

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: P562794

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-93-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562794
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-93-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4966.9 lumens
Efficiency: N/A
Efficacy: 106.1 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

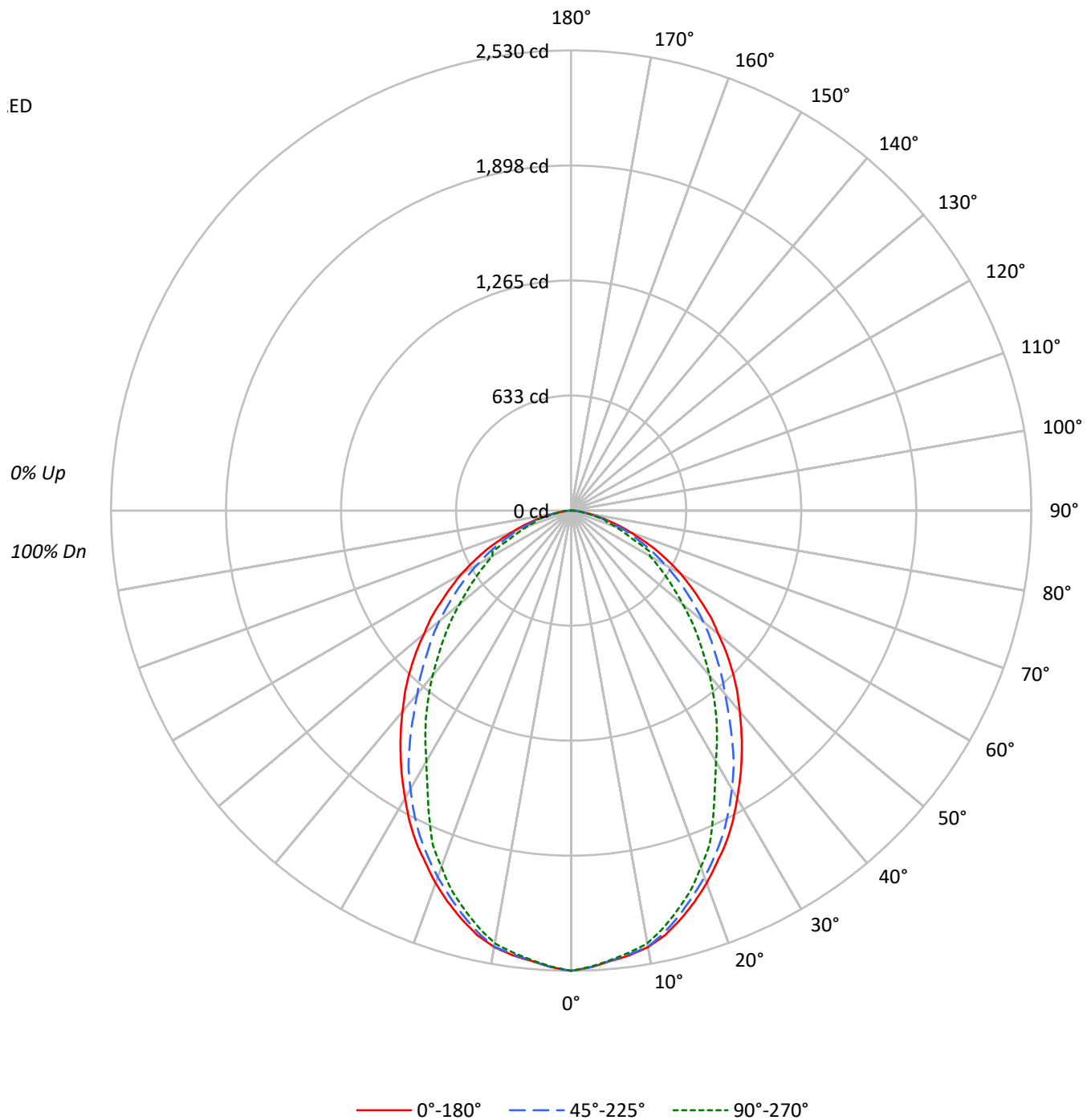
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3404	3404	3404
5°	3358	3354	3350
10°	3329	3325	3301
15°	3239	3207	3162
20°	3120	3070	2986
25°	2992	2927	2744
30°	2836	2745	2472
35°	2686	2537	2287
40°	2533	2312	2081
45°	2388	2137	1881
50°	2210	1984	1677
55°	2045	1798	1503
60°	1873	1606	1346
65°	1648	1406	1192
70°	1358	1231	1013
75°	1080	943	988
80°	725	680	635
85°	451	542	631

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2388 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	235.5	4.7
10°-20°	646.4	13.0
20°-30°	894.8	18.0
30°-40°	954.2	19.2
40°-50°	870.5	17.5
50°-60°	681.9	13.7
60°-70°	444.5	8.9
70°-80°	196.9	4.0
80°-90°	42.3	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°	1776.7	35.8
0°-40°	2730.9	55.0
0°-60°	4283.3	86.2
0°-90°	4966.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4966.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2530	2530	2530	2530	2530	
5°	2486	2483	2483	2480	2480	236
15°	2325	2325	2302	2279	2270	654
25°	2015	2004	1971	1901	1849	925
35°	1635	1623	1544	1427	1392	1022
45°	1255	1228	1123	1030	989	967
55°	872	845	766	676	641	782
65°	518	488	442	450	374	510
75°	208	193	181	173	190	223
85°	29	32	35	38	41	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2530.1	2530.1	2530.1	2530.1	2530.1
2.5°	2512.6	2512.6	2512.6	2509.6	2509.6
5°	2486.2	2483.3	2483.3	2480.4	2480.4
7.5°	2465.8	2462.8	2459.9	2457.0	2451.1
10°	2436.5	2436.5	2433.6	2419.0	2416.0
12.5°	2389.7	2386.8	2375.1	2354.6	2348.8
15°	2325.4	2325.4	2302.0	2278.6	2269.8
17.5°	2255.2	2252.2	2223.0	2199.6	2187.9
20°	2179.1	2173.3	2144.0	2106.0	2085.5
22.5°	2094.3	2094.3	2059.2	2009.5	1989.0
25°	2015.3	2003.6	1971.4	1901.2	1848.6
27.5°	1924.6	1907.1	1872.0	1772.5	1711.1
30°	1825.2	1816.4	1766.7	1638.0	1591.2
32.5°	1731.6	1717.0	1664.3	1529.8	1491.7
35°	1635.1	1623.4	1544.4	1427.4	1392.3
37.5°	1538.5	1523.9	1424.5	1330.9	1287.0
40°	1442.0	1424.5	1316.2	1231.4	1184.6
42.5°	1351.3	1327.9	1222.6	1132.0	1079.3
45°	1254.8	1228.5	1123.2	1029.6	988.6
47.5°	1158.3	1134.9	1038.4	941.8	895.0
50°	1055.9	1035.4	947.7	851.2	801.4
52.5°	971.1	938.9	854.1	757.6	716.6
55°	871.6	845.3	766.3	675.7	640.6
57.5°	781.0	754.6	681.5	596.7	567.4
60°	696.1	658.1	596.7	523.6	500.2
62.5°	602.5	573.3	520.6	459.2	488.5
65°	517.7	488.5	441.7	450.4	374.4
67.5°	424.1	409.5	368.5	327.6	315.9
70°	345.1	327.6	313.0	269.1	257.4
72.5°	274.9	257.4	236.9	213.5	204.7
75°	207.7	193.0	181.3	172.6	190.1
77.5°	143.3	137.5	128.7	119.9	117.0
80°	93.6	90.7	87.7	84.8	81.9
82.5°	55.6	55.6	55.6	55.6	55.6
85°	29.2	32.2	35.1	38.0	40.9
87.5°	17.5	17.5	20.5	23.4	26.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)