

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: P561470

Luminaire Tested: FSR-12-4-LD4-2HI-50-UNV-80-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561470
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-12-4-LD4-2HI-50-UNV-80-97-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

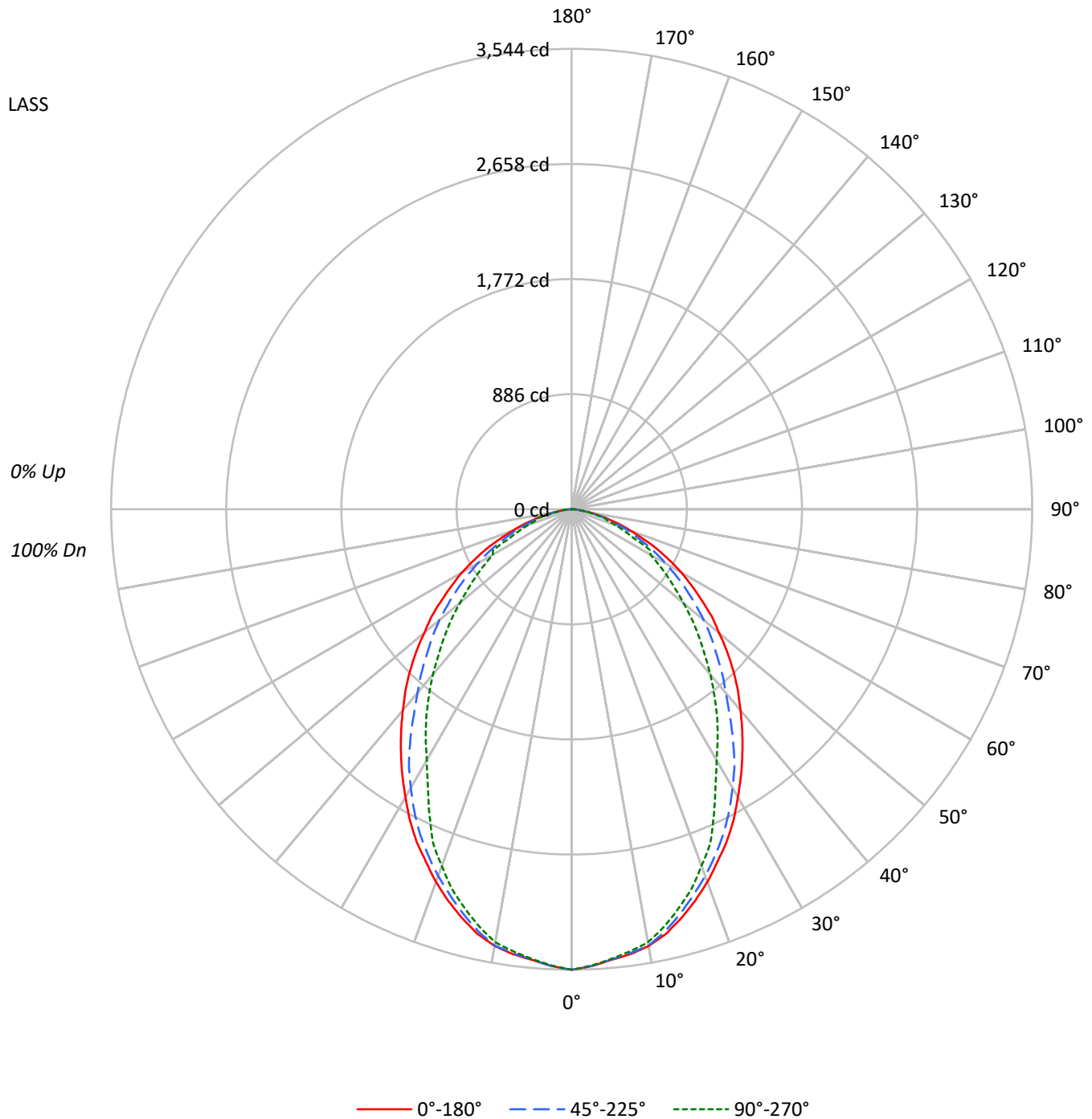
Lumens per Lamp: N/A
Luminaire Lumens: 6958.0 lumens
Efficiency: N/A
Efficacy: 80.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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																												
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9538	9538	9538
5°	9408	9397	9386
10°	9327	9315	9248
15°	9075	8984	8858
20°	8742	8601	8366
25°	8383	8200	7689
30°	7945	7690	6926
35°	7524	7107	6407
40°	7096	6477	5830
45°	6690	5988	5270
50°	6193	5558	4700
55°	5728	5036	4210
60°	5248	4499	3771
65°	4618	3940	3340
70°	3804	3449	2837
75°	3025	2641	2769
80°	2032	1905	1777
85°	1266	1519	1772

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6690 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	329.9	4.7
10°-20°	905.5	13.0
20°-30°	1253.6	18.0
30°-40°	1336.7	19.2
40°-50°	1219.4	17.5
50°-60°	955.3	13.7
60°-70°	622.6	8.9
70°-80°	275.8	4.0
80°-90°	59.2	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°	2488.9	35.8
0°-40°	3825.6	55.0
0°-60°	6000.3	86.2
0°-90°	6958.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6958.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3544	3544	3544	3544	3544	
5°	3483	3479	3479	3475	3475	331
15°	3258	3258	3225	3192	3180	916
25°	2823	2807	2762	2663	2590	1296
35°	2290	2274	2164	2000	1950	1432
45°	1758	1721	1573	1442	1385	1354
55°	1221	1184	1074	946	897	1095
65°	725	684	619	631	524	715
75°	291	270	254	242	266	312
85°	41	45	49	53	57	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3544.3	3544.3	3544.3	3544.3	3544.3
2.5°	3519.7	3519.7	3519.7	3515.6	3515.6
5°	3482.9	3478.8	3478.8	3474.7	3474.7
7.5°	3454.2	3450.1	3446.0	3441.9	3433.7
10°	3413.2	3413.2	3409.1	3388.6	3384.5
12.5°	3347.6	3343.5	3327.1	3298.5	3290.3
15°	3257.5	3257.5	3224.7	3191.9	3179.6
17.5°	3159.1	3155.1	3114.1	3081.3	3064.9
20°	3052.6	3044.4	3003.4	2950.2	2921.5
22.5°	2933.8	2933.8	2884.6	2815.0	2786.3
25°	2823.2	2806.8	2761.7	2663.4	2589.6
27.5°	2696.1	2671.6	2622.4	2483.1	2397.0
30°	2556.8	2544.5	2474.9	2294.6	2229.0
32.5°	2425.7	2405.2	2331.5	2143.0	2089.7
35°	2290.5	2274.1	2163.5	1999.6	1950.4
37.5°	2155.3	2134.8	1995.5	1864.3	1802.9
40°	2020.1	1995.5	1843.9	1725.0	1659.5
42.5°	1893.0	1860.3	1712.7	1585.7	1512.0
45°	1757.8	1720.9	1573.4	1442.3	1384.9
47.5°	1622.6	1589.8	1454.6	1319.4	1253.8
50°	1479.2	1450.5	1327.6	1192.4	1122.7
52.5°	1360.4	1315.3	1196.5	1061.2	1003.9
55°	1221.0	1184.2	1073.5	946.5	897.3
57.5°	1094.0	1057.1	954.7	835.9	794.9
60°	975.2	921.9	835.9	733.4	700.7
62.5°	844.1	803.1	729.3	643.3	684.3
65°	725.3	684.3	618.7	631.0	524.5
67.5°	594.1	573.6	516.3	458.9	442.5
70°	483.5	458.9	438.4	377.0	360.6
72.5°	385.2	360.6	331.9	299.1	286.8
75°	290.9	270.4	254.0	241.8	266.3
77.5°	200.8	192.6	180.3	168.0	163.9
80°	131.1	127.0	122.9	118.8	114.7
82.5°	77.9	77.9	77.9	77.9	77.9
85°	41.0	45.1	49.2	53.3	57.4
87.5°	24.6	24.6	28.7	32.8	36.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)