

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: P561889

Luminaire Tested: FSR-12-4-LD4-2STD-50-UNV-93-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561889
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-93-84-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6837.0 lumens
Efficiency: N/A
Efficacy: 102.7 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

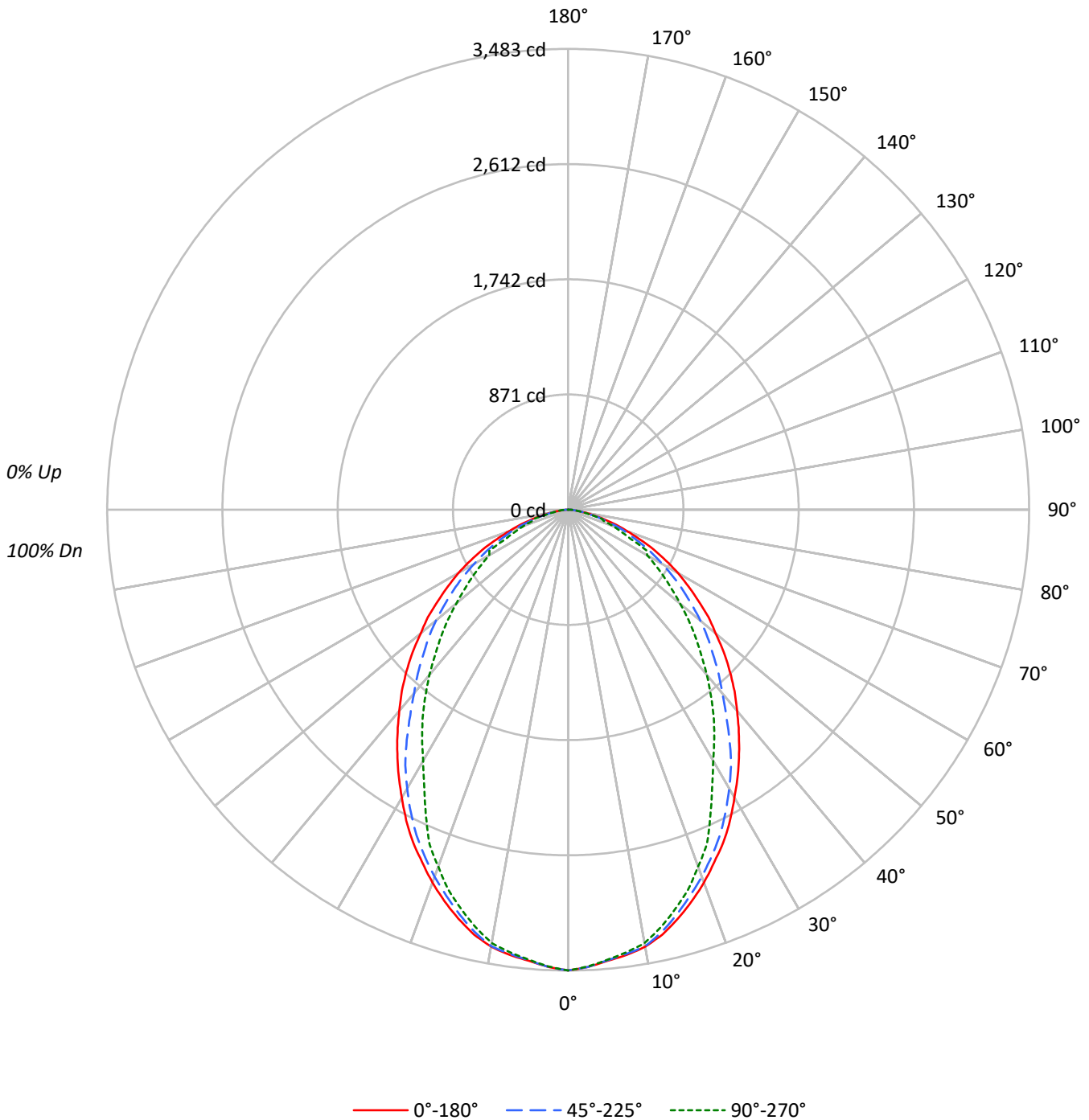
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	9372	9372	9372
5°	9245	9234	9223
10°	9164	9153	9087
15°	8917	8827	8704
20°	8590	8451	8221
25°	8237	8057	7555
30°	7807	7556	6806
35°	7394	6983	6296
40°	6973	6365	5728
45°	6573	5884	5179
50°	6085	5461	4618
55°	5629	4949	4137
60°	5157	4420	3705
65°	4537	3871	3282
70°	3738	3389	2788
75°	2973	2595	2721
80°	1996	1872	1746
85°	1244	1491	1741

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6573 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	324.2	4.7
10°-20°	889.7	13.0
20°-30°	1231.8	18.0
30°-40°	1313.4	19.2
40°-50°	1198.2	17.5
50°-60°	938.7	13.7
60°-70°	611.8	8.9
70°-80°	271.0	4.0
80°-90°	58.2	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°	2445.7	35.8
0°-40°	3759.1	55.0
0°-60°	5896.0	86.2
0°-90°	6837.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6837.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3483	3483	3483	3483	3483	
5°	3422	3418	3418	3414	3414	325
15°	3201	3201	3169	3136	3124	900
25°	2774	2758	2714	2617	2545	1274
35°	2251	2234	2126	1965	1916	1407
45°	1727	1691	1546	1417	1361	1330
55°	1200	1164	1055	930	882	1076
65°	713	672	608	620	515	702
75°	286	266	250	238	262	306
85°	40	44	48	52	56	56
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3482.7	3482.7	3482.7	3482.7	3482.7
2.5°	3458.5	3458.5	3458.5	3454.5	3454.5
5°	3422.3	3418.3	3418.3	3414.2	3414.2
7.5°	3394.1	3390.1	3386.0	3382.0	3374.0
10°	3353.8	3353.8	3349.8	3329.7	3325.7
12.5°	3289.4	3285.4	3269.3	3241.1	3233.1
15°	3200.8	3200.8	3168.6	3136.4	3124.3
17.5°	3104.2	3100.2	3059.9	3027.7	3011.6
20°	2999.5	2991.5	2951.2	2898.9	2870.7
22.5°	2882.8	2882.8	2834.5	2766.0	2737.8
25°	2774.1	2758.0	2713.7	2617.0	2544.6
27.5°	2649.2	2625.1	2576.8	2439.9	2355.3
30°	2512.4	2500.3	2431.8	2254.7	2190.3
32.5°	2383.5	2363.4	2290.9	2105.7	2053.4
35°	2250.7	2234.5	2125.8	1964.8	1916.5
37.5°	2117.8	2097.7	1960.8	1831.9	1771.5
40°	1984.9	1960.8	1811.8	1695.0	1630.6
42.5°	1860.1	1827.9	1683.0	1558.1	1485.7
45°	1727.2	1691.0	1546.1	1417.2	1360.9
47.5°	1594.4	1562.2	1429.3	1296.4	1232.0
50°	1453.5	1425.3	1304.5	1171.6	1103.2
52.5°	1336.7	1292.4	1175.7	1042.8	986.4
55°	1199.8	1163.6	1054.9	930.1	881.7
57.5°	1075.0	1038.8	938.1	821.3	781.1
60°	958.2	905.9	821.3	720.7	688.5
62.5°	829.4	789.1	716.7	632.1	672.4
65°	712.6	672.4	608.0	620.0	515.4
67.5°	583.8	563.7	507.3	450.9	434.8
70°	475.1	450.9	430.8	370.4	354.3
72.5°	378.5	354.3	326.1	293.9	281.8
75°	285.9	265.7	249.6	237.5	261.7
77.5°	197.3	189.2	177.2	165.1	161.0
80°	128.8	124.8	120.8	116.8	112.7
82.5°	76.5	76.5	76.5	76.5	76.5
85°	40.3	44.3	48.3	52.3	56.4
87.5°	24.2	24.2	28.2	32.2	36.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)