

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: P561902

Luminaire Tested: FSR-12-4-LD4-2STD-50-UNV-93-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561902
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-50-UNV-93-97-EDD-90
Description: 1X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5684.0 lumens
Efficiency: N/A
Efficacy: 85.3 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

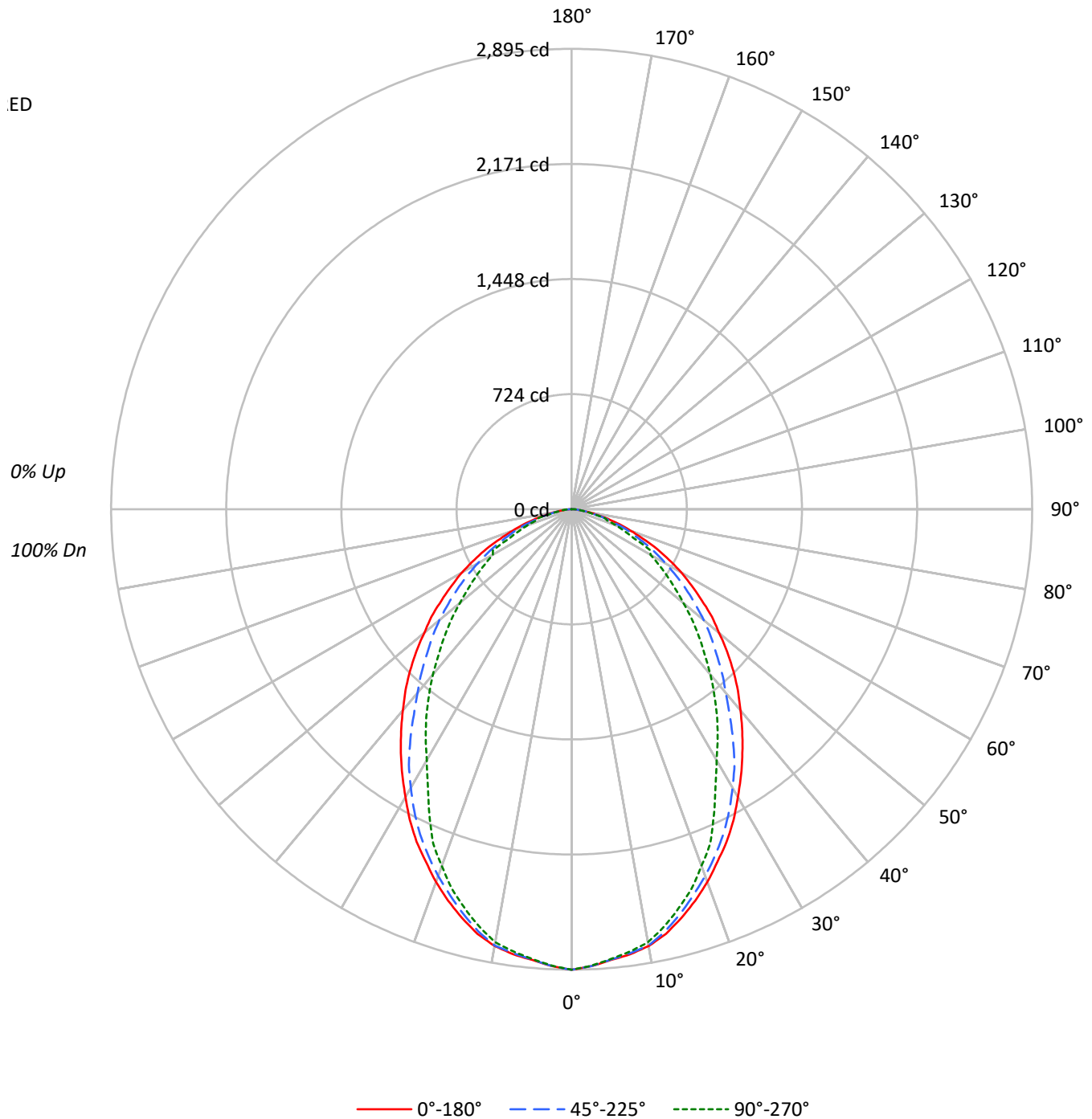
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7791	7791	7791
5°	7685	7676	7668
10°	7619	7610	7555
15°	7413	7339	7236
20°	7141	7026	6834
25°	6847	6698	6281
30°	6490	6282	5658
35°	6147	5806	5234
40°	5797	5291	4762
45°	5465	4891	4306
50°	5058	4540	3839
55°	4680	4115	3439
60°	4287	3675	3081
65°	3773	3218	2728
70°	3108	2818	2318
75°	2471	2157	2262
80°	1660	1556	1452
85°	1034	1241	1448

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5465 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	269.5	4.7
10°-20°	739.7	13.0
20°-30°	1024.0	18.0
30°-40°	1091.9	19.2
40°-50°	996.1	17.5
50°-60°	780.4	13.7
60°-70°	508.6	8.9
70°-80°	225.3	4.0
80°-90°	48.4	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°	2033.2	35.8
0°-40°	3125.1	55.0
0°-60°	4901.6	86.2
0°-90°	5684.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5684.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2895	2895	2895	2895	2895	
5°	2845	2842	2842	2838	2838	270
15°	2661	2661	2634	2608	2598	748
25°	2306	2293	2256	2176	2115	1059
35°	1871	1858	1767	1633	1593	1170
45°	1436	1406	1285	1178	1131	1106
55°	998	967	877	773	733	895
65°	592	559	505	516	428	584
75°	238	221	208	198	218	255
85°	34	37	40	44	47	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2895.4	2895.4	2895.4	2895.4	2895.4
2.5°	2875.3	2875.3	2875.3	2871.9	2871.9
5°	2845.1	2841.8	2841.8	2838.5	2838.5
7.5°	2821.7	2818.4	2815.0	2811.7	2805.0
10°	2788.2	2788.2	2784.9	2768.2	2764.8
12.5°	2734.7	2731.3	2718.0	2694.5	2687.8
15°	2661.0	2661.0	2634.3	2607.5	2597.5
17.5°	2580.7	2577.4	2543.9	2517.1	2503.7
20°	2493.7	2487.0	2453.5	2410.0	2386.6
22.5°	2396.6	2396.6	2356.4	2299.5	2276.1
25°	2306.2	2292.9	2256.0	2175.7	2115.4
27.5°	2202.5	2182.4	2142.2	2028.4	1958.1
30°	2088.7	2078.6	2021.7	1874.4	1820.9
32.5°	1981.6	1964.8	1904.6	1750.6	1707.1
35°	1871.1	1857.7	1767.3	1633.4	1593.3
37.5°	1760.6	1743.9	1630.1	1523.0	1472.8
40°	1650.2	1630.1	1506.3	1409.2	1355.6
42.5°	1546.4	1519.6	1399.1	1295.4	1235.1
45°	1436.0	1405.8	1285.3	1178.2	1131.4
47.5°	1325.5	1298.7	1188.3	1077.8	1024.3
50°	1208.3	1184.9	1084.5	974.0	917.1
52.5°	1111.3	1074.5	977.4	866.9	820.1
55°	997.5	967.3	877.0	773.2	733.0
57.5°	893.7	863.6	779.9	682.8	649.4
60°	796.6	753.1	682.8	599.2	572.4
62.5°	689.5	656.1	595.8	525.5	559.0
65°	592.5	559.0	505.4	515.5	428.4
67.5°	485.3	468.6	421.8	374.9	361.5
70°	395.0	374.9	358.2	307.9	294.6
72.5°	314.6	294.6	271.1	244.3	234.3
75°	237.7	220.9	207.5	197.5	217.6
77.5°	164.0	157.3	147.3	137.2	133.9
80°	107.1	103.8	100.4	97.1	93.7
82.5°	63.6	63.6	63.6	63.6	63.6
85°	33.5	36.8	40.2	43.5	46.9
87.5°	20.1	20.1	23.4	26.8	30.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)