

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: P562516

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-82-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562516
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-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7219.0 lumens
Efficiency: N/A
Efficacy: 83.6 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

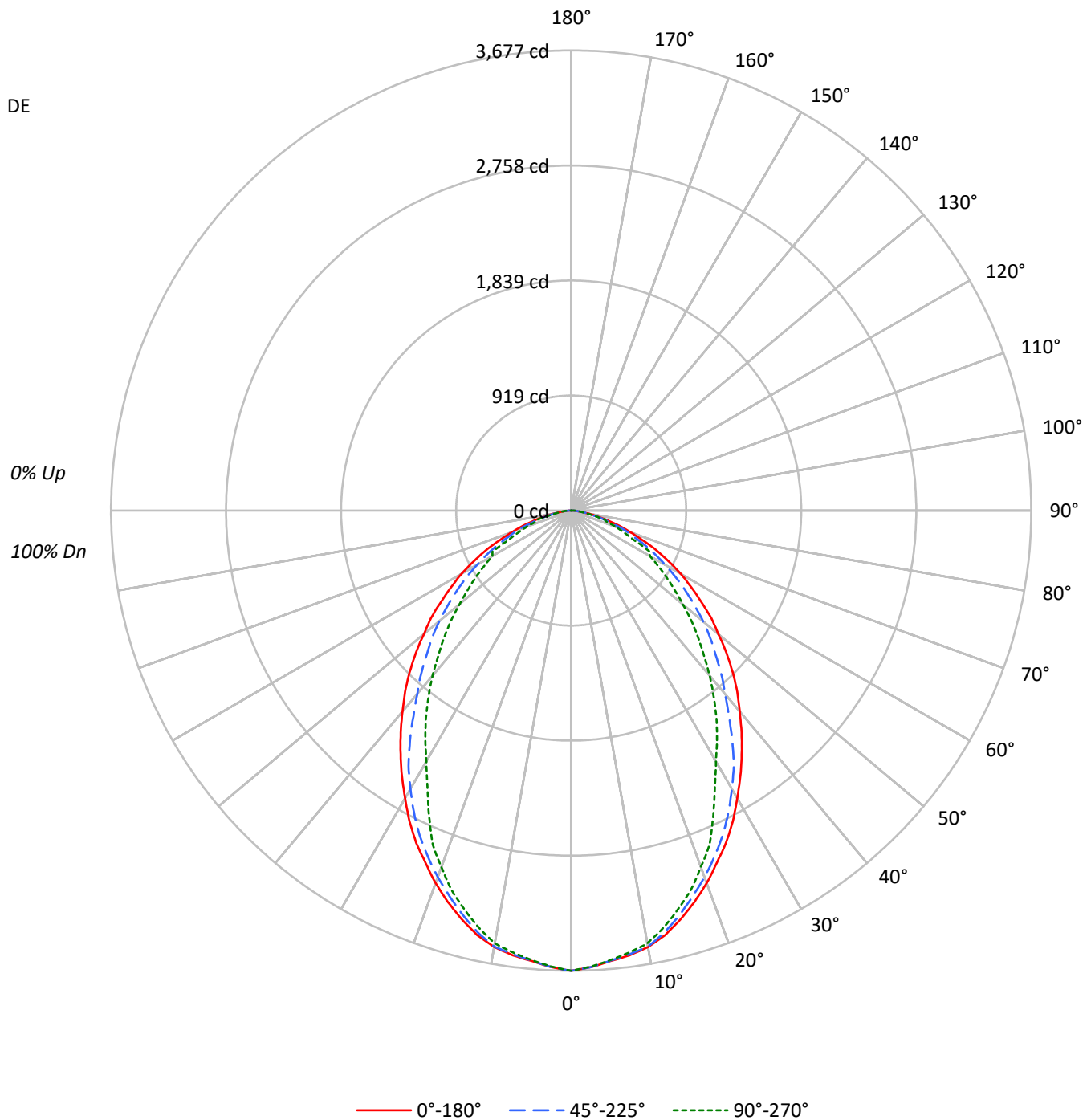
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4948	4948	4948
5°	4880	4875	4869
10°	4838	4832	4798
15°	4708	4660	4595
20°	4535	4462	4340
25°	4348	4254	3989
30°	4121	3989	3593
35°	3903	3687	3324
40°	3681	3360	3024
45°	3470	3106	2734
50°	3212	2883	2438
55°	2972	2613	2184
60°	2723	2334	1956
65°	2396	2044	1732
70°	1973	1790	1472
75°	1569	1370	1436
80°	1054	988	922
85°	656	787	919

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3470 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	342.3	4.7
10°-20°	939.4	13.0
20°-30°	1300.6	18.0
30°-40°	1386.8	19.2
40°-50°	1265.2	17.5
50°-60°	991.1	13.7
60°-70°	646.0	8.9
70°-80°	286.2	4.0
80°-90°	61.5	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°	2582.3	35.8
0°-40°	3969.1	55.0
0°-60°	6225.4	86.2
0°-90°	7219.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7219.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3677	3677	3677	3677	3677	
5°	3614	3609	3609	3605	3605	343
15°	3380	3380	3346	3312	3299	950
25°	2929	2912	2865	2763	2687	1345
35°	2376	2359	2245	2075	2024	1486
45°	1824	1786	1632	1496	1437	1405
55°	1267	1229	1114	982	931	1136
65°	752	710	642	655	544	742
75°	302	281	264	251	276	323
85°	42	47	51	55	60	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3677.3	3677.3	3677.3	3677.3	3677.3
2.5°	3651.8	3651.8	3651.8	3647.5	3647.5
5°	3613.5	3609.2	3609.2	3605.0	3605.0
7.5°	3583.7	3579.5	3575.2	3571.0	3562.5
10°	3541.2	3541.2	3537.0	3515.7	3511.5
12.5°	3473.2	3469.0	3452.0	3422.2	3413.7
15°	3379.7	3379.7	3345.7	3311.7	3298.9
17.5°	3277.7	3273.4	3230.9	3196.9	3179.9
20°	3167.1	3158.6	3116.1	3060.8	3031.1
22.5°	3043.8	3043.8	2992.8	2920.6	2890.8
25°	2929.1	2912.1	2865.3	2763.3	2686.7
27.5°	2797.3	2771.8	2720.7	2576.2	2486.9
30°	2652.7	2640.0	2567.7	2380.7	2312.6
32.5°	2516.7	2495.4	2418.9	2223.4	2168.1
35°	2376.4	2359.4	2244.6	2074.6	2023.6
37.5°	2236.1	2214.9	2070.3	1934.3	1870.5
40°	2095.8	2070.3	1913.0	1789.7	1721.7
42.5°	1964.0	1930.0	1777.0	1645.2	1568.7
45°	1823.8	1785.5	1632.4	1496.4	1436.9
47.5°	1683.5	1649.5	1509.2	1368.9	1300.9
50°	1534.7	1504.9	1377.4	1237.1	1164.8
52.5°	1411.4	1364.6	1241.3	1101.1	1041.5
55°	1266.8	1228.6	1113.8	982.0	931.0
57.5°	1135.1	1096.8	990.5	867.2	824.7
60°	1011.8	956.5	867.2	761.0	727.0
62.5°	875.7	833.2	756.7	667.4	709.9
65°	752.5	709.9	641.9	654.7	544.1
67.5°	616.4	595.2	535.6	476.1	459.1
70°	501.6	476.1	454.9	391.1	374.1
72.5°	399.6	374.1	344.3	310.3	297.6
75°	301.8	280.6	263.6	250.8	276.3
77.5°	208.3	199.8	187.1	174.3	170.0
80°	136.0	131.8	127.5	123.3	119.0
82.5°	80.8	80.8	80.8	80.8	80.8
85°	42.5	46.8	51.0	55.3	59.5
87.5°	25.5	25.5	29.8	34.0	38.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)