

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: P562791

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-93-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562791
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-24-4-LD4-2LO-40-UNV-93-87-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5530.0 lumens
Efficiency: N/A
Efficacy: 118.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

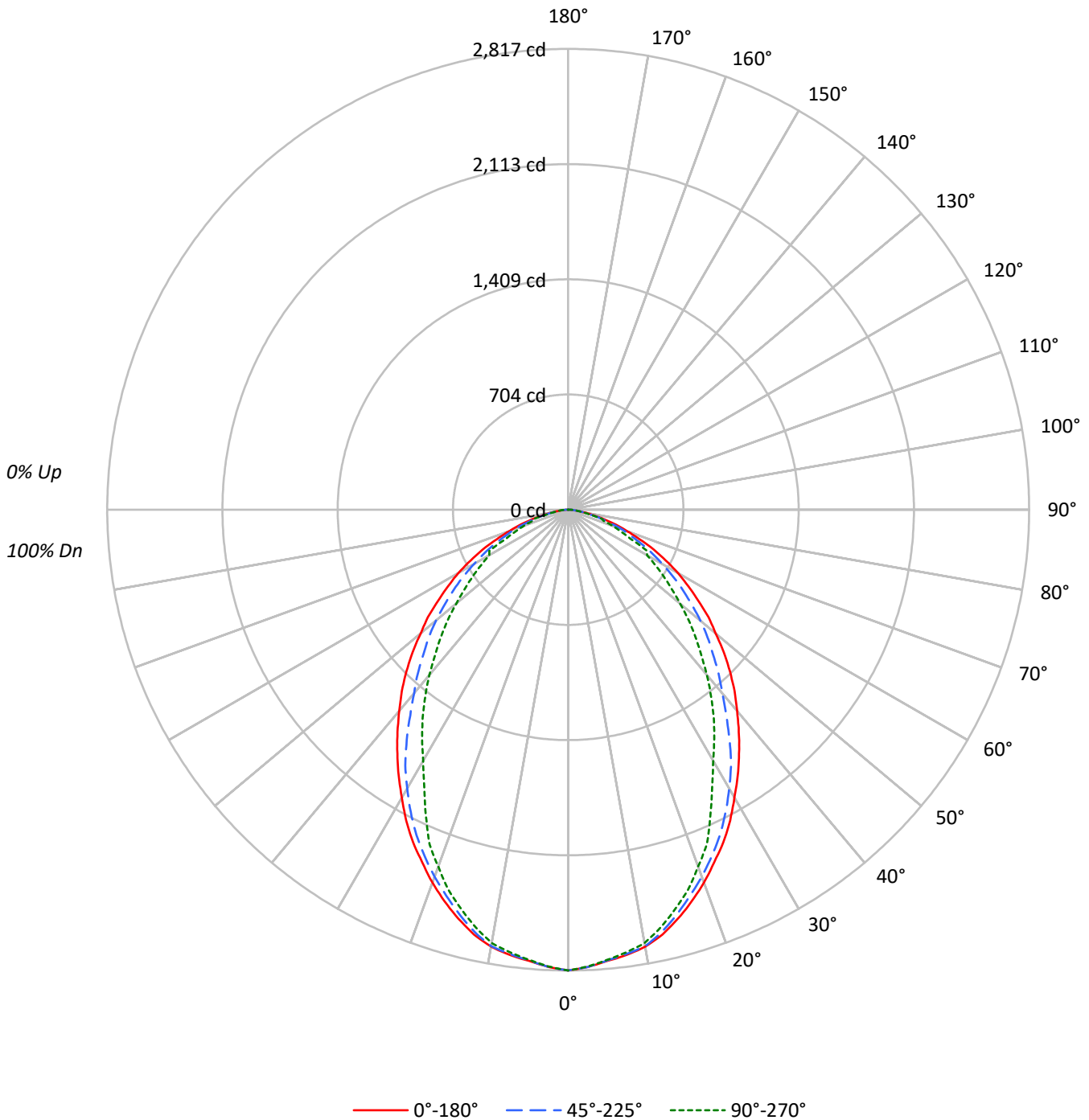
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3790	3790	3790
5°	3739	3734	3730
10°	3706	3702	3675
15°	3606	3570	3520
20°	3474	3418	3325
25°	3331	3259	3055
30°	3157	3056	2752
35°	2990	2824	2546
40°	2820	2574	2317
45°	2658	2379	2094
50°	2461	2209	1868
55°	2276	2001	1673
60°	2086	1788	1499
65°	1835	1565	1327
70°	1512	1371	1127
75°	1202	1050	1101
80°	807	757	707
85°	503	604	704

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2658 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	262.2	4.7
10°-20°	719.6	13.0
20°-30°	996.3	18.0
30°-40°	1062.3	19.2
40°-50°	969.1	17.5
50°-60°	759.2	13.7
60°-70°	494.8	8.9
70°-80°	219.2	4.0
80°-90°	47.1	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°	1978.1	35.8
0°-40°	3040.5	55.0
0°-60°	4768.8	86.2
0°-90°	5530.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5530.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2817	2817	2817	2817	2817	
5°	2768	2765	2765	2762	2762	263
15°	2589	2589	2563	2537	2527	728
25°	2244	2231	2195	2117	2058	1030
35°	1820	1807	1720	1589	1550	1138
45°	1397	1368	1250	1146	1101	1076
55°	970	941	853	752	713	870
65°	576	544	492	502	417	568
75°	231	215	202	192	212	248
85°	33	36	39	42	46	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2816.9	2816.9	2816.9	2816.9	2816.9
2.5°	2797.4	2797.4	2797.4	2794.1	2794.1
5°	2768.1	2764.8	2764.8	2761.5	2761.5
7.5°	2745.3	2742.0	2738.8	2735.5	2729.0
10°	2712.7	2712.7	2709.4	2693.2	2689.9
12.5°	2660.6	2657.3	2644.3	2621.5	2615.0
15°	2589.0	2589.0	2562.9	2536.8	2527.1
17.5°	2510.8	2507.5	2475.0	2448.9	2435.9
20°	2426.1	2419.6	2387.0	2344.7	2321.9
22.5°	2331.7	2331.7	2292.6	2237.2	2214.4
25°	2243.8	2230.7	2194.9	2116.8	2058.1
27.5°	2142.8	2123.3	2084.2	1973.5	1905.1
30°	2032.1	2022.3	1967.0	1823.7	1771.6
32.5°	1927.9	1911.6	1853.0	1703.2	1660.8
35°	1820.4	1807.4	1719.5	1589.2	1550.1
37.5°	1712.9	1696.7	1585.9	1481.7	1432.9
40°	1605.5	1585.9	1465.4	1371.0	1318.9
42.5°	1504.5	1478.5	1361.2	1260.3	1201.7
45°	1397.1	1367.7	1250.5	1146.3	1100.7
47.5°	1289.6	1263.5	1156.1	1048.6	996.5
50°	1175.6	1152.8	1055.1	947.7	892.3
52.5°	1081.2	1045.3	950.9	843.4	797.9
55°	970.4	941.1	853.2	752.3	713.2
57.5°	869.5	840.2	758.8	664.3	631.8
60°	775.1	732.7	664.3	582.9	556.9
62.5°	670.8	638.3	579.7	511.3	543.8
65°	576.4	543.8	491.7	501.5	416.8
67.5°	472.2	455.9	410.3	364.7	351.7
70°	384.3	364.7	348.4	299.6	286.6
72.5°	306.1	286.6	263.8	237.7	228.0
75°	231.2	214.9	201.9	192.1	211.7
77.5°	159.6	153.1	143.3	133.5	130.3
80°	104.2	101.0	97.7	94.4	91.2
82.5°	61.9	61.9	61.9	61.9	61.9
85°	32.6	35.8	39.1	42.3	45.6
87.5°	19.5	19.5	22.8	26.1	29.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)