

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: P561770

Luminaire Tested: FSR-12-4-LD4-2STD-35-UNV-93-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561770
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-93-94-EDD-90
Description: 1X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5582.0 lumens
Efficiency: N/A
Efficacy: 83.8 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

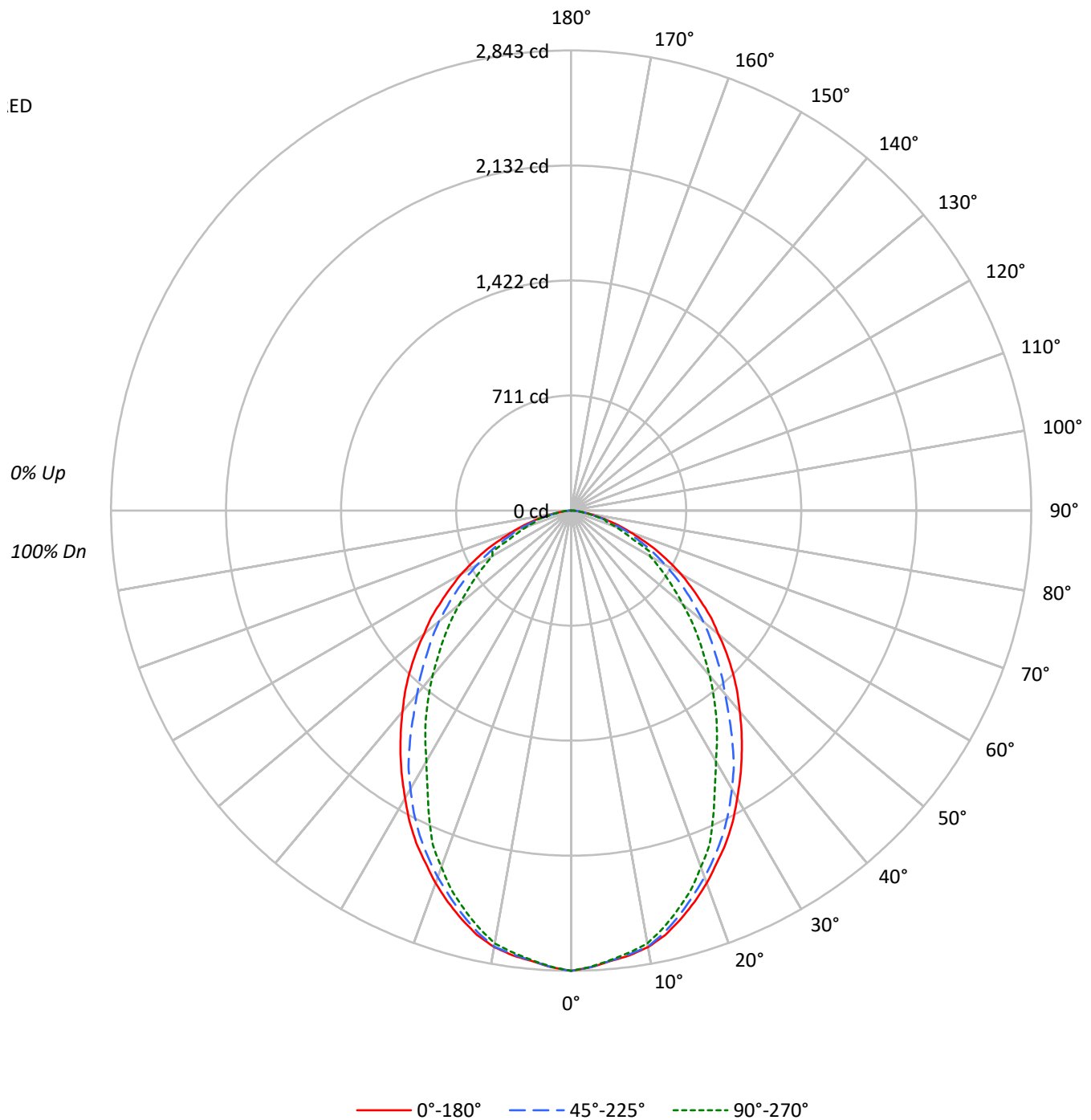
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7652	7652	7652
5°	7548	7539	7530
10°	7482	7473	7419
15°	7280	7207	7106
20°	7013	6900	6712
25°	6725	6578	6168
30°	6374	6169	5556
35°	6036	5702	5140
40°	5693	5196	4677
45°	5367	4804	4228
50°	4968	4459	3771
55°	4596	4040	3377
60°	4210	3609	3025
65°	3705	3161	2679
70°	3052	2767	2276
75°	2427	2119	2222
80°	1630	1528	1426
85°	1016	1216	1420

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5367 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	264.7	4.7
10°-20°	726.4	13.0
20°-30°	1005.6	18.0
30°-40°	1072.3	19.2
40°-50°	978.3	17.5
50°-60°	766.4	13.7
60°-70°	499.5	8.9
70°-80°	221.3	4.0
80°-90°	47.5	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°	1996.7	35.8
0°-40°	3069.0	55.0
0°-60°	4813.7	86.2
0°-90°	5582.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5582.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2843	2843	2843	2843	2843	
5°	2794	2791	2791	2788	2788	265
15°	2613	2613	2587	2561	2551	735
25°	2265	2252	2216	2137	2078	1040
35°	1838	1824	1736	1604	1565	1149
45°	1410	1381	1262	1157	1111	1086
55°	980	950	861	759	720	879
65°	582	549	496	506	421	573
75°	233	217	204	194	214	250
85°	33	36	39	43	46	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2843.4	2843.4	2843.4	2843.4	2843.4
2.5°	2823.7	2823.7	2823.7	2820.4	2820.4
5°	2794.1	2790.8	2790.8	2787.5	2787.5
7.5°	2771.1	2767.8	2764.5	2761.2	2754.6
10°	2738.2	2738.2	2734.9	2718.5	2715.2
12.5°	2685.6	2682.3	2669.2	2646.2	2639.6
15°	2613.3	2613.3	2587.0	2560.7	2550.8
17.5°	2534.4	2531.1	2498.2	2471.9	2458.8
20°	2448.9	2442.4	2409.5	2366.8	2343.7
22.5°	2353.6	2353.6	2314.2	2258.3	2235.3
25°	2264.9	2251.7	2215.5	2136.7	2077.5
27.5°	2163.0	2143.2	2103.8	1992.0	1923.0
30°	2051.2	2041.3	1985.4	1840.8	1788.2
32.5°	1946.0	1929.6	1870.4	1719.2	1676.5
35°	1837.5	1824.4	1735.6	1604.1	1564.7
37.5°	1729.0	1712.6	1600.8	1495.7	1446.4
40°	1620.6	1600.8	1479.2	1383.9	1331.3
42.5°	1518.7	1492.4	1374.0	1272.1	1213.0
45°	1410.2	1380.6	1262.3	1157.1	1111.1
47.5°	1301.7	1275.4	1166.9	1058.5	1005.9
50°	1186.7	1163.7	1065.0	956.6	900.7
52.5°	1091.3	1055.2	959.9	851.4	805.4
55°	979.6	950.0	861.2	759.3	719.9
57.5°	877.7	848.1	765.9	670.6	637.7
60°	782.3	739.6	670.6	588.4	562.1
62.5°	677.2	644.3	585.1	516.1	549.0
65°	581.8	549.0	496.4	506.2	420.8
67.5°	476.6	460.2	414.2	368.2	355.0
70°	387.9	368.2	351.7	302.4	289.3
72.5°	309.0	289.3	266.3	240.0	230.1
75°	233.4	217.0	203.8	193.9	213.7
77.5°	161.1	154.5	144.6	134.8	131.5
80°	105.2	101.9	98.6	95.3	92.0
82.5°	62.5	62.5	62.5	62.5	62.5
85°	32.9	36.2	39.4	42.7	46.0
87.5°	19.7	19.7	23.0	26.3	29.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)