

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: P561875

Luminaire Tested: FSR-12-4-LD4-2STD-50-UNV-82-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561875
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-LD4-2STD-50-UNV-82-85-EDD
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6220.0 lumens
Efficiency: N/A
Efficacy: 93.4 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

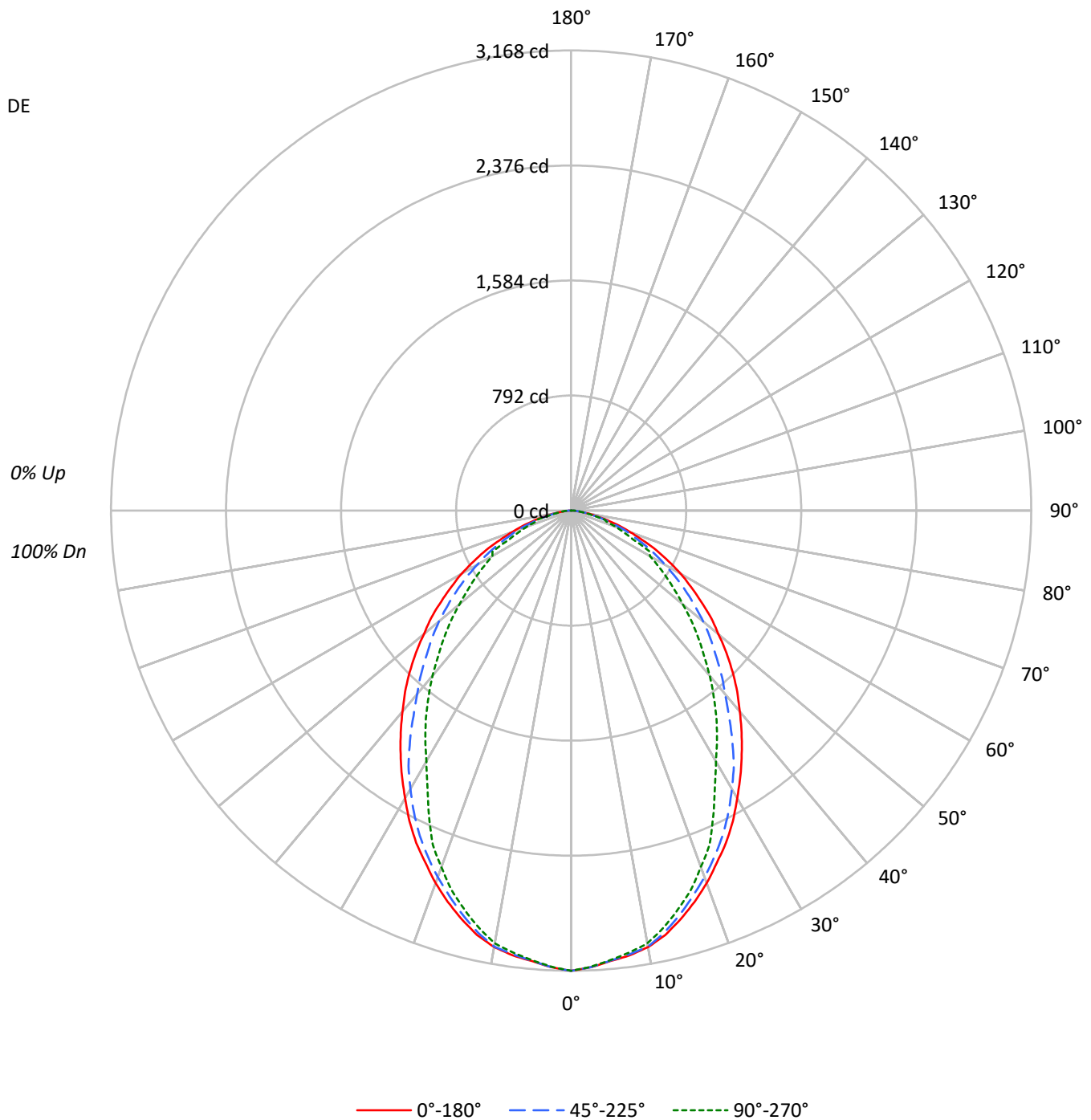
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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°	8526	8526	8526
5°	8410	8400	8390
10°	8337	8327	8267
15°	8113	8031	7919
20°	7814	7689	7479
25°	7493	7330	6873
30°	7102	6875	6192
35°	6726	6353	5728
40°	6343	5790	5211
45°	5980	5353	4712
50°	5536	4968	4201
55°	5121	4503	3764
60°	4692	4021	3371
65°	4128	3522	2985
70°	3401	3083	2536
75°	2704	2361	2476
80°	1816	1703	1590
85°	1130	1359	1584

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5980 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	294.9	4.7
10°-20°	809.4	13.0
20°-30°	1120.6	18.0
30°-40°	1194.9	19.2
40°-50°	1090.1	17.5
50°-60°	854.0	13.7
60°-70°	556.6	8.9
70°-80°	246.6	4.0
80°-90°	52.9	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°	2224.9	35.8
0°-40°	3419.8	55.0
0°-60°	5363.9	86.2
0°-90°	6220.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6220.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3168	3168	3168	3168	3168	
5°	3113	3110	3110	3106	3106	296
15°	2912	2912	2883	2853	2842	819
25°	2524	2509	2469	2381	2315	1159
35°	2048	2033	1934	1788	1744	1280
45°	1571	1538	1406	1289	1238	1210
55°	1092	1059	960	846	802	979
65°	648	612	553	564	469	639
75°	260	242	227	216	238	279
85°	37	40	44	48	51	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3168.4	3168.4	3168.4	3168.4	3168.4
2.5°	3146.4	3146.4	3146.4	3142.7	3142.7
5°	3113.4	3109.8	3109.8	3106.1	3106.1
7.5°	3087.8	3084.1	3080.5	3076.8	3069.5
10°	3051.2	3051.2	3047.5	3029.2	3025.5
12.5°	2992.6	2988.9	2974.3	2948.6	2941.3
15°	2912.0	2912.0	2882.7	2853.4	2842.4
17.5°	2824.1	2820.4	2783.8	2754.5	2739.8
20°	2728.8	2721.5	2684.9	2637.3	2611.6
22.5°	2622.6	2622.6	2578.7	2516.4	2490.8
25°	2523.7	2509.1	2468.8	2380.9	2314.9
27.5°	2410.2	2388.2	2344.2	2219.7	2142.8
30°	2285.6	2274.6	2212.4	2051.2	1992.6
32.5°	2168.4	2150.1	2084.2	1915.7	1868.1
35°	2047.5	2032.9	1934.0	1787.5	1743.5
37.5°	1926.7	1908.4	1783.8	1666.6	1611.7
40°	1805.8	1783.8	1648.3	1542.1	1483.5
42.5°	1692.2	1662.9	1531.1	1417.5	1351.6
45°	1571.4	1538.4	1406.5	1289.3	1238.1
47.5°	1450.5	1421.2	1300.3	1179.4	1120.8
50°	1322.3	1296.7	1186.8	1065.9	1003.6
52.5°	1216.1	1175.8	1069.6	948.7	897.4
55°	1091.5	1058.6	959.7	846.1	802.2
57.5°	978.0	945.0	853.4	747.2	710.6
60°	871.8	824.1	747.2	655.7	626.4
62.5°	754.6	717.9	652.0	575.1	611.7
65°	648.3	611.7	553.1	564.1	468.8
67.5°	531.1	512.8	461.5	410.2	395.6
70°	432.2	410.2	391.9	337.0	322.3
72.5°	344.3	322.3	296.7	267.4	256.4
75°	260.1	241.7	227.1	216.1	238.1
77.5°	179.5	172.2	161.2	150.2	146.5
80°	117.2	113.5	109.9	106.2	102.6
82.5°	69.6	69.6	69.6	69.6	69.6
85°	36.6	40.3	44.0	47.6	51.3
87.5°	22.0	22.0	25.6	29.3	33.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)