

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: P562651

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-82-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562651
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-82-94-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9166.0 lumens
Efficiency: N/A
Efficacy: 106.1 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

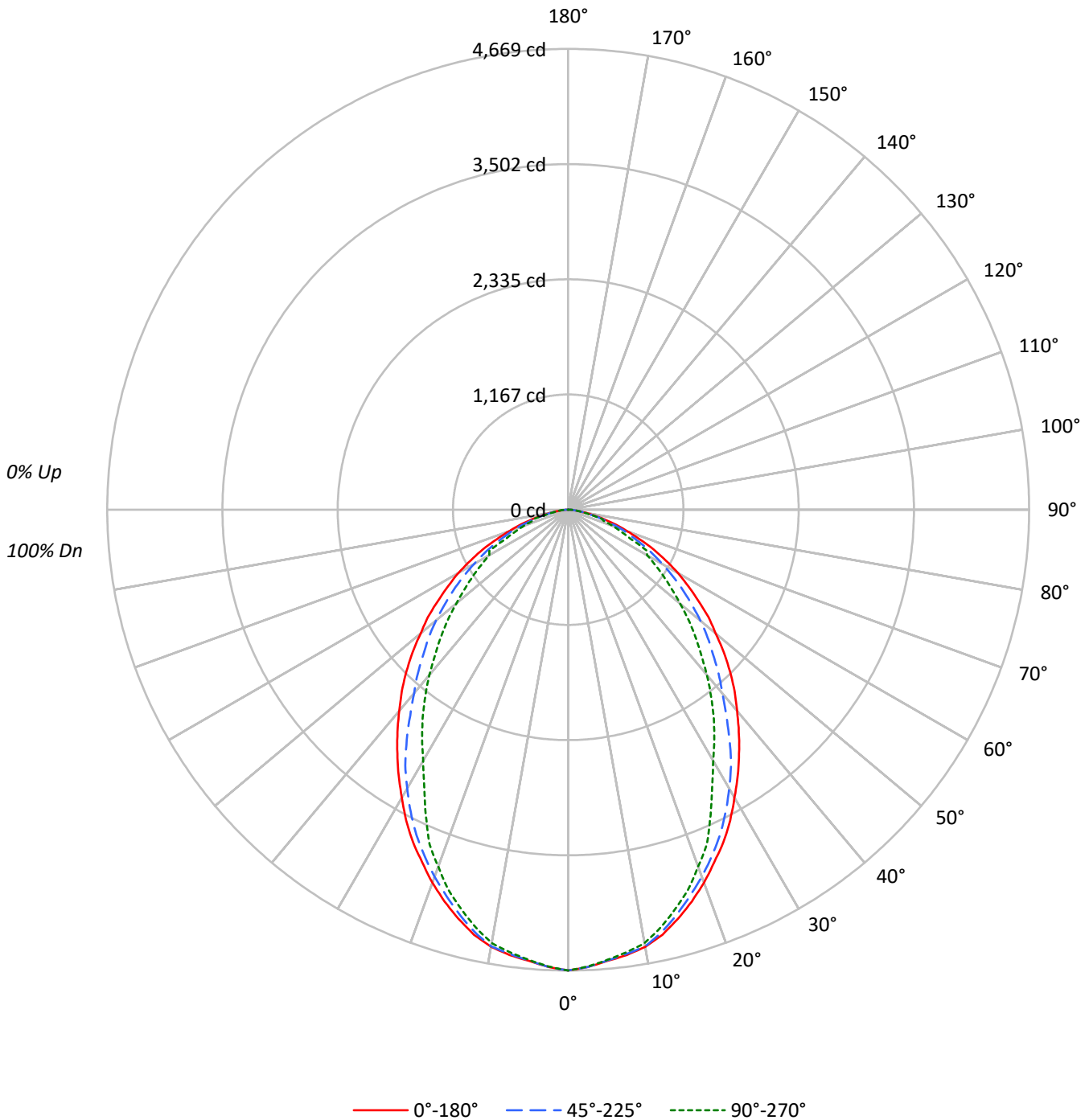
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6282	6282	6282
5°	6197	6190	6182
10°	6143	6136	6091
15°	5977	5917	5835
20°	5758	5665	5511
25°	5521	5401	5065
30°	5233	5065	4562
35°	4956	4681	4220
40°	4674	4266	3840
45°	4406	3944	3471
50°	4079	3661	3096
55°	3773	3317	2773
60°	3457	2963	2484
65°	3042	2595	2200
70°	2506	2272	1869
75°	1992	1740	1824
80°	1338	1254	1171
85°	834	1000	1167

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4406 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	434.6	4.7
10°-20°	1192.8	13.0
20°-30°	1651.3	18.0
30°-40°	1760.8	19.2
40°-50°	1606.4	17.5
50°-60°	1258.5	13.7
60°-70°	820.2	8.9
70°-80°	363.4	4.0
80°-90°	78.0	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°	3278.8	35.8
0°-40°	5039.6	55.0
0°-60°	7904.4	86.2
0°-90°	9166.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9166.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4669	4669	4669	4669	4669	
5°	4588	4583	4583	4577	4577	436
15°	4291	4291	4248	4205	4189	1206
25°	3719	3697	3638	3508	3411	1707
35°	3017	2996	2850	2634	2569	1886
45°	2316	2267	2073	1900	1824	1784
55°	1608	1560	1414	1247	1182	1443
65°	955	901	815	831	691	942
75°	383	356	335	318	351	411
85°	54	59	65	70	76	75
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4669.0	4669.0	4669.0	4669.0	4669.0
2.5°	4636.7	4636.7	4636.7	4631.3	4631.3
5°	4588.1	4582.7	4582.7	4577.3	4577.3
7.5°	4550.3	4544.9	4539.5	4534.1	4523.3
10°	4496.3	4496.3	4490.9	4463.9	4458.5
12.5°	4409.9	4404.5	4383.0	4345.2	4334.4
15°	4291.2	4291.2	4248.0	4204.8	4188.6
17.5°	4161.7	4156.3	4102.3	4059.1	4037.5
20°	4021.3	4010.5	3956.5	3886.4	3848.6
22.5°	3864.8	3864.8	3800.0	3708.2	3670.5
25°	3719.0	3697.4	3638.1	3508.5	3411.4
27.5°	3551.7	3519.3	3454.5	3271.0	3157.7
30°	3368.2	3352.0	3260.2	3022.7	2936.4
32.5°	3195.5	3168.5	3071.3	2823.0	2752.8
35°	3017.3	2995.7	2850.0	2634.1	2569.3
37.5°	2839.2	2812.2	2628.7	2456.0	2375.0
40°	2661.1	2628.7	2429.0	2272.4	2186.1
42.5°	2493.8	2450.6	2256.3	2088.9	1991.8
45°	2315.6	2267.0	2072.7	1900.0	1824.4
47.5°	2137.5	2094.3	1916.2	1738.1	1651.7
50°	1948.6	1910.8	1748.9	1570.7	1479.0
52.5°	1792.0	1732.7	1576.1	1398.0	1322.4
55°	1608.5	1559.9	1414.2	1246.9	1182.1
57.5°	1441.2	1392.6	1257.7	1101.1	1047.2
60°	1284.7	1214.5	1101.1	966.2	923.0
62.5°	1111.9	1058.0	960.8	847.4	901.4
65°	955.4	901.4	815.1	831.3	690.9
67.5°	782.7	755.7	680.1	604.5	583.0
70°	636.9	604.5	577.6	496.6	475.0
72.5°	507.4	475.0	437.2	394.0	377.8
75°	383.2	356.3	334.7	318.5	350.9
77.5°	264.5	253.7	237.5	221.3	215.9
80°	172.7	167.3	161.9	156.5	151.1
82.5°	102.6	102.6	102.6	102.6	102.6
85°	54.0	59.4	64.8	70.2	75.6
87.5°	32.4	32.4	37.8	43.2	48.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)