

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: P561497

Luminaire Tested: FSR-12-4-LD4-2HI-50-UNV-82-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561497
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-82-88-EDD
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6572.0 lumens
Efficiency: N/A
Efficacy: 76.1 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

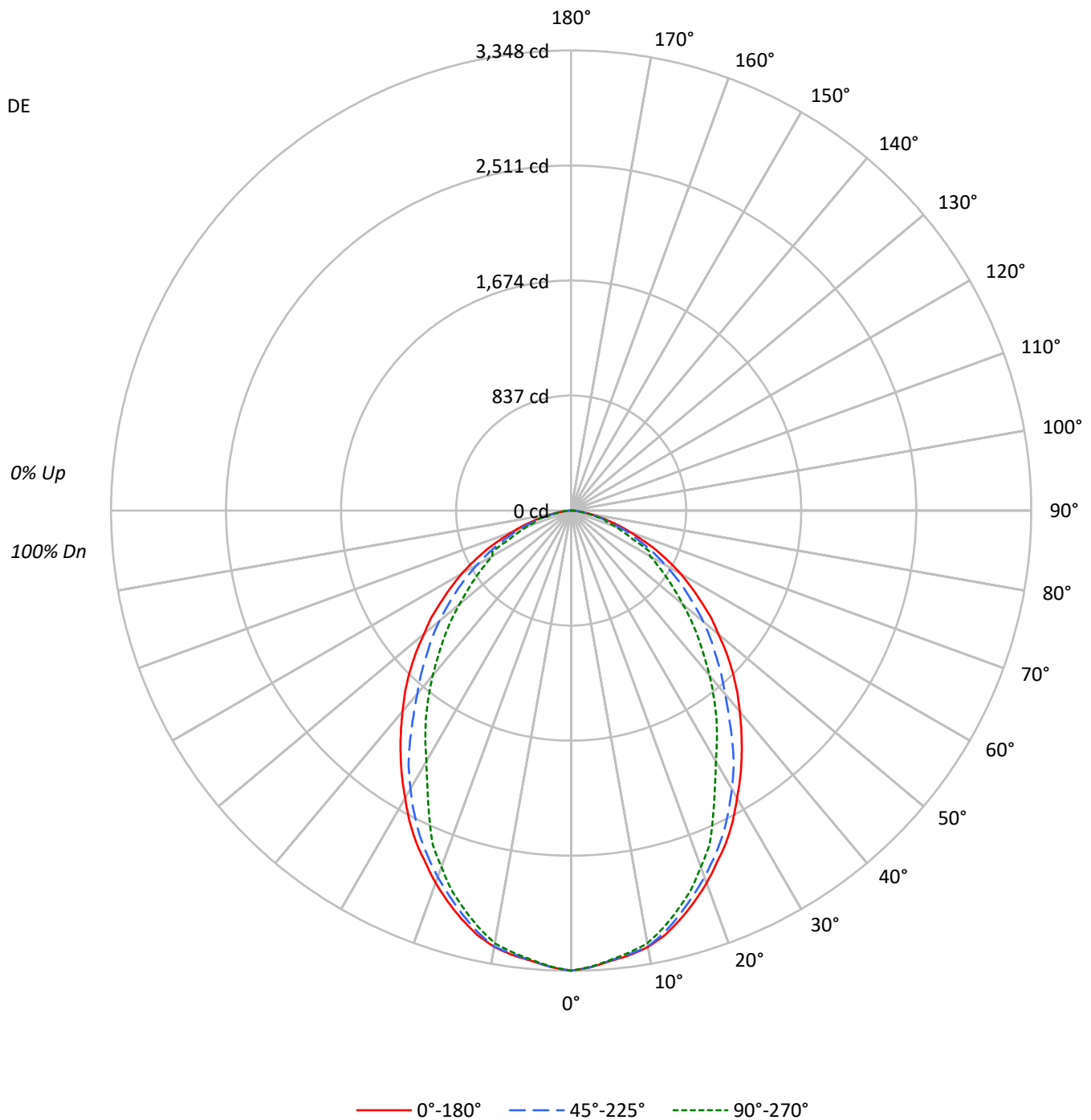
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	9009	9009	9009
5°	8886	8876	8865
10°	8809	8799	8735
15°	8572	8485	8367
20°	8257	8124	7902
25°	7917	7745	7262
30°	7504	7264	6542
35°	7107	6713	6052
40°	6702	6118	5506
45°	6318	5656	4978
50°	5849	5249	4439
55°	5411	4757	3977
60°	4957	4249	3562
65°	4362	3721	3154
70°	3593	3258	2680
75°	2857	2494	2616
80°	1918	1799	1680
85°	1195	1433	1673

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6318 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	311.6	4.7
10°-20°	855.2	13.0
20°-30°	1184.0	18.0
30°-40°	1262.5	19.2
40°-50°	1151.8	17.5
50°-60°	902.3	13.7
60°-70°	588.1	8.9
70°-80°	260.5	4.0
80°-90°	55.9	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°	2350.9	35.8
0°-40°	3613.4	55.0
0°-60°	5667.4	86.2
0°-90°	6572.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6572.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3348	3348	3348	3348	3348	
5°	3290	3286	3286	3282	3282	312
15°	3077	3077	3046	3015	3003	865
25°	2666	2651	2608	2516	2446	1224
35°	2163	2148	2043	1889	1842	1353
45°	1660	1626	1486	1362	1308	1279
55°	1153	1118	1014	894	848	1034
65°	685	646	584	596	495	675
75°	275	255	240	228	252	294
85°	39	43	46	50	54	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3347.7	3347.7	3347.7	3347.7	3347.7
2.5°	3324.5	3324.5	3324.5	3320.6	3320.6
5°	3289.6	3285.8	3285.8	3281.9	3281.9
7.5°	3262.5	3258.7	3254.8	3250.9	3243.2
10°	3223.8	3223.8	3220.0	3200.6	3196.8
12.5°	3161.9	3158.1	3142.6	3115.5	3107.7
15°	3076.8	3076.8	3045.8	3014.9	3003.2
17.5°	2983.9	2980.0	2941.3	2910.4	2894.9
20°	2883.3	2875.5	2836.8	2786.5	2759.4
22.5°	2771.0	2771.0	2724.6	2658.8	2631.7
25°	2666.5	2651.1	2608.5	2515.6	2445.9
27.5°	2546.6	2523.3	2476.9	2345.3	2264.0
30°	2415.0	2403.4	2337.6	2167.3	2105.4
32.5°	2291.1	2271.8	2202.1	2024.1	1973.8
35°	2163.4	2147.9	2043.4	1888.6	1842.2
37.5°	2035.7	2016.4	1884.8	1760.9	1702.9
40°	1908.0	1884.8	1741.6	1629.3	1567.4
42.5°	1788.0	1757.1	1617.7	1497.8	1428.1
45°	1660.3	1625.5	1486.1	1362.3	1308.1
47.5°	1532.6	1501.6	1373.9	1246.2	1184.3
50°	1397.1	1370.0	1253.9	1126.2	1060.4
52.5°	1284.9	1242.3	1130.1	1002.4	948.2
55°	1153.3	1118.5	1014.0	894.0	847.6
57.5°	1033.3	998.5	901.7	789.5	750.8
60°	921.1	870.8	789.5	692.8	661.8
62.5°	797.3	758.6	688.9	607.6	646.3
65°	685.0	646.3	584.4	596.0	495.4
67.5°	561.2	541.8	487.6	433.5	418.0
70°	456.7	433.5	414.1	356.1	340.6
72.5°	363.8	340.6	313.5	282.5	270.9
75°	274.8	255.4	239.9	228.3	251.6
77.5°	189.6	181.9	170.3	158.7	154.8
80°	123.8	120.0	116.1	112.2	108.4
82.5°	73.5	73.5	73.5	73.5	73.5
85°	38.7	42.6	46.4	50.3	54.2
87.5°	23.2	23.2	27.1	31.0	34.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)