

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: P561718

Luminaire Tested: FSR-12-4-LD4-2STD-35-UNV-80-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561718
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-LD4-2STD-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5212.0 lumens
Efficiency: N/A
Efficacy: 78.3 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

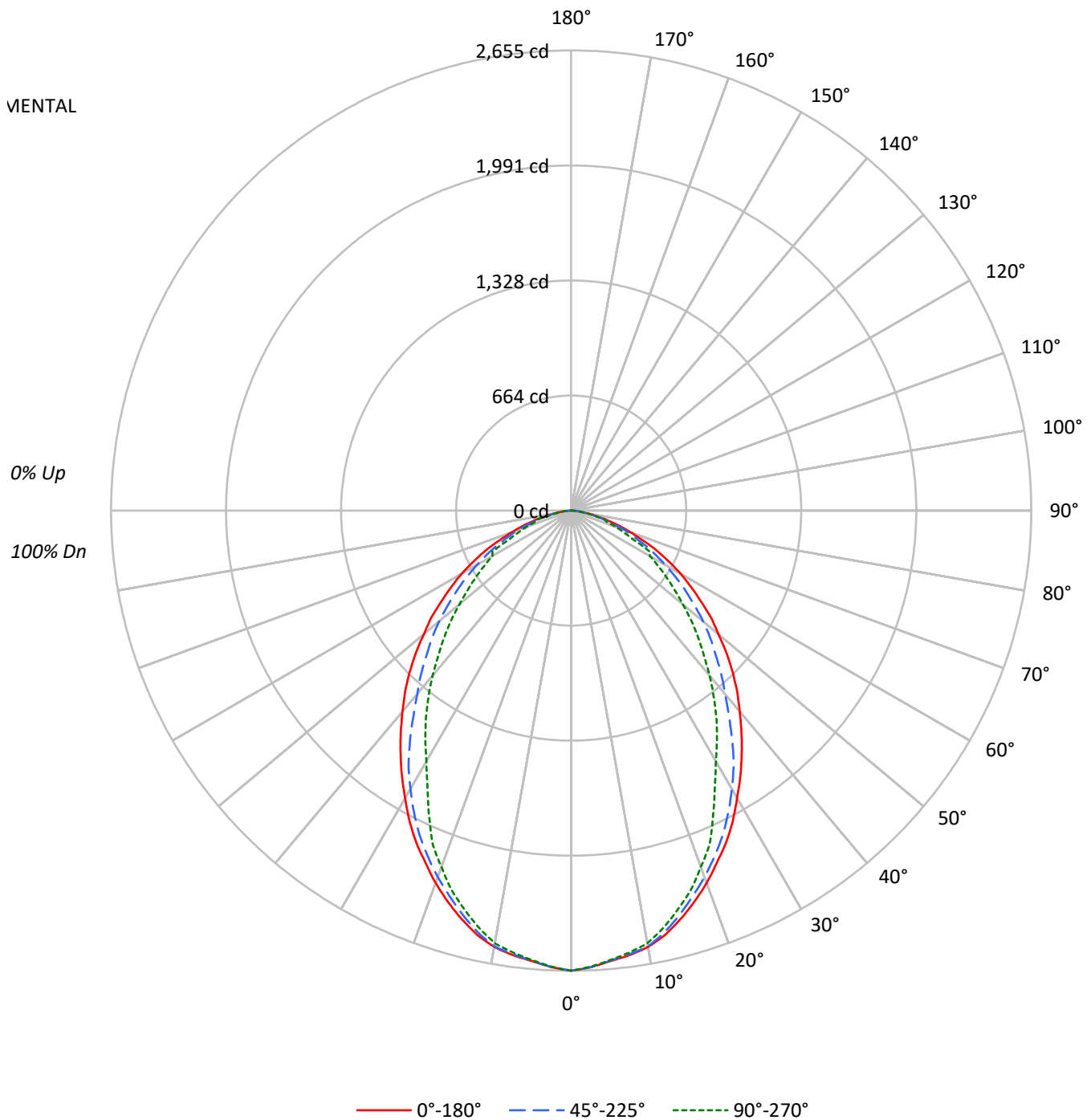
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7144	7144	7144
5°	7047	7039	7031
10°	6986	6978	6927
15°	6798	6729	6635
20°	6548	6443	6267
25°	6279	6142	5760
30°	5951	5760	5188
35°	5636	5324	4799
40°	5316	4852	4367
45°	5011	4485	3948
50°	4639	4163	3521
55°	4291	3773	3154
60°	3932	3370	2824
65°	3459	2951	2502
70°	2850	2584	2125
75°	2266	1979	2074
80°	1522	1427	1331
85°	948	1136	1328

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5011 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	247.1	4.7
10°-20°	678.2	13.0
20°-30°	939.0	18.0
30°-40°	1001.2	19.2
40°-50°	913.4	17.5
50°-60°	715.6	13.7
60°-70°	466.4	8.9
70°-80°	206.6	4.0
80°-90°	44.4	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°	1864.4	35.8
0°-40°	2865.6	55.0
0°-60°	4494.6	86.2
0°-90°	5212.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5212.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2655	2655	2655	2655	2655	
5°	2609	2606	2606	2603	2603	248
15°	2440	2440	2416	2391	2382	686
25°	2115	2102	2069	1995	1940	971
35°	1716	1703	1621	1498	1461	1073
45°	1317	1289	1179	1080	1037	1014
55°	915	887	804	709	672	820
65°	543	513	464	473	393	535
75°	218	203	190	181	200	234
85°	31	34	37	40	43	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2654.9	2654.9	2654.9	2654.9	2654.9
2.5°	2636.5	2636.5	2636.5	2633.4	2633.4
5°	2608.9	2605.8	2605.8	2602.7	2602.7
7.5°	2587.4	2584.3	2581.3	2578.2	2572.1
10°	2556.7	2556.7	2553.6	2538.3	2535.2
12.5°	2507.6	2504.5	2492.3	2470.8	2464.6
15°	2440.1	2440.1	2415.5	2391.0	2381.8
17.5°	2366.4	2363.3	2332.6	2308.1	2295.8
20°	2286.6	2280.5	2249.8	2209.9	2188.4
22.5°	2197.6	2197.6	2160.8	2108.6	2087.1
25°	2114.7	2102.5	2068.7	1995.0	1939.8
27.5°	2019.6	2001.2	1964.3	1860.0	1795.5
30°	1915.2	1906.0	1853.8	1718.8	1669.7
32.5°	1817.0	1801.7	1746.4	1605.2	1565.3
35°	1715.7	1703.4	1620.6	1497.8	1461.0
37.5°	1614.4	1599.1	1494.7	1396.5	1350.5
40°	1513.2	1494.7	1381.2	1292.2	1243.1
42.5°	1418.0	1393.5	1283.0	1187.8	1132.6
45°	1316.7	1289.1	1178.6	1080.4	1037.4
47.5°	1215.4	1190.9	1089.6	988.3	939.2
50°	1108.0	1086.5	994.4	893.2	841.0
52.5°	1019.0	985.2	896.2	794.9	752.0
55°	914.6	887.0	804.2	709.0	672.2
57.5°	819.5	791.9	715.1	626.1	595.4
60°	730.5	690.6	626.1	549.4	524.8
62.5°	632.3	601.6	546.3	481.9	512.6
65°	543.3	512.6	463.5	472.7	392.9
67.5°	445.0	429.7	386.7	343.8	331.5
70°	362.2	343.8	328.4	282.4	270.1
72.5°	288.5	270.1	248.6	224.1	214.8
75°	217.9	202.6	190.3	181.1	199.5
77.5°	150.4	144.3	135.0	125.8	122.8
80°	98.2	95.1	92.1	89.0	85.9
82.5°	58.3	58.3	58.3	58.3	58.3
85°	30.7	33.8	36.8	39.9	43.0
87.5°	18.4	18.4	21.5	24.6	27.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)