

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: P562687

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-80-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562687
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-35-UNV-80-97-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

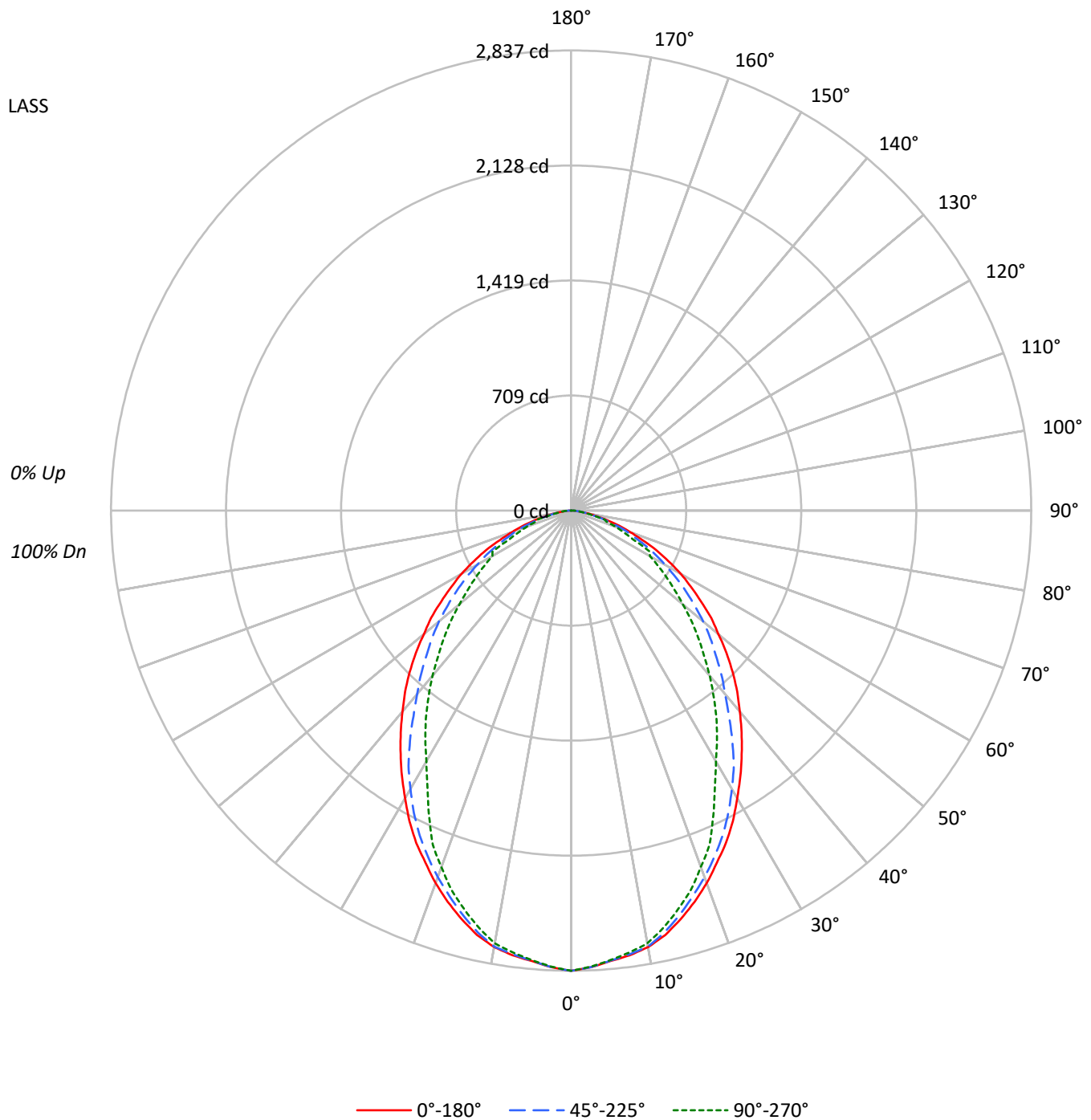
Lumens per Lamp: N/A
Luminaire Lumens: 5570.0 lumens
Efficiency: N/A
Efficacy: 119.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	3818	3818	3818
5°	3766	3761	3757
10°	3733	3728	3702
15°	3632	3596	3546
20°	3499	3443	3349
25°	3355	3282	3078
30°	3180	3078	2772
35°	3012	2845	2564
40°	2840	2592	2333
45°	2678	2397	2110
50°	2479	2225	1881
55°	2293	2016	1685
60°	2101	1801	1509
65°	1848	1577	1337
70°	1523	1381	1135
75°	1211	1057	1108
80°	814	762	711
85°	506	608	709

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2678 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	264.1	4.7
10°-20°	724.8	13.0
20°-30°	1003.5	18.0
30°-40°	1070.0	19.2
40°-50°	976.2	17.5
50°-60°	764.7	13.7
60°-70°	498.4	8.9
70°-80°	220.8	4.0
80°-90°	47.4	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°	1992.4	35.8
0°-40°	3062.4	55.0
0°-60°	4803.3	86.2
0°-90°	5570.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5570.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2837	2837	2837	2837	2837	
5°	2788	2785	2785	2782	2782	265
15°	2608	2608	2581	2555	2545	733
25°	2260	2247	2211	2132	2073	1038
35°	1834	1820	1732	1601	1561	1146
45°	1407	1378	1260	1155	1109	1084
55°	978	948	859	758	718	877
65°	581	548	495	505	420	572
75°	233	216	203	194	213	250
85°	33	36	39	43	46	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2837.3	2837.3	2837.3	2837.3	2837.3
2.5°	2817.6	2817.6	2817.6	2814.3	2814.3
5°	2788.1	2784.8	2784.8	2781.5	2781.5
7.5°	2765.1	2761.8	2758.6	2755.3	2748.7
10°	2732.3	2732.3	2729.0	2712.6	2709.4
12.5°	2679.8	2676.6	2663.4	2640.5	2633.9
15°	2607.7	2607.7	2581.4	2555.2	2545.4
17.5°	2529.0	2525.7	2492.9	2466.6	2453.5
20°	2443.7	2437.1	2404.3	2361.7	2338.7
22.5°	2348.5	2348.5	2309.2	2253.4	2230.5
25°	2260.0	2246.9	2210.8	2132.1	2073.0
27.5°	2158.3	2138.6	2099.3	1987.7	1918.9
30°	2046.8	2036.9	1981.2	1836.9	1784.4
32.5°	1941.8	1925.4	1866.4	1715.5	1672.8
35°	1833.6	1820.5	1731.9	1600.7	1561.3
37.5°	1725.3	1708.9	1597.4	1492.4	1443.2
40°	1617.1	1597.4	1476.0	1380.9	1328.4
42.5°	1515.4	1489.2	1371.1	1269.4	1210.4
45°	1407.2	1377.6	1259.6	1154.6	1108.7
47.5°	1298.9	1272.7	1164.4	1056.2	1003.7
50°	1184.1	1161.2	1062.8	954.5	898.7
52.5°	1089.0	1052.9	957.8	849.5	803.6
55°	977.5	947.9	859.4	757.7	718.3
57.5°	875.8	846.3	764.3	669.1	636.3
60°	780.7	738.0	669.1	587.1	560.9
62.5°	675.7	642.9	583.9	515.0	547.8
65°	580.6	547.8	495.3	505.1	419.9
67.5°	475.6	459.2	413.3	367.4	354.3
70°	387.1	367.4	351.0	301.8	288.6
72.5°	308.3	288.6	265.7	239.4	229.6
75°	232.9	216.5	203.4	193.5	213.2
77.5°	160.7	154.2	144.3	134.5	131.2
80°	105.0	101.7	98.4	95.1	91.8
82.5°	62.3	62.3	62.3	62.3	62.3
85°	32.8	36.1	39.4	42.6	45.9
87.5°	19.7	19.7	23.0	26.2	29.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)