

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: P562107

Luminaire Tested: FSR-24-4-LD4-1HI-50-UNV-80-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562107
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-LD4-1HI-50-UNV-80-94-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4928.0 lumens
Efficiency: N/A
Efficacy: 114.1 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

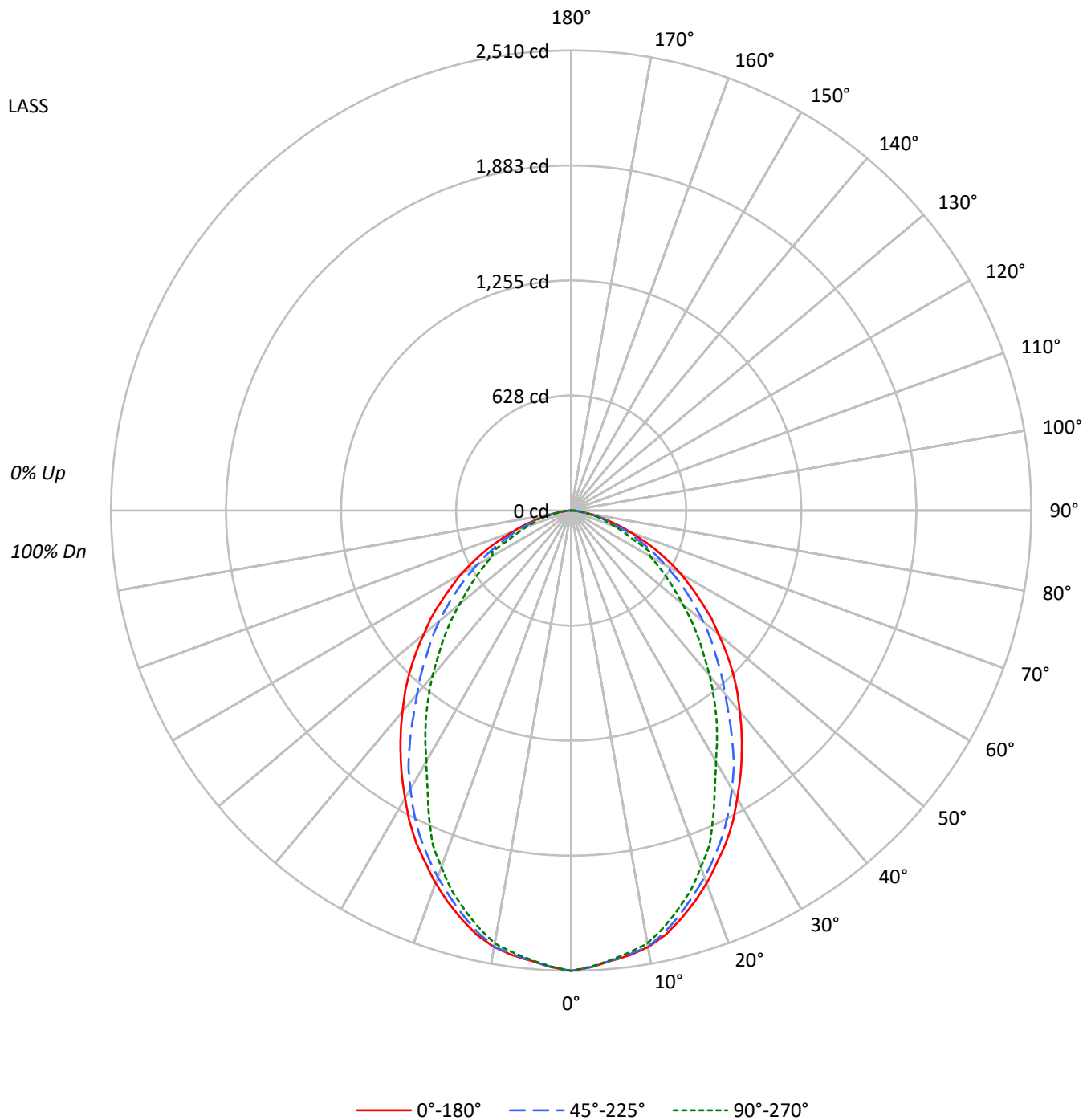
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3378	3378	3378
5°	3332	3328	3324
10°	3303	3299	3275
15°	3214	3181	3137
20°	3096	3046	2963
25°	2968	2904	2723
30°	2813	2723	2453
35°	2665	2517	2269
40°	2513	2294	2064
45°	2369	2120	1866
50°	2193	1968	1665
55°	2029	1784	1491
60°	1859	1593	1335
65°	1635	1395	1183
70°	1347	1221	1005
75°	1071	935	980
80°	720	675	630
85°	448	537	627

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2369 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	233.7	4.7
10°-20°	641.3	13.0
20°-30°	887.8	18.0
30°-40°	946.7	19.2
40°-50°	863.6	17.5
50°-60°	676.6	13.7
60°-70°	441.0	8.9
70°-80°	195.4	4.0
80°-90°	41.9	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°	1762.8	35.8
0°-40°	2709.5	55.0
0°-60°	4249.7	86.2
0°-90°	4928.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4928.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2510	2510	2510	2510	2510	
5°	2467	2464	2464	2461	2461	234
15°	2307	2307	2284	2261	2252	649
25°	2000	1988	1956	1886	1834	918
35°	1622	1611	1532	1416	1381	1014
45°	1245	1219	1114	1022	981	959
55°	865	839	760	670	636	776
65°	514	485	438	447	372	506
75°	206	192	180	171	189	221
85°	29	32	35	38	41	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2510.3	2510.3	2510.3	2510.3	2510.3
2.5°	2492.8	2492.8	2492.8	2489.9	2489.9
5°	2466.7	2463.8	2463.8	2460.9	2460.9
7.5°	2446.4	2443.5	2440.6	2437.7	2431.9
10°	2417.4	2417.4	2414.5	2400.0	2397.1
12.5°	2371.0	2368.1	2356.4	2336.1	2330.3
15°	2307.1	2307.1	2283.9	2260.7	2252.0
17.5°	2237.5	2234.6	2205.5	2182.3	2170.7
20°	2162.0	2156.2	2127.2	2089.5	2069.1
22.5°	2077.9	2077.9	2043.0	1993.7	1973.4
25°	1999.5	1987.9	1956.0	1886.3	1834.1
27.5°	1909.5	1892.1	1857.3	1758.6	1697.7
30°	1810.9	1802.2	1752.8	1625.1	1578.7
32.5°	1718.0	1703.5	1651.3	1517.8	1480.0
35°	1622.2	1610.6	1532.3	1416.2	1381.4
37.5°	1526.5	1512.0	1413.3	1320.4	1276.9
40°	1430.7	1413.3	1305.9	1221.8	1175.3
42.5°	1340.7	1317.5	1213.0	1123.1	1070.8
45°	1245.0	1218.9	1114.4	1021.5	980.9
47.5°	1149.2	1126.0	1030.2	934.5	888.0
50°	1047.6	1027.3	940.3	844.5	795.2
52.5°	963.5	931.6	847.4	751.6	711.0
55°	864.8	838.7	760.3	670.4	635.5
57.5°	774.8	748.7	676.2	592.0	563.0
60°	690.7	653.0	592.0	519.5	496.2
62.5°	597.8	568.8	516.6	455.6	484.6
65°	513.7	484.6	438.2	446.9	371.5
67.5°	420.8	406.3	365.7	325.0	313.4
70°	342.4	325.0	310.5	267.0	255.4
72.5°	272.8	255.4	235.1	211.8	203.1
75°	206.0	191.5	179.9	171.2	188.6
77.5°	142.2	136.4	127.7	119.0	116.1
80°	92.9	90.0	87.1	84.2	81.3
82.5°	55.1	55.1	55.1	55.1	55.1
85°	29.0	31.9	34.8	37.7	40.6
87.5°	17.4	17.4	20.3	23.2	26.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)