

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: P562580

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-82-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562580
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-40-UNV-82-86-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7322.0 lumens
Efficiency: N/A
Efficacy: 84.7 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

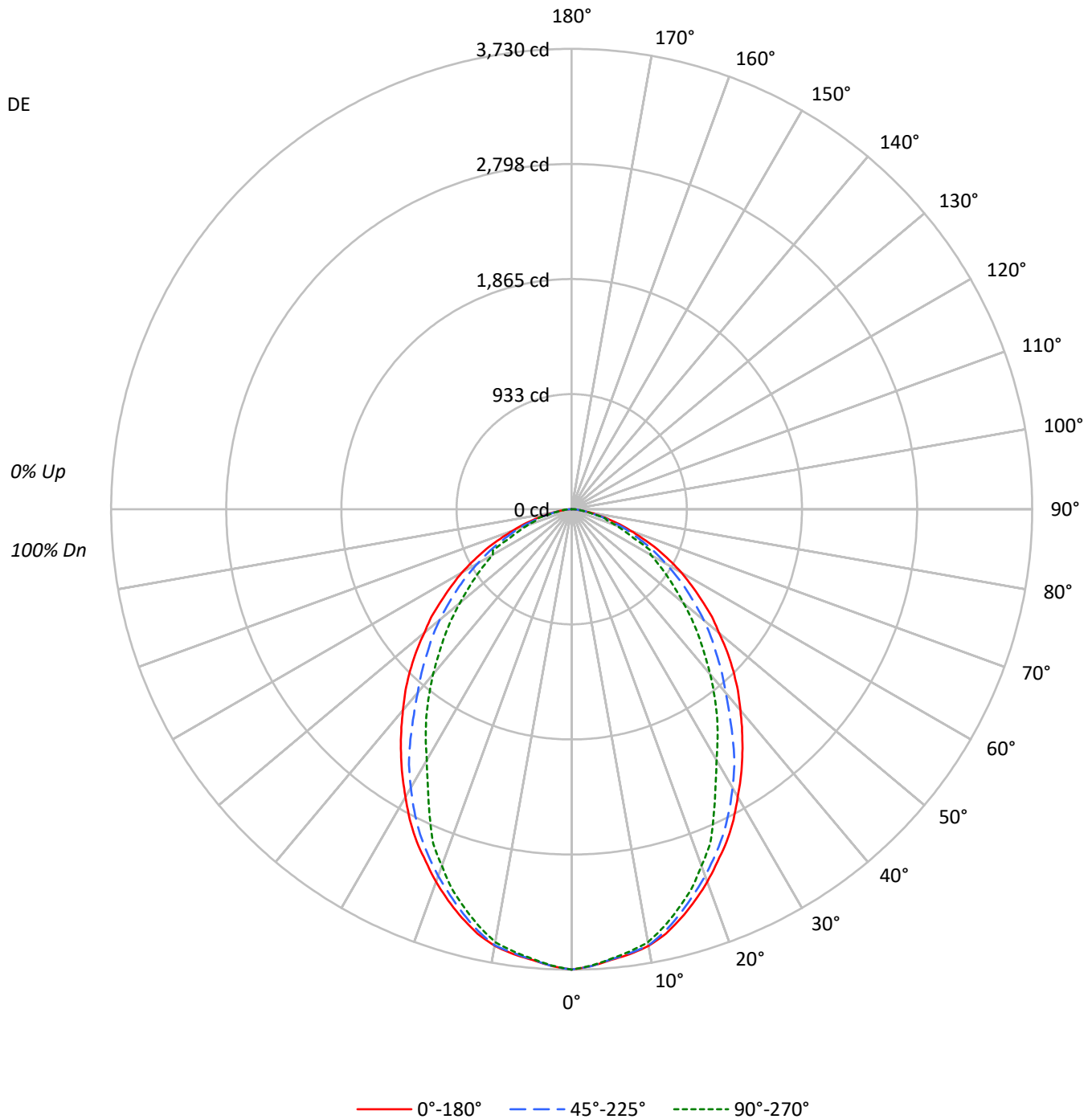
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5018	5018	5018
5°	4950	4944	4938
10°	4907	4901	4866
15°	4775	4727	4661
20°	4599	4525	4402
25°	4410	4314	4046
30°	4180	4046	3644
35°	3959	3739	3371
40°	3734	3408	3067
45°	3520	3150	2773
50°	3258	2924	2473
55°	3014	2650	2215
60°	2761	2367	1984
65°	2430	2073	1757
70°	2002	1815	1493
75°	1591	1390	1457
80°	1069	1003	935
85°	665	798	932

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3520 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	347.2	4.7
10°-20°	952.8	13.0
20°-30°	1319.1	18.0
30°-40°	1406.6	19.2
40°-50°	1283.2	17.5
50°-60°	1005.3	13.7
60°-70°	655.2	8.9
70°-80°	290.3	4.0
80°-90°	62.3	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°	2619.1	35.8
0°-40°	4025.7	55.0
0°-60°	6314.2	86.2
0°-90°	7322.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7322.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3730	3730	3730	3730	3730	
5°	3665	3661	3661	3656	3656	348
15°	3428	3428	3393	3359	3346	964
25°	2971	2954	2906	2803	2725	1364
35°	2410	2393	2277	2104	2052	1507
45°	1850	1811	1656	1518	1457	1425
55°	1285	1246	1130	996	944	1152
65°	763	720	651	664	552	752
75°	306	285	267	254	280	328
85°	43	47	52	56	60	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3729.7	3729.7	3729.7	3729.7	3729.7
2.5°	3703.9	3703.9	3703.9	3699.5	3699.5
5°	3665.1	3660.7	3660.7	3656.4	3656.4
7.5°	3634.9	3630.6	3626.2	3621.9	3613.3
10°	3591.8	3591.8	3587.4	3565.9	3561.6
12.5°	3522.8	3518.4	3501.2	3471.0	3462.4
15°	3427.9	3427.9	3393.4	3358.9	3346.0
17.5°	3324.4	3320.1	3277.0	3242.5	3225.2
20°	3212.3	3203.7	3160.6	3104.5	3074.3
22.5°	3087.3	3087.3	3035.5	2962.2	2932.0
25°	2970.8	2953.6	2906.2	2802.7	2725.1
27.5°	2837.2	2811.3	2759.6	2613.0	2522.4
30°	2690.6	2677.6	2604.3	2414.6	2345.6
32.5°	2552.6	2531.0	2453.4	2255.1	2199.0
35°	2410.3	2393.1	2276.6	2104.2	2052.4
37.5°	2268.0	2246.5	2099.9	1961.9	1897.2
40°	2125.7	2099.9	1940.3	1815.3	1746.3
42.5°	1992.1	1957.6	1802.3	1668.7	1591.1
45°	1849.8	1811.0	1655.7	1517.8	1457.4
47.5°	1707.5	1673.0	1530.7	1388.4	1319.4
50°	1556.6	1526.4	1397.0	1254.7	1181.4
52.5°	1431.5	1384.1	1259.1	1116.8	1056.4
55°	1284.9	1246.1	1129.7	996.0	944.3
57.5°	1151.3	1112.5	1004.7	879.6	836.5
60°	1026.2	970.2	879.6	771.8	737.3
62.5°	888.2	845.1	767.5	677.0	720.1
65°	763.2	720.1	651.1	664.0	551.9
67.5°	625.2	603.7	543.3	482.9	465.7
70°	508.8	482.9	461.4	396.7	379.4
72.5°	405.3	379.4	349.3	314.8	301.8
75°	306.1	284.6	267.3	254.4	280.3
77.5°	211.3	202.7	189.7	176.8	172.5
80°	138.0	133.7	129.4	125.0	120.7
82.5°	81.9	81.9	81.9	81.9	81.9
85°	43.1	47.4	51.7	56.1	60.4
87.5°	25.9	25.9	30.2	34.5	38.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)