

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: P561863

Luminaire Tested: FSR-12-4-LD4-2STD-50-UNV-81-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561863
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-81-87-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6078.0 lumens
Efficiency: N/A
Efficacy: 91.3 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

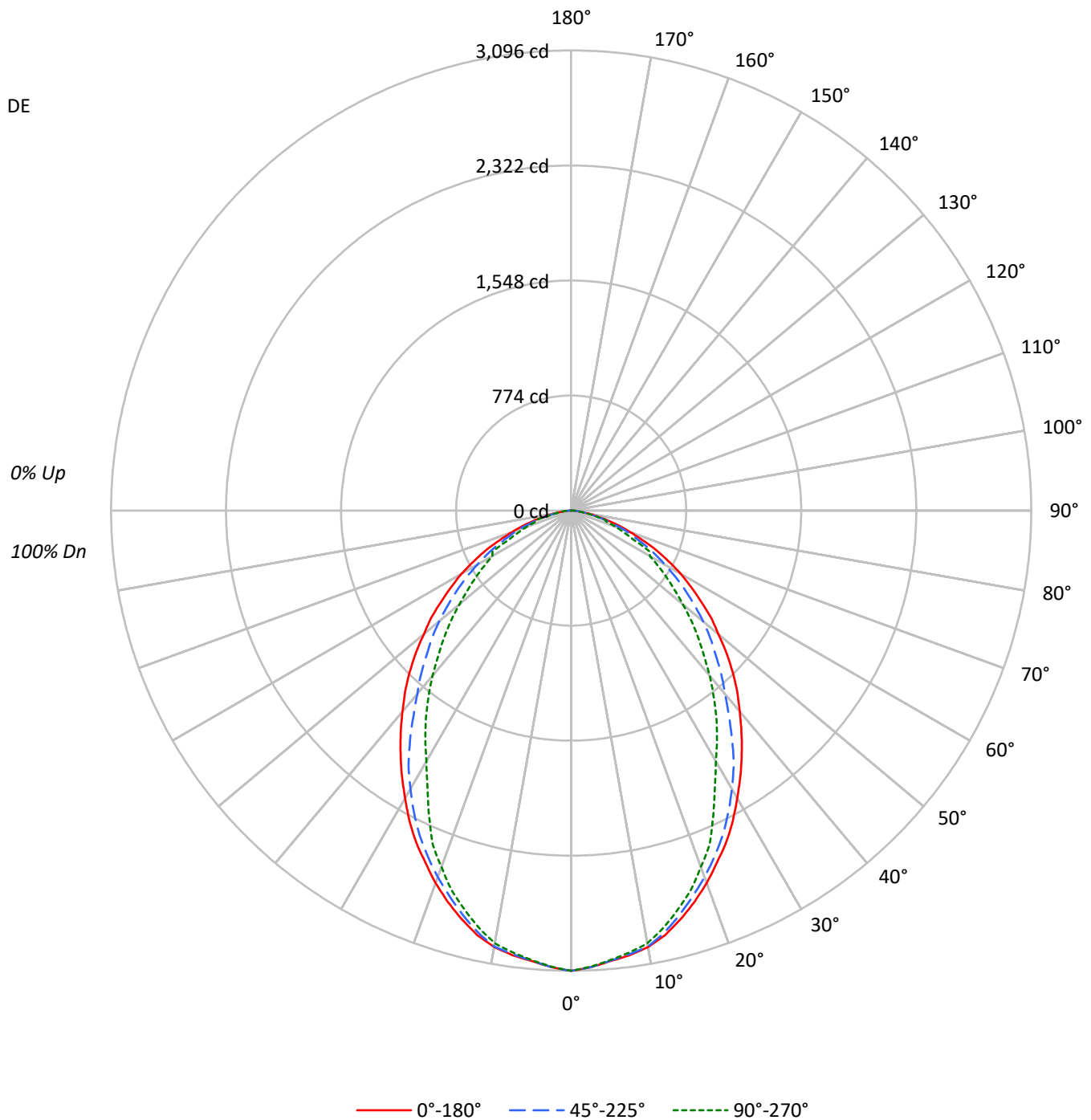
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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	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°	8332	8332	8332
5°	8218	8209	8199
10°	8147	8137	8079
15°	7927	7848	7738
20°	7636	7513	7308
25°	7322	7163	6717
30°	6940	6718	6050
35°	6573	6208	5597
40°	6199	5658	5092
45°	5844	5230	4604
50°	5409	4855	4106
55°	5004	4400	3678
60°	4585	3930	3294
65°	4034	3442	2917
70°	3323	3013	2478
75°	2642	2307	2419
80°	1774	1664	1553
85°	1105	1328	1547

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5844 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	288.2	4.7
10°-20°	790.9	13.0
20°-30°	1095.0	18.0
30°-40°	1167.6	19.2
40°-50°	1065.2	17.5
50°-60°	834.5	13.7
60°-70°	543.9	8.9
70°-80°	241.0	4.0
80°-90°	51.7	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°	2174.1	35.8
0°-40°	3341.7	55.0
0°-60°	5241.4	86.2
0°-90°	6078.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6078.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3096	3096	3096	3096	3096	
5°	3042	3039	3039	3035	3035	289
15°	2846	2846	2817	2788	2778	800
25°	2466	2452	2412	2326	2262	1132
35°	2001	1986	1890	1747	1704	1251
45°	1536	1503	1374	1260	1210	1183
55°	1067	1034	938	827	784	957
65°	634	598	540	551	458	624
75°	254	236	222	211	233	272
85°	36	39	43	46	50	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3096.1	3096.1	3096.1	3096.1	3096.1
2.5°	3074.6	3074.6	3074.6	3071.0	3071.0
5°	3042.4	3038.8	3038.8	3035.2	3035.2
7.5°	3017.3	3013.7	3010.1	3006.6	2999.4
10°	2981.5	2981.5	2977.9	2960.0	2956.5
12.5°	2924.2	2920.7	2906.4	2881.3	2874.1
15°	2845.5	2845.5	2816.9	2788.2	2777.5
17.5°	2759.6	2756.0	2720.2	2691.6	2677.3
20°	2666.5	2659.4	2623.6	2577.1	2552.0
22.5°	2562.7	2562.7	2519.8	2458.9	2433.9
25°	2466.1	2451.8	2412.4	2326.5	2262.1
27.5°	2355.1	2333.7	2290.7	2169.0	2093.9
30°	2233.5	2222.7	2161.9	2004.4	1947.1
32.5°	2118.9	2101.0	2036.6	1871.9	1825.4
35°	2000.8	1986.5	1889.8	1746.7	1703.7
37.5°	1882.7	1864.8	1743.1	1628.6	1574.9
40°	1764.6	1743.1	1610.7	1506.9	1449.6
42.5°	1653.6	1625.0	1496.1	1385.2	1320.7
45°	1535.5	1503.3	1374.4	1259.9	1209.8
47.5°	1417.4	1388.7	1270.6	1152.5	1095.3
50°	1292.1	1267.1	1159.7	1041.6	980.7
52.5°	1188.3	1148.9	1045.1	927.0	876.9
55°	1066.6	1034.4	937.8	826.8	783.9
57.5°	955.7	923.4	834.0	730.2	694.4
60°	851.9	805.3	730.2	640.7	612.1
62.5°	737.3	701.5	637.1	561.9	597.7
65°	633.5	597.7	540.5	551.2	458.1
67.5°	519.0	501.1	451.0	400.9	386.6
70°	422.4	400.9	383.0	329.3	315.0
72.5°	336.4	315.0	289.9	261.3	250.5
75°	254.1	236.2	221.9	211.2	232.7
77.5°	175.4	168.2	157.5	146.7	143.2
80°	114.5	111.0	107.4	103.8	100.2
82.5°	68.0	68.0	68.0	68.0	68.0
85°	35.8	39.4	43.0	46.5	50.1
87.5°	21.5	21.5	25.1	28.6	32.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)