

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: P560893

Luminaire Tested: FSR-12-4-LD4-1HI-50-UNV-80-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560893
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-80-96-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: 4148.0 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

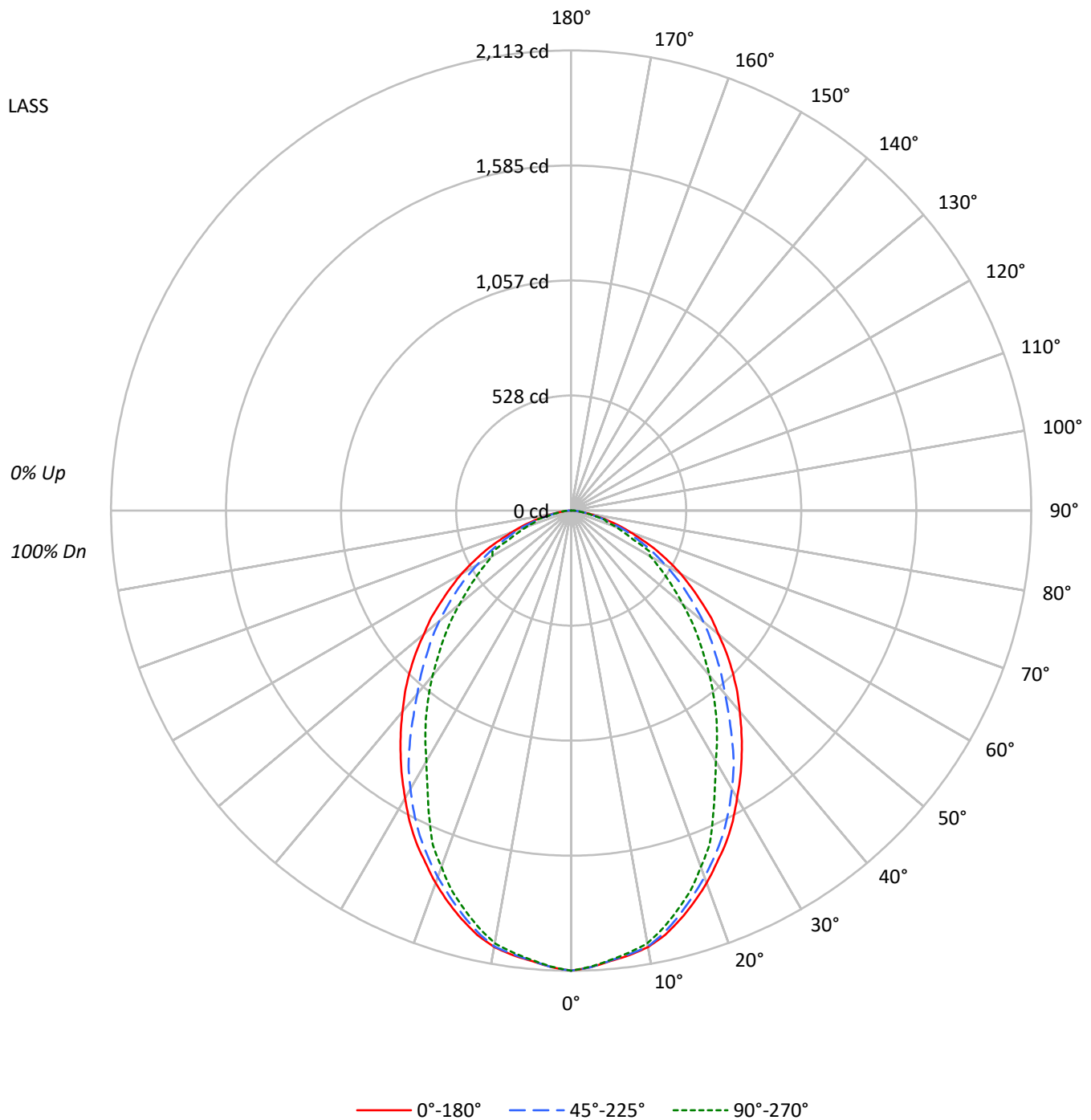
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5686	5686	5686
5°	5609	5602	5595
10°	5560	5553	5513
15°	5410	5356	5281
20°	5211	5127	4987
25°	4997	4888	4584
30°	4736	4584	4129
35°	4486	4237	3820
40°	4230	3861	3475
45°	3988	3570	3142
50°	3692	3313	2802
55°	3415	3003	2510
60°	3129	2682	2248
65°	2753	2348	1991
70°	2268	2057	1692
75°	1803	1574	1651
80°	1212	1136	1060
85°	753	905	1056

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3988 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	196.7	4.7
10°-20°	539.8	13.0
20°-30°	747.3	18.0
30°-40°	796.8	19.2
40°-50°	726.9	17.5
50°-60°	569.5	13.7
60°-70°	371.2	8.9
70°-80°	164.4	4.0
80°-90°	35.3	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°	1483.8	35.8
0°-40°	2280.6	55.0
0°-60°	3577.1	86.2
0°-90°	4148.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4148.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2113	2113	2113	2113	2113	
5°	2076	2074	2074	2071	2071	197
15°	1942	1942	1922	1903	1896	546
25°	1683	1673	1646	1588	1544	773
35°	1366	1356	1290	1192	1163	854
45°	1048	1026	938	860	826	807
55°	728	706	640	564	535	653
65°	432	408	369	376	313	426
75°	173	161	151	144	159	186
85°	24	27	29	32	34	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2112.9	2112.9	2112.9	2112.9	2112.9
2.5°	2098.3	2098.3	2098.3	2095.8	2095.8
5°	2076.3	2073.9	2073.9	2071.4	2071.4
7.5°	2059.2	2056.8	2054.3	2051.9	2047.0
10°	2034.8	2034.8	2032.3	2020.1	2017.7
12.5°	1995.7	1993.2	1983.5	1966.4	1961.5
15°	1941.9	1941.9	1922.4	1902.9	1895.5
17.5°	1883.3	1880.9	1856.5	1836.9	1827.1
20°	1819.8	1814.9	1790.5	1758.7	1741.6
22.5°	1749.0	1749.0	1719.7	1678.1	1661.0
25°	1683.0	1673.2	1646.4	1587.8	1543.8
27.5°	1607.3	1592.6	1563.3	1480.3	1429.0
30°	1524.2	1516.9	1475.4	1367.9	1328.8
32.5°	1446.1	1433.9	1389.9	1277.5	1245.8
35°	1365.5	1355.7	1289.7	1192.0	1162.7
37.5°	1284.9	1272.6	1189.6	1111.4	1074.8
40°	1204.3	1189.6	1099.2	1028.4	989.3
42.5°	1128.5	1109.0	1021.0	945.3	901.4
45°	1047.9	1025.9	938.0	859.8	825.6
47.5°	967.3	947.8	867.2	786.5	747.5
50°	881.8	864.7	791.4	710.8	669.3
52.5°	811.0	784.1	713.3	632.7	598.5
55°	727.9	705.9	640.0	564.3	535.0
57.5°	652.2	630.2	569.1	498.3	473.9
60°	581.4	549.6	498.3	437.2	417.7
62.5°	503.2	478.8	434.8	383.5	407.9
65°	432.4	407.9	368.8	376.2	312.7
67.5°	354.2	342.0	307.8	273.6	263.8
70°	288.2	273.6	261.4	224.7	215.0
72.5°	229.6	215.0	197.9	178.3	171.0
75°	173.4	161.2	151.4	144.1	158.8
77.5°	119.7	114.8	107.5	100.2	97.7
80°	78.2	75.7	73.3	70.8	68.4
82.5°	46.4	46.4	46.4	46.4	46.4
85°	24.4	26.9	29.3	31.8	34.2
87.5°	14.7	14.7	17.1	19.5	22.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)