

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: P562646

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-82-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562646
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-LD4-2HI-50-UNV-82-87-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7460.0 lumens
Efficiency: N/A
Efficacy: 86.3 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

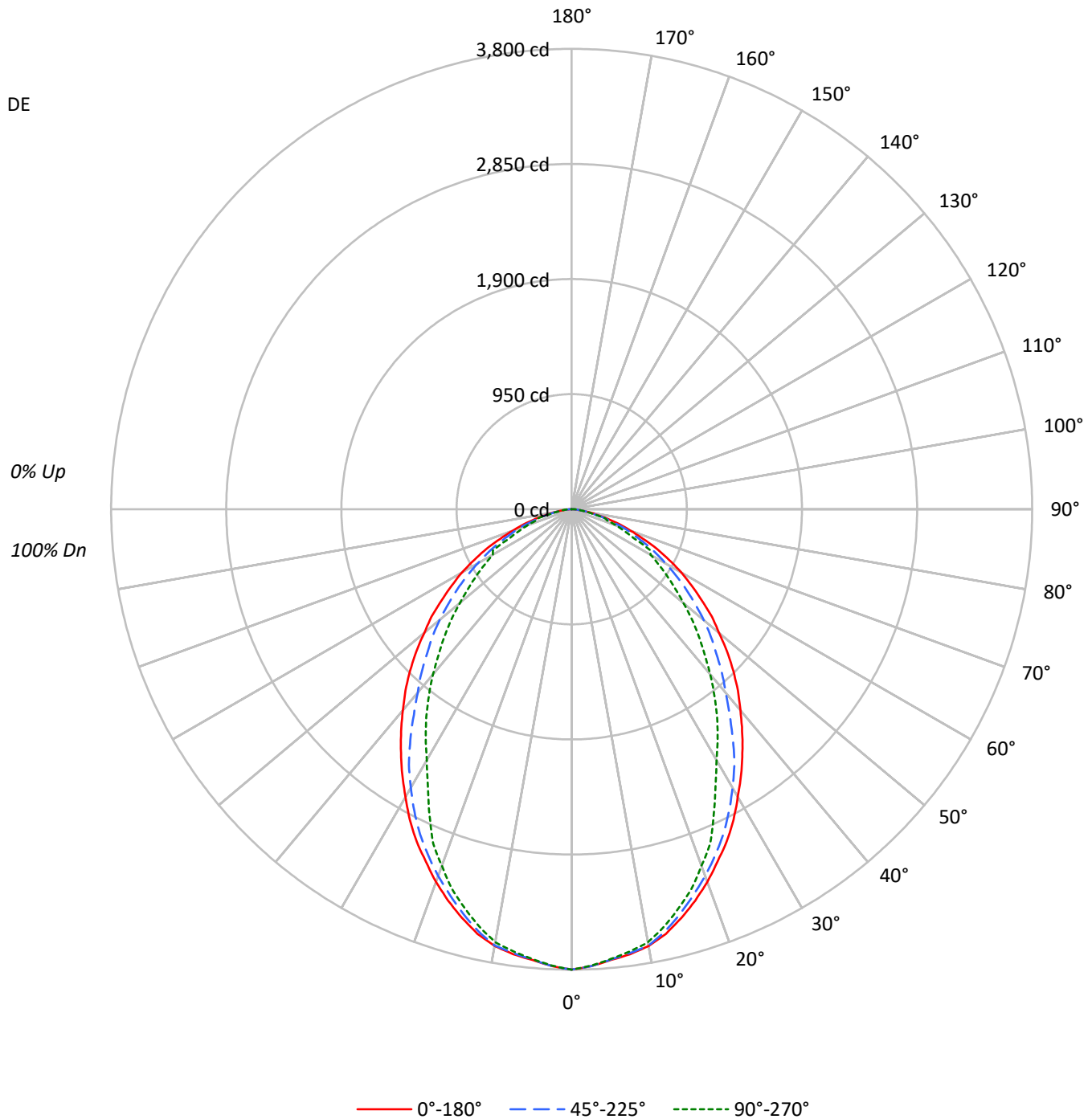
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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													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°	5113	5113	5113
5°	5043	5037	5031
10°	5000	4994	4958
15°	4865	4816	4749
20°	4686	4611	4485
25°	4494	4396	4122
30°	4259	4122	3713
35°	4034	3810	3435
40°	3804	3472	3125
45°	3586	3210	2825
50°	3320	2979	2520
55°	3071	2700	2257
60°	2814	2412	2021
65°	2476	2112	1790
70°	2039	1849	1521
75°	1621	1416	1485
80°	1089	1021	953
85°	678	814	949

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3586 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	353.7	4.7
10°-20°	970.8	13.0
20°-30°	1344.0	18.0
30°-40°	1433.1	19.2
40°-50°	1307.4	17.5
50°-60°	1024.2	13.7
60°-70°	667.5	8.9
70°-80°	295.8	4.0
80°-90°	63.5	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°	2668.5	35.8
0°-40°	4101.6	55.0
0°-60°	6433.2	86.2
0°-90°	7460.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7460.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3800	3800	3800	3800	3800	
5°	3734	3730	3730	3725	3725	354
15°	3492	3492	3457	3422	3409	982
25°	3027	3009	2961	2856	2776	1390
35°	2456	2438	2320	2144	2091	1535
45°	1885	1845	1687	1546	1485	1452
55°	1309	1270	1151	1015	962	1174
65°	778	734	663	676	562	766
75°	312	290	272	259	286	334
85°	44	48	53	57	62	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3800.0	3800.0	3800.0	3800.0	3800.0
2.5°	3773.7	3773.7	3773.7	3769.3	3769.3
5°	3734.1	3729.7	3729.7	3725.3	3725.3
7.5°	3703.4	3699.0	3694.6	3690.2	3681.4
10°	3659.4	3659.4	3655.1	3633.1	3628.7
12.5°	3589.2	3584.8	3567.2	3536.4	3527.7
15°	3492.5	3492.5	3457.4	3422.2	3409.0
17.5°	3387.1	3382.7	3338.7	3303.6	3286.0
20°	3272.9	3264.1	3220.1	3163.0	3132.3
22.5°	3145.5	3145.5	3092.7	3018.1	2987.3
25°	3026.8	3009.3	2960.9	2855.5	2776.4
27.5°	2890.7	2864.3	2811.6	2662.2	2570.0
30°	2741.3	2728.1	2653.4	2460.1	2389.8
32.5°	2600.7	2578.7	2499.7	2297.6	2240.5
35°	2455.7	2438.2	2319.6	2143.8	2091.1
37.5°	2310.8	2288.8	2139.4	1998.9	1933.0
40°	2165.8	2139.4	1976.9	1849.5	1779.2
42.5°	2029.6	1994.5	1836.3	1700.1	1621.1
45°	1884.6	1845.1	1686.9	1546.4	1484.9
47.5°	1739.7	1704.5	1559.5	1414.6	1344.3
50°	1585.9	1555.2	1423.4	1278.4	1203.7
52.5°	1458.5	1410.2	1282.8	1137.8	1076.3
55°	1309.1	1269.6	1151.0	1014.8	962.1
57.5°	1173.0	1133.4	1023.6	896.2	852.3
60°	1045.6	988.4	896.2	786.4	751.2
62.5°	905.0	861.0	782.0	689.7	733.6
65°	777.6	733.6	663.4	676.5	562.3
67.5°	637.0	615.0	553.5	492.0	474.5
70°	518.4	492.0	470.1	404.2	386.6
72.5°	413.0	386.6	355.8	320.7	307.5
75°	311.9	289.9	272.4	259.2	285.6
77.5°	215.3	206.5	193.3	180.1	175.7
80°	140.6	136.2	131.8	127.4	123.0
82.5°	83.5	83.5	83.5	83.5	83.5
85°	43.9	48.3	52.7	57.1	61.5
87.5°	26.4	26.4	30.8	35.1	39.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)