

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: P561520

Luminaire Tested: FSR-12-4-LD4-2LO-35-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561520
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-LD4-2LO-35-UNV-80-84-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4151.0 lumens
Efficiency: N/A
Efficacy: 88.7 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

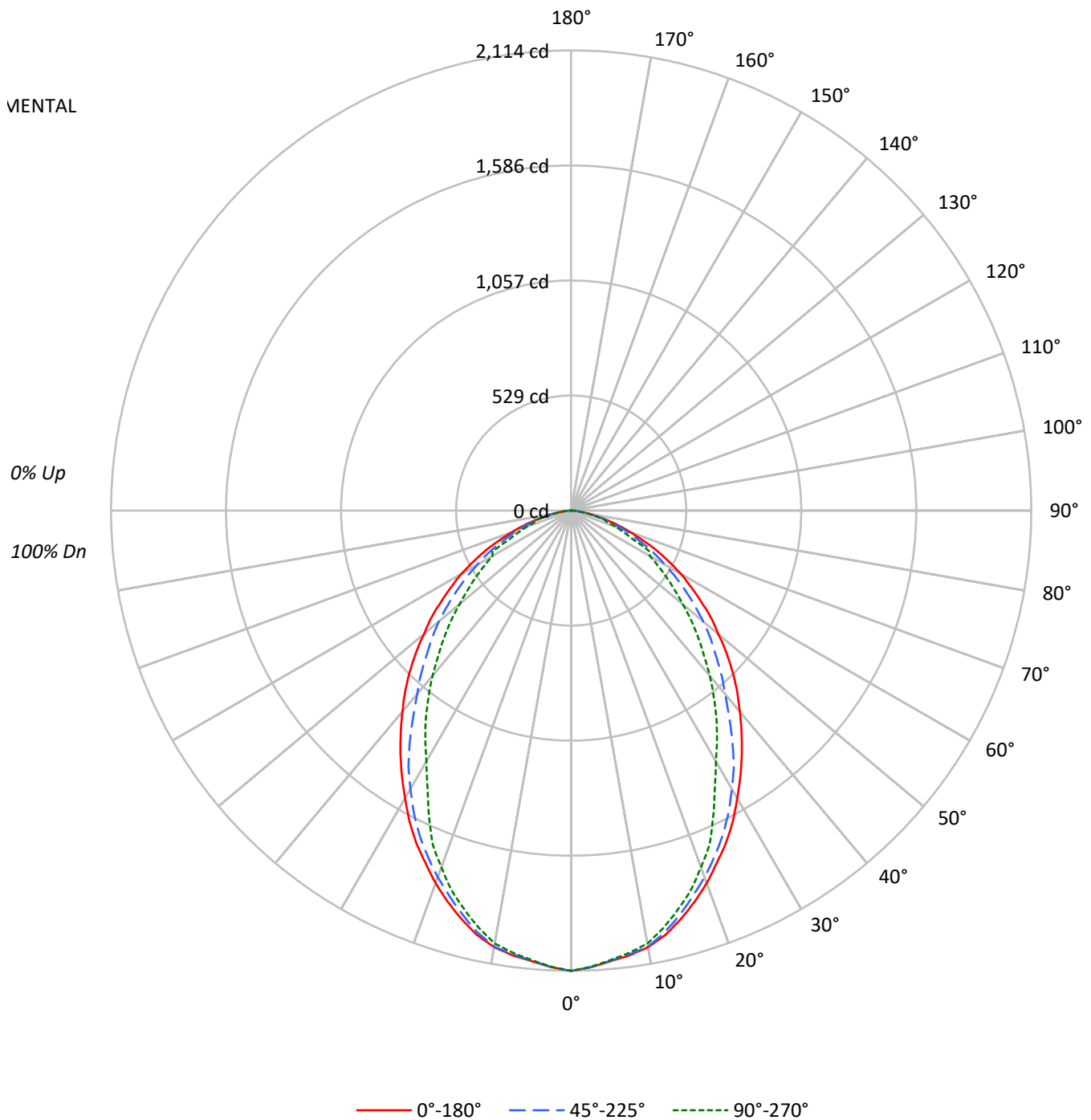
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5690	5690	5690
5°	5613	5606	5599
10°	5564	5557	5517
15°	5414	5360	5285
20°	5215	5131	4991
25°	5001	4892	4587
30°	4740	4588	4132
35°	4489	4240	3823
40°	4233	3864	3478
45°	3991	3572	3144
50°	3695	3316	2804
55°	3418	3005	2511
60°	3131	2684	2250
65°	2755	2350	1992
70°	2269	2058	1692
75°	1805	1576	1652
80°	1212	1136	1060
85°	753	905	1056

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3991 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	196.8	4.7
10°-20°	540.2	13.0
20°-30°	747.8	18.0
30°-40°	797.4	19.2
40°-50°	727.5	17.5
50°-60°	569.9	13.7
60°-70°	371.4	8.9
70°-80°	164.6	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°	1484.8	35.8
0°-40°	2282.3	55.0
0°-60°	3579.7	86.2
0°-90°	4151.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4151.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2114	2114	2114	2114	2114	
5°	2078	2075	2075	2073	2073	197
15°	1943	1943	1924	1904	1897	546
25°	1684	1674	1648	1589	1545	773
35°	1366	1357	1291	1193	1164	854
45°	1049	1027	939	860	826	808
55°	728	706	640	565	535	653
65°	433	408	369	376	313	426
75°	174	161	152	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°	2114.5	2114.5	2114.5	2114.5	2114.5
2.5°	2099.8	2099.8	2099.8	2097.4	2097.4
5°	2077.8	2075.4	2075.4	2072.9	2072.9
7.5°	2060.7	2058.2	2055.8	2053.4	2048.5
10°	2036.2	2036.2	2033.8	2021.6	2019.1
12.5°	1997.1	1994.7	1984.9	1967.8	1962.9
15°	1943.4	1943.4	1923.8	1904.2	1896.9
17.5°	1884.7	1882.2	1857.8	1838.2	1828.5
20°	1821.1	1816.2	1791.8	1760.0	1742.9
22.5°	1750.2	1750.2	1720.9	1679.3	1662.2
25°	1684.2	1674.5	1647.6	1588.9	1544.9
27.5°	1608.5	1593.8	1564.5	1481.3	1430.0
30°	1525.3	1518.0	1476.5	1368.9	1329.8
32.5°	1447.1	1434.9	1390.9	1278.5	1246.7
35°	1366.5	1356.7	1290.7	1192.9	1163.6
37.5°	1285.8	1273.6	1190.5	1112.2	1075.6
40°	1205.1	1190.5	1100.0	1029.1	990.0
42.5°	1129.3	1109.8	1021.8	946.0	902.0
45°	1048.7	1026.7	938.7	860.5	826.2
47.5°	968.0	948.5	867.8	787.1	748.0
50°	882.5	865.3	792.0	711.3	669.8
52.5°	811.6	784.7	713.8	633.1	598.9
55°	728.5	706.5	640.5	564.7	535.3
57.5°	652.7	630.7	569.6	498.7	474.2
60°	581.8	550.0	498.7	437.6	418.0
62.5°	503.6	479.1	435.1	383.8	408.2
65°	432.7	408.2	369.1	376.4	312.9
67.5°	354.4	342.2	308.0	273.8	264.0
70°	288.4	273.8	261.6	224.9	215.1
72.5°	229.8	215.1	198.0	178.4	171.1
75°	173.6	161.3	151.6	144.2	158.9
77.5°	119.8	114.9	107.6	100.2	97.8
80°	78.2	75.8	73.3	70.9	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	19.6	22.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)