

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: P562644

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-82-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562644
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-82-86-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7710.0 lumens
Efficiency: N/A
Efficacy: 89.2 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

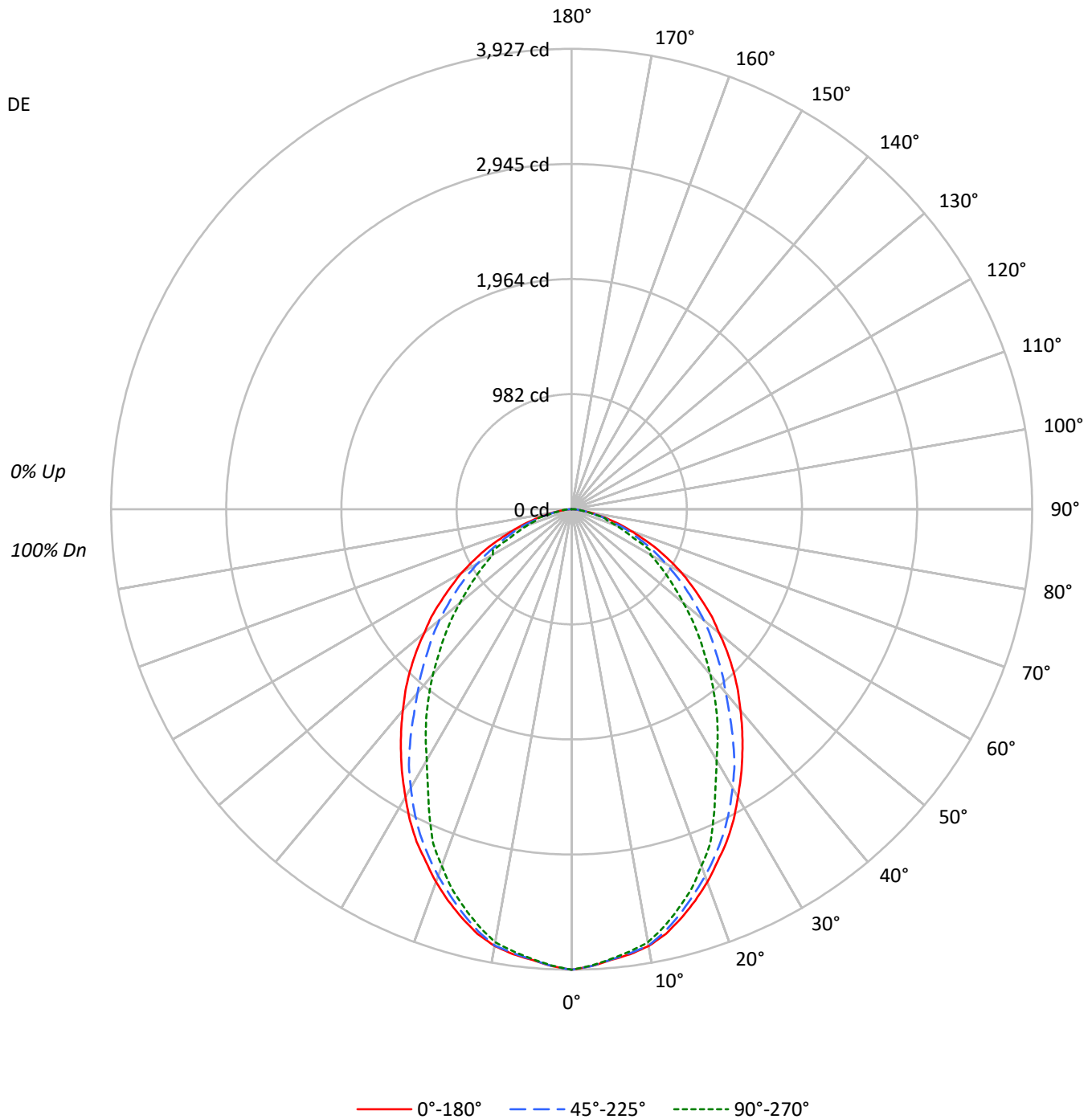
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5284	5284	5284
5°	5212	5206	5200
10°	5167	5161	5124
15°	5028	4977	4908
20°	4843	4765	4635
25°	4644	4543	4260
30°	4402	4261	3837
35°	4169	3938	3550
40°	3932	3589	3230
45°	3706	3318	2920
50°	3431	3079	2604
55°	3174	2791	2332
60°	2908	2492	2089
65°	2558	2183	1850
70°	2108	1911	1572
75°	1676	1463	1534
80°	1126	1055	985
85°	701	841	982

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3706 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	365.6	4.7
10°-20°	1003.3	13.0
20°-30°	1389.0	18.0
30°-40°	1481.1	19.2
40°-50°	1351.2	17.5
50°-60°	1058.6	13.7
60°-70°	689.9	8.9
70°-80°	305.7	4.0
80°-90°	65.6	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°	2757.9	35.8
0°-40°	4239.0	55.0
0°-60°	6648.8	86.2
0°-90°	7710.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7710.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3927	3927	3927	3927	3927	
5°	3859	3855	3855	3850	3850	366
15°	3610	3610	3573	3537	3523	1015
25°	3128	3110	3060	2951	2870	1436
35°	2538	2520	2397	2216	2161	1587
45°	1948	1907	1744	1598	1535	1500
55°	1353	1312	1190	1049	994	1214
65°	804	758	686	699	581	792
75°	322	300	282	268	295	346
85°	45	50	54	59	64	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3927.4	3927.4	3927.4	3927.4	3927.4
2.5°	3900.1	3900.1	3900.1	3895.6	3895.6
5°	3859.3	3854.7	3854.7	3850.2	3850.2
7.5°	3827.5	3822.9	3818.4	3813.9	3804.8
10°	3782.1	3782.1	3777.5	3754.8	3750.3
12.5°	3709.4	3704.9	3686.7	3655.0	3645.9
15°	3609.5	3609.5	3573.2	3536.9	3523.3
17.5°	3500.6	3496.0	3450.6	3414.3	3396.2
20°	3382.5	3373.5	3328.0	3269.0	3237.2
22.5°	3250.9	3250.9	3196.4	3119.2	3087.4
25°	3128.3	3110.1	3060.2	2951.2	2869.5
27.5°	2987.5	2960.3	2905.8	2751.4	2656.1
30°	2833.2	2819.5	2742.3	2542.6	2469.9
32.5°	2687.9	2665.2	2583.4	2374.6	2315.6
35°	2538.0	2519.9	2397.3	2215.7	2161.2
37.5°	2388.2	2365.5	2211.1	2065.8	1997.7
40°	2238.4	2211.1	2043.1	1911.5	1838.8
42.5°	2097.6	2061.3	1897.9	1757.1	1675.4
45°	1947.8	1906.9	1743.5	1598.2	1534.6
47.5°	1798.0	1761.6	1611.8	1462.0	1389.3
50°	1639.1	1607.3	1471.1	1321.2	1244.0
52.5°	1507.4	1457.4	1325.8	1175.9	1112.4
55°	1353.0	1312.2	1189.6	1048.8	994.3
57.5°	1212.3	1171.4	1057.9	926.2	880.8
60°	1080.6	1021.6	926.2	812.7	776.4
62.5°	935.3	889.9	808.2	712.8	758.2
65°	803.6	758.2	685.6	699.2	581.2
67.5°	658.3	635.6	572.1	508.5	490.4
70°	535.8	508.5	485.8	417.7	399.5
72.5°	426.8	399.5	367.8	331.4	317.8
75°	322.4	299.7	281.5	267.9	295.1
77.5°	222.5	213.4	199.8	186.2	181.6
80°	145.3	140.7	136.2	131.7	127.1
82.5°	86.3	86.3	86.3	86.3	86.3
85°	45.4	49.9	54.5	59.0	63.6
87.5°	27.2	27.2	31.8	36.3	40.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)