

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: P562812

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-80-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562812
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-50-UNV-80-96-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5162.0 lumens
Efficiency: N/A
Efficacy: 110.3 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

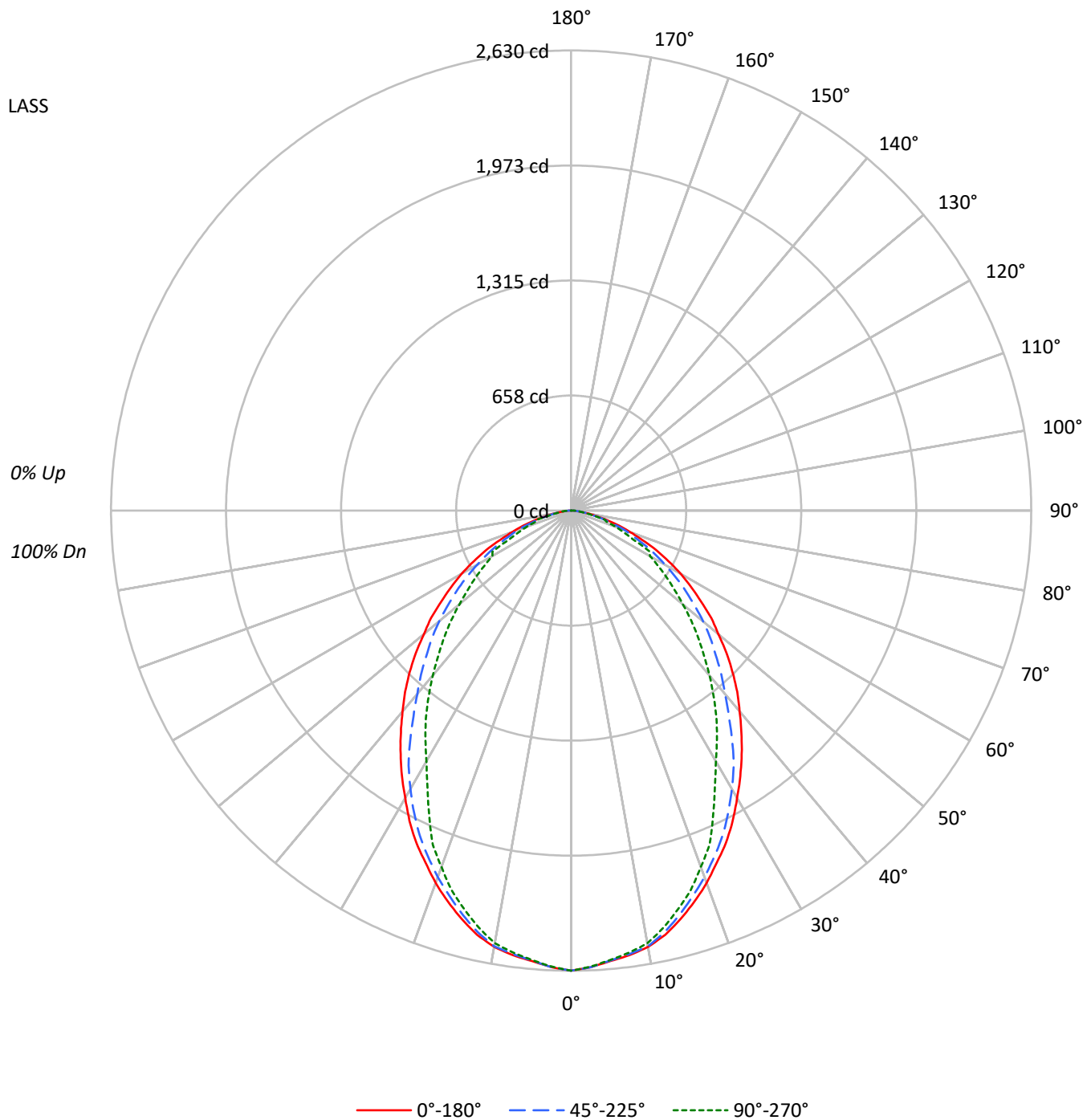
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3538	3538	3538
5°	3490	3486	3482
10°	3460	3455	3431
15°	3366	3332	3286
20°	3243	3190	3103
25°	3109	3042	2852
30°	2947	2853	2569
35°	2791	2636	2377
40°	2632	2403	2162
45°	2481	2221	1955
50°	2297	2062	1743
55°	2125	1868	1562
60°	1947	1669	1399
65°	1713	1461	1239
70°	1411	1280	1052
75°	1122	980	1027
80°	754	707	659
85°	469	563	658

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2481 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	244.8	4.7
10°-20°	671.7	13.0
20°-30°	930.0	18.0
30°-40°	991.6	19.2
40°-50°	904.7	17.5
50°-60°	708.7	13.7
60°-70°	461.9	8.9
70°-80°	204.7	4.0
80°-90°	43.9	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°	1846.5	35.8
0°-40°	2838.1	55.0
0°-60°	4451.5	86.2
0°-90°	5162.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5162.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2630	2630	2630	2630	2630	
5°	2584	2581	2581	2578	2578	245
15°	2417	2417	2392	2368	2359	679
25°	2094	2082	2049	1976	1921	962
35°	1699	1687	1605	1483	1447	1062
45°	1304	1277	1167	1070	1028	1005
55°	906	878	796	702	666	812
65°	538	508	459	468	389	530
75°	216	201	188	179	198	231
85°	30	33	36	40	43	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2629.5	2629.5	2629.5	2629.5	2629.5
2.5°	2611.2	2611.2	2611.2	2608.2	2608.2
5°	2583.9	2580.8	2580.8	2577.8	2577.8
7.5°	2562.6	2559.5	2556.5	2553.5	2547.4
10°	2532.2	2532.2	2529.1	2513.9	2510.9
12.5°	2483.5	2480.5	2468.3	2447.1	2441.0
15°	2416.7	2416.7	2392.3	2368.0	2358.9
17.5°	2343.7	2340.7	2310.3	2286.0	2273.8
20°	2264.7	2258.6	2228.2	2188.7	2167.4
22.5°	2176.5	2176.5	2140.0	2088.4	2067.1
25°	2094.4	2082.3	2048.8	1975.9	1921.2
27.5°	2000.2	1982.0	1945.5	1842.1	1778.3
30°	1896.9	1887.7	1836.1	1702.3	1653.7
32.5°	1799.6	1784.4	1729.7	1589.8	1550.3
35°	1699.3	1687.1	1605.0	1483.4	1447.0
37.5°	1599.0	1583.8	1480.4	1383.1	1337.5
40°	1498.6	1480.4	1367.9	1279.8	1231.1
42.5°	1404.4	1380.1	1270.6	1176.4	1121.7
45°	1304.1	1276.7	1167.3	1070.0	1027.5
47.5°	1203.8	1179.5	1079.1	978.8	930.2
50°	1097.4	1076.1	984.9	884.6	832.9
52.5°	1009.2	975.8	887.6	787.3	744.8
55°	905.9	878.5	796.4	702.2	665.7
57.5°	811.6	784.3	708.3	620.1	589.7
60°	723.5	684.0	620.1	544.1	519.8
62.5°	626.2	595.8	541.1	477.3	507.7
65°	538.1	507.7	459.0	468.1	389.1
67.5°	440.8	425.6	383.0	340.5	328.3
70°	358.7	340.5	325.3	279.7	267.5
72.5°	285.7	267.5	246.2	221.9	212.8
75°	215.8	200.6	188.5	179.4	197.6
77.5°	149.0	142.9	133.8	124.6	121.6
80°	97.3	94.2	91.2	88.2	85.1
82.5°	57.8	57.8	57.8	57.8	57.8
85°	30.4	33.4	36.5	39.5	42.6
87.5°	18.2	18.2	21.3	24.3	27.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)