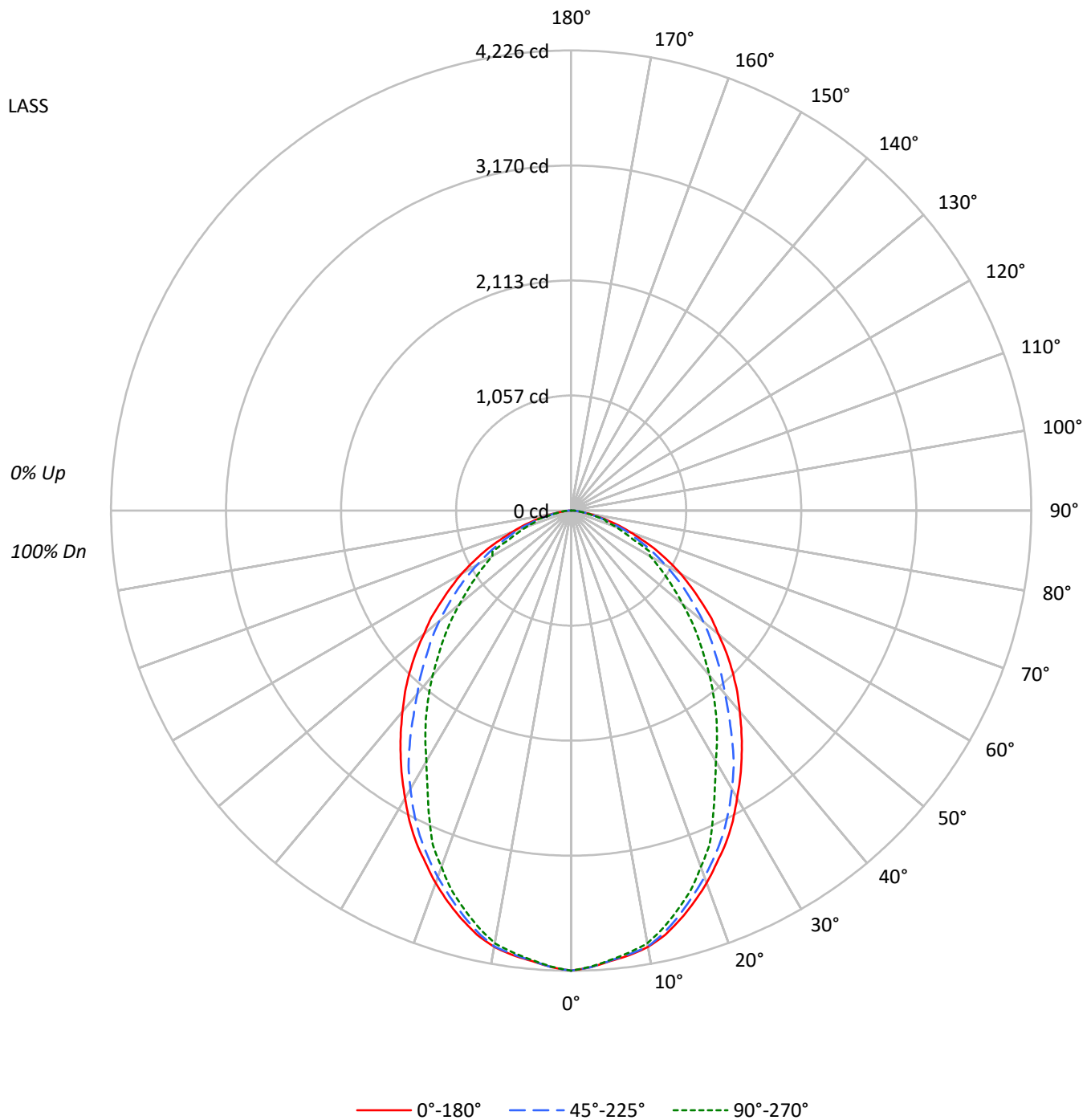
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P561469

CATALOG NUMBER: FSR-12-4-LD4-2HI-50-UNV-80-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P561469

CATALOG NUMBER: FSR-12-4-LD4-2HI-50-UNV-80-96-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	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°	11372	11372	11372
5°	11217	11204	11191
10°	11120	11107	11026
15°	10820	10711	10562
20°	10423	10255	9975
25°	9994	9777	9168
30°	9473	9169	8258
35°	8971	8474	7639
40°	8461	7723	6950
45°	7976	7139	6284
50°	7383	6627	5604
55°	6830	6005	5020
60°	6258	5364	4496
65°	5506	4697	3982
70°	4536	4113	3382
75°	3607	3149	3302
80°	2422	2272	2120
85°	1510	1809	2112

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7976 cd/sqm



TEST NUMBER: P561469

CATALOG NUMBER: FSR-12-4-LD4-2HI-50-UNV-80-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	393.4	4.7
10°-20°	1079.6	13.0
20°-30°	1494.6	18.0
30°-40°	1593.7	19.2
40°-50°	1453.9	17.5
50°-60°	1139.0	13.7
60°-70°	742.4	8.9
70°-80°	328.9	4.0
80°-90°	70.6	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°	2967.5	35.8
0°-40°	4561.2	55.0
0°-60°	7154.1	86.2
0°-90°	8296.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8296.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4226	4226	4226	4226	4226	
5°	4153	4148	4148	4143	4143	394
15°	3884	3884	3845	3806	3791	1092
25°	3366	3346	3293	3176	3088	1545
35°	2731	2711	2580	2384	2326	1707
45°	2096	2052	1876	1720	1651	1614
55°	1456	1412	1280	1128	1070	1306
65°	865	816	738	752	625	852
75°	347	322	303	288	318	372
85°	49	54	59	64	68	68
90°	0	0	0	0	0	



TEST NUMBER: P561469

CATALOG NUMBER: FSR-12-4-LD4-2HI-50-UNV-80-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4225.9	4225.9	4225.9	4225.9	4225.9
2.5°	4196.6	4196.6	4196.6	4191.7	4191.7
5°	4152.6	4147.7	4147.7	4142.8	4142.8
7.5°	4118.4	4113.5	4108.6	4103.7	4094.0
10°	4069.5	4069.5	4064.7	4040.2	4035.3
12.5°	3991.4	3986.5	3966.9	3932.7	3923.0
15°	3883.9	3883.9	3844.8	3805.7	3791.1
17.5°	3766.6	3761.8	3712.9	3673.8	3654.3
20°	3639.6	3629.9	3581.0	3517.5	3483.3
22.5°	3497.9	3497.9	3439.3	3356.3	3322.1
25°	3366.0	3346.5	3292.8	3175.5	3087.6
27.5°	3214.6	3185.3	3126.7	2960.6	2858.0
30°	3048.5	3033.8	2950.8	2735.8	2657.7
32.5°	2892.2	2867.7	2779.8	2555.1	2491.6
35°	2730.9	2711.4	2579.5	2384.1	2325.5
37.5°	2569.7	2545.3	2379.2	2222.9	2149.6
40°	2408.5	2379.2	2198.4	2056.8	1978.6
42.5°	2257.1	2218.0	2042.1	1890.7	1802.7
45°	2095.8	2051.9	1876.0	1719.7	1651.3
47.5°	1934.6	1895.5	1734.3	1573.1	1494.9
50°	1763.6	1729.4	1582.9	1421.7	1338.6
52.5°	1622.0	1568.2	1426.5	1265.3	1196.9
55°	1455.8	1411.9	1280.0	1128.5	1069.9
57.5°	1304.4	1260.4	1138.3	996.6	947.8
60°	1162.7	1099.2	996.6	874.5	835.4
62.5°	1006.4	957.5	869.6	767.0	815.9
65°	864.7	815.9	737.7	752.4	625.3
67.5°	708.4	684.0	615.6	547.2	527.6
70°	576.5	547.2	522.7	449.5	429.9
72.5°	459.2	429.9	395.7	356.6	342.0
75°	346.9	322.4	302.9	288.2	317.6
77.5°	239.4	229.6	215.0	200.3	195.4
80°	156.3	151.4	146.6	141.7	136.8
82.5°	92.8	92.8	92.8	92.8	92.8
85°	48.9	53.7	58.6	63.5	68.4
87.5°	29.3	29.3	34.2	39.1	44.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)