

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: P590503

Luminaire Tested: FSR-24-2-LD4-3HI-50-UNV-82-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590503
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-3HI-50-UNV-82-86-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6646.0 lumens
Efficiency: N/A
Efficacy: 102.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

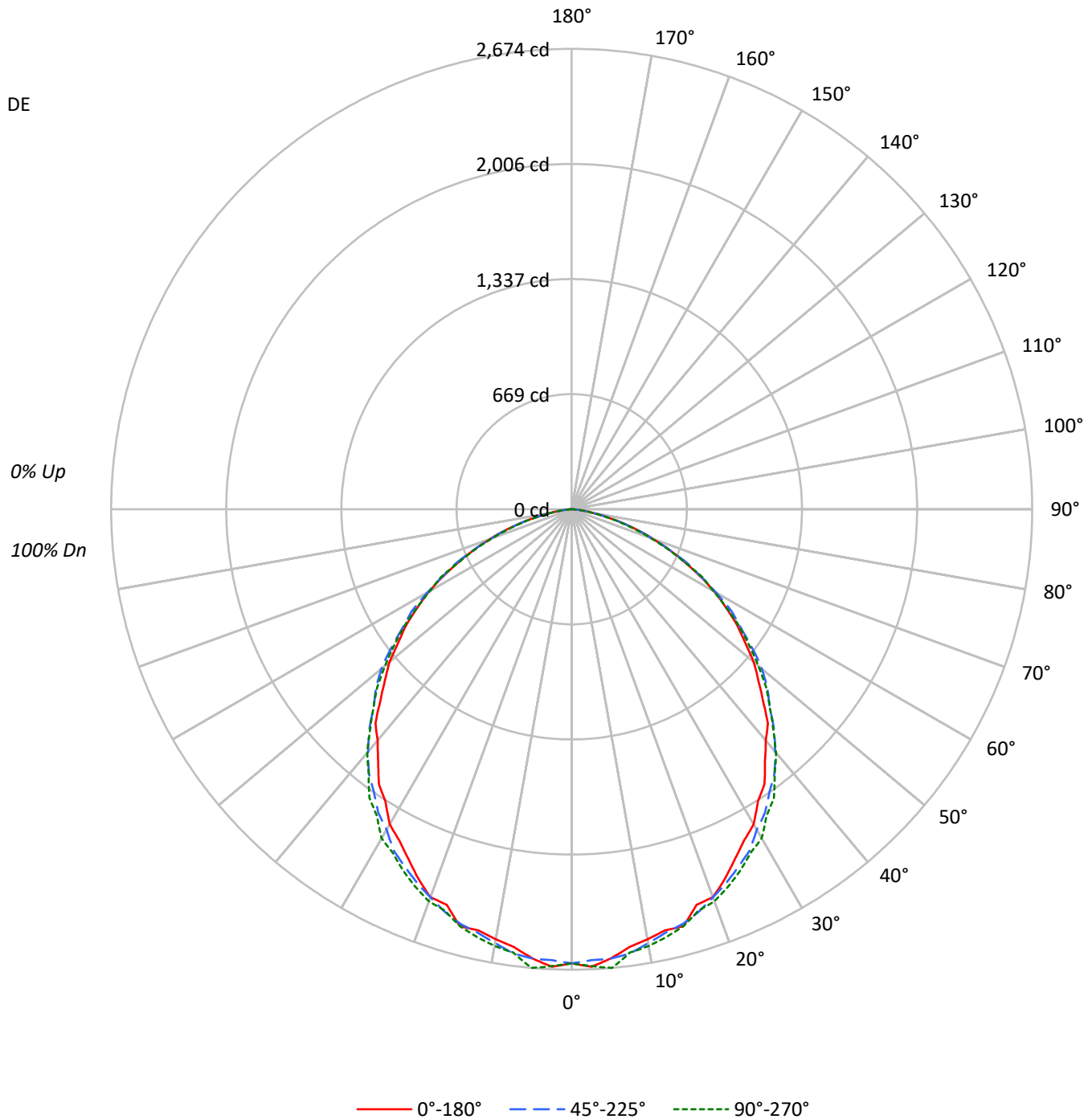
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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																												
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86																												
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73																												
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62																												
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53																												
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46																												
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41																												
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36																												
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32																												
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29																												
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7096	7096	7096
5°	7072	7075	7224
10°	6929	6990	7039
15°	6984	6946	6985
20°	6866	6866	6939
25°	6655	6801	6875
30°	6563	6679	6857
35°	6409	6577	6724
40°	6159	6456	6485
45°	5973	6186	6195
50°	5777	6038	5923
55°	5505	5612	5572
60°	5147	5198	5105
65°	4590	4707	4557
70°	3938	3951	3841
75°	3119	3112	2991
80°	2089	2032	1953
85°	1136	1124	1050

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6345 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	248.0	3.7
10°-20°	703.0	10.6
20°-30°	1053.2	15.8
30°-40°	1248.3	18.8
40°-50°	1250.6	18.8
50°-60°	1061.6	16.0
60°-70°	715.7	10.8
70°-80°	314.5	4.7
80°-90°	51.1	0.8
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°	2004.3	30.2
0°-40°	3252.6	48.9
0°-60°	5564.7	83.7
0°-90°	6646.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6646.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2637	2637	2637	2637	2637	
5°	2618	2612	2619	2611	2674	247
15°	2507	2478	2493	2506	2507	698
25°	2241	2254	2290	2320	2316	1036
35°	1951	1957	2002	2048	2047	1211
45°	1570	1599	1625	1667	1628	1214
55°	1173	1165	1196	1188	1188	1044
65°	721	711	739	711	716	717
75°	300	294	299	278	288	321
85°	37	36	36	35	34	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2637.0	2637.0	2637.0	2637.0	2637.0
2.5°	2659.8	2639.7	2621.0	2642.8	2656.0
5°	2618.2	2612.1	2619.3	2611.4	2674.4
7.5°	2564.4	2587.9	2601.6	2593.0	2596.8
10°	2535.8	2527.7	2558.0	2579.1	2576.0
12.5°	2505.2	2517.5	2519.2	2542.0	2544.0
15°	2506.9	2478.0	2493.3	2506.2	2507.2
17.5°	2409.5	2440.9	2451.4	2481.0	2444.3
20°	2397.6	2374.8	2397.6	2427.9	2423.1
22.5°	2324.4	2298.9	2347.9	2374.8	2373.1
25°	2241.3	2253.6	2290.4	2320.3	2315.6
27.5°	2168.5	2182.8	2235.2	2276.4	2249.8
30°	2112.3	2105.1	2149.4	2186.2	2206.6
32.5°	2011.9	2037.7	2089.5	2125.9	2106.5
35°	1950.9	1956.7	2002.0	2048.3	2046.9
37.5°	1844.3	1871.2	1934.9	1947.8	1935.9
40°	1753.4	1780.3	1837.9	1851.8	1846.0
42.5°	1686.4	1691.1	1740.5	1756.5	1731.0
45°	1569.6	1598.9	1625.4	1667.3	1627.8
47.5°	1470.2	1483.8	1541.0	1552.2	1531.4
50°	1379.9	1384.7	1442.2	1428.3	1414.7
52.5°	1266.6	1286.6	1319.0	1316.3	1300.3
55°	1173.3	1165.4	1196.1	1187.9	1187.6
57.5°	1061.3	1074.9	1100.1	1087.1	1066.4
60°	956.4	956.7	965.9	951.3	948.6
62.5°	839.6	843.7	845.7	827.7	857.0
65°	720.8	711.2	739.2	710.9	715.7
67.5°	611.5	616.3	613.5	595.8	602.6
70°	500.5	506.6	502.2	482.1	488.2
72.5°	399.0	391.5	396.3	371.1	382.7
75°	300.0	293.8	299.3	278.2	287.7
77.5°	204.3	209.1	205.6	194.4	200.9
80°	134.8	131.1	131.1	124.6	126.0
82.5°	78.6	74.9	73.9	71.8	74.9
85°	36.8	35.7	36.4	35.4	34.0
87.5°	13.3	13.6	13.6	12.9	12.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)