

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: P563227

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-82-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563227
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-LD4-3HI-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: 13749.0 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

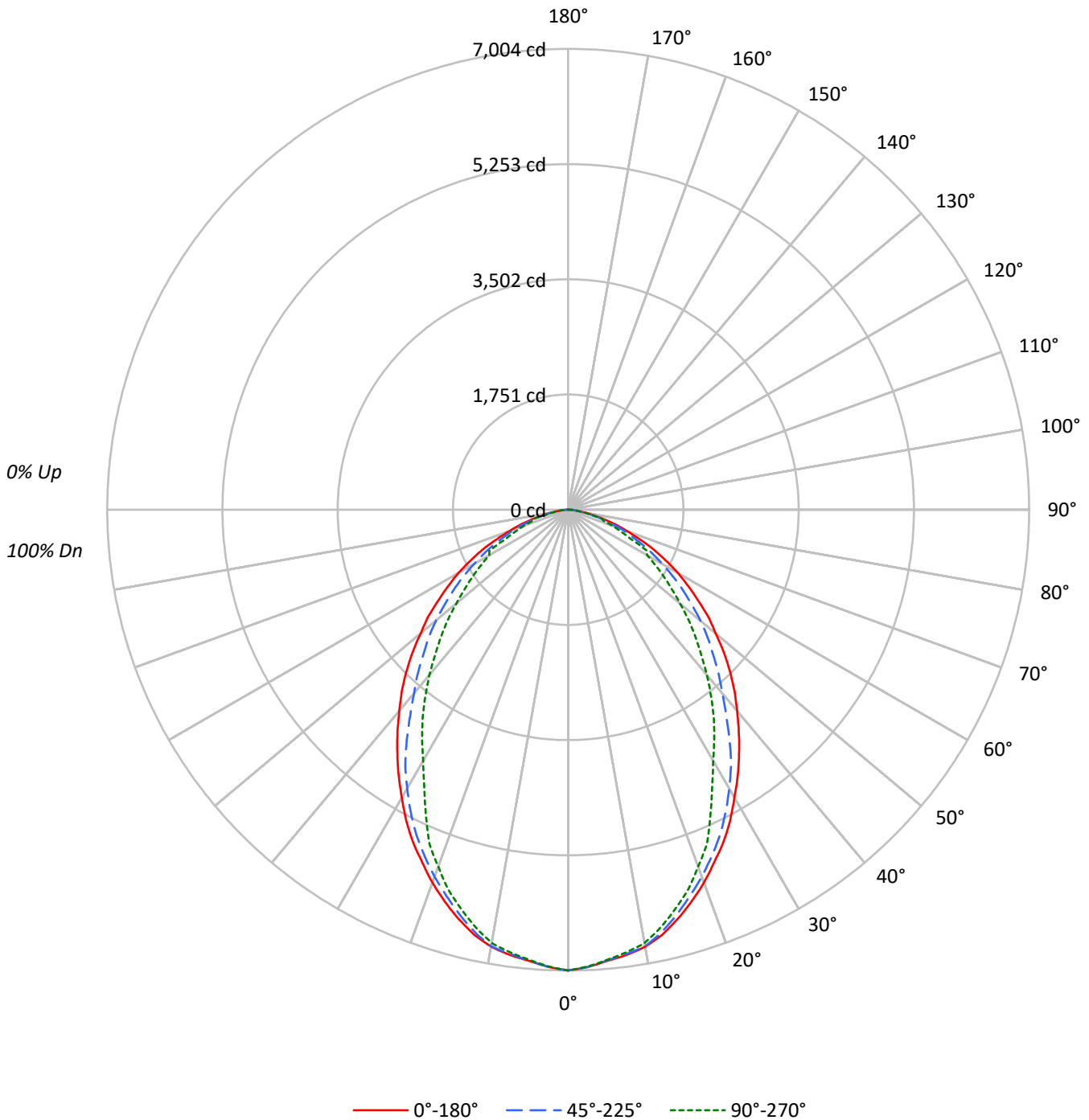
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9423	9423	9423
5°	9295	9284	9273
10°	9215	9204	9137
15°	8966	8876	8752
20°	8637	8498	8266
25°	8282	8102	7597
30°	7849	7598	6843
35°	7434	7022	6330
40°	7011	6399	5759
45°	6609	5916	5207
50°	6118	5491	4644
55°	5660	4976	4160
60°	5186	4445	3726
65°	4563	3892	3300
70°	3758	3408	2803
75°	2989	2610	2736
80°	2008	1882	1757
85°	1250	1501	1751

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6609 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	651.9	4.7
10°-20°	1789.2	13.0
20°-30°	2477.0	18.0
30°-40°	2641.2	19.2
40°-50°	2409.6	17.5
50°-60°	1887.7	13.7
60°-70°	1230.3	8.9
70°-80°	545.1	4.0
80°-90°	117.0	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°	4918.1	35.8
0°-40°	7559.3	55.0
0°-60°	11856.6	86.2
0°-90°	13749.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13749.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7004	7004	7004	7004	7004	
5°	6882	6874	6874	6866	6866	653
15°	6437	6437	6372	6307	6283	1810
25°	5579	5546	5457	5263	5117	2561
35°	4526	4494	4275	3951	3854	2830
45°	3473	3401	3109	2850	2737	2676
55°	2413	2340	2121	1870	1773	2164
65°	1433	1352	1223	1247	1036	1412
75°	575	534	502	478	526	616
85°	81	89	97	105	113	112
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7003.6	7003.6	7003.6	7003.6	7003.6
2.5°	6955.0	6955.0	6955.0	6946.9	6946.9
5°	6882.1	6874.0	6874.0	6865.9	6865.9
7.5°	6825.4	6817.3	6809.2	6801.1	6784.9
10°	6744.5	6744.5	6736.4	6695.9	6687.8
12.5°	6614.9	6606.8	6574.4	6517.8	6501.6
15°	6436.8	6436.8	6372.0	6307.2	6283.0
17.5°	6242.5	6234.4	6153.4	6088.6	6056.3
20°	6032.0	6015.8	5934.8	5829.6	5772.9
22.5°	5797.2	5797.2	5700.0	5562.4	5505.7
25°	5578.6	5546.2	5457.1	5262.8	5117.0
27.5°	5327.6	5279.0	5181.8	4906.5	4736.5
30°	5052.3	5028.0	4890.3	4534.1	4404.5
32.5°	4793.2	4752.7	4607.0	4234.5	4129.3
35°	4526.0	4493.6	4275.0	3951.1	3854.0
37.5°	4258.8	4218.3	3943.0	3684.0	3562.5
40°	3991.6	3943.0	3643.5	3408.7	3279.1
42.5°	3740.6	3675.9	3384.4	3133.4	2987.6
45°	3473.4	3400.6	3109.1	2850.0	2736.6
47.5°	3206.3	3141.5	2874.3	2607.1	2477.6
50°	2922.9	2866.2	2623.3	2356.1	2218.5
52.5°	2688.1	2599.0	2364.2	2097.0	1983.7
55°	2412.8	2339.9	2121.3	1870.3	1773.2
57.5°	2161.8	2088.9	1886.5	1651.7	1570.7
60°	1927.0	1821.7	1651.7	1449.3	1384.5
62.5°	1667.9	1586.9	1441.2	1271.2	1352.1
65°	1433.1	1352.1	1222.6	1246.9	1036.4
67.5°	1174.0	1133.5	1020.2	906.8	874.4
70°	955.4	906.8	866.3	744.9	712.5
72.5°	761.1	712.5	655.8	591.1	566.8
75°	574.9	534.4	502.0	477.7	526.3
77.5°	396.7	380.5	356.3	332.0	323.9
80°	259.1	251.0	242.9	234.8	226.7
82.5°	153.8	153.8	153.8	153.8	153.8
85°	81.0	89.1	97.2	105.3	113.4
87.5°	48.6	48.6	56.7	64.8	72.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)