

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: P559768

Luminaire Tested: FSR-12-2-LD4-1HI-50-UNV-82-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559768
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-12-2-LD4-1HI-50-UNV-82-88-EDD-90
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

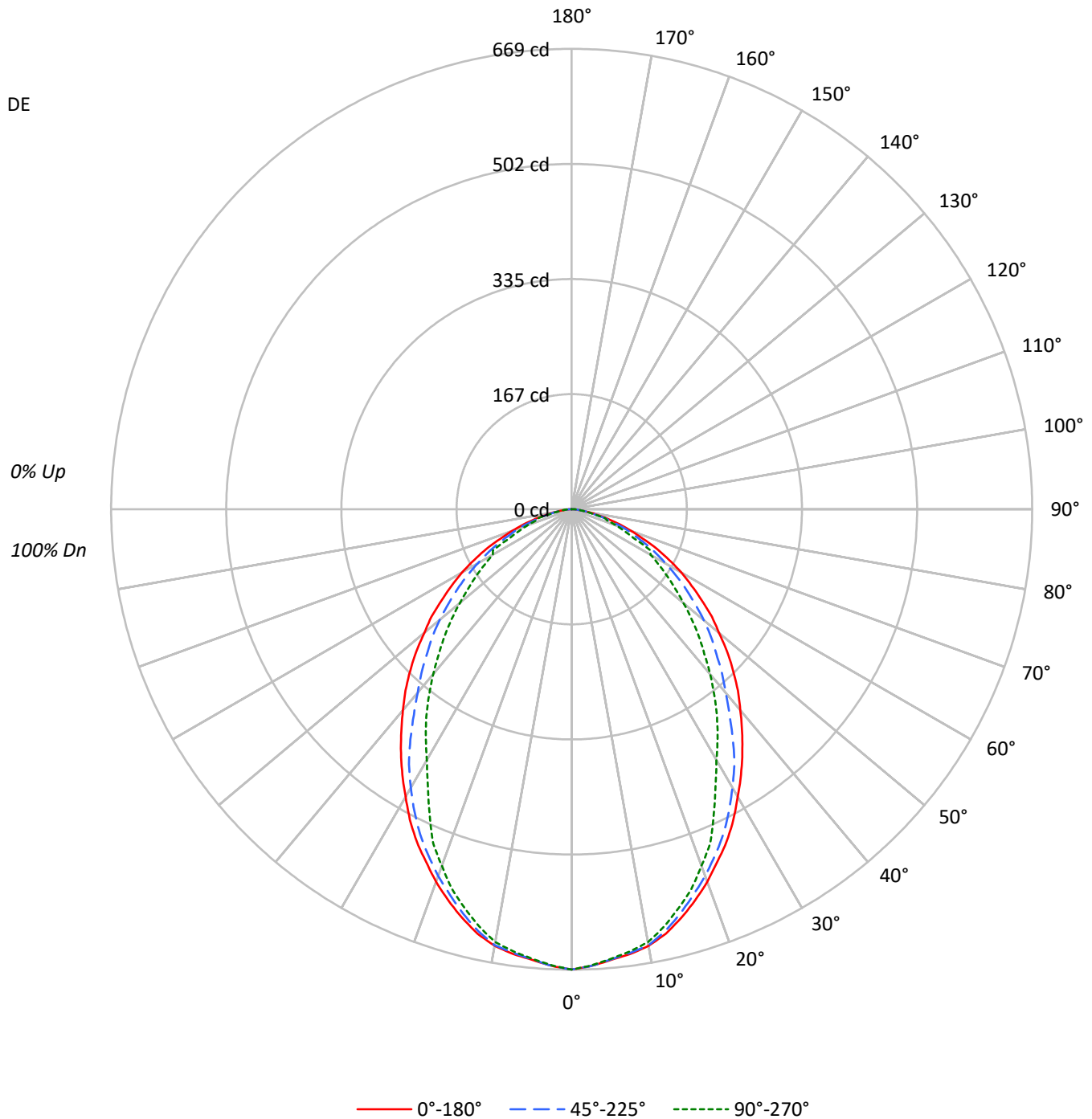
Lumens per Lamp: N/A
Luminaire Lumens: 1313.0 lumens
Efficiency: N/A
Efficacy: 60.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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	50	30	10	50	30	10	50	30	10																
RCR	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99															
	1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87															
	2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75														
	3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65													
	4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56													
	5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50													
	6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44													
	7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40													
	8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36													
	9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33													
	10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30													

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3599	3599	3599
5°	3551	3547	3542
10°	3520	3516	3490
15°	3425	3390	3343
20°	3299	3246	3157
25°	3163	3094	2902
30°	2999	2902	2614
35°	2840	2683	2418
40°	2678	2444	2200
45°	2525	2260	1989
50°	2337	2097	1774
55°	2162	1901	1589
60°	1981	1697	1423
65°	1743	1487	1261
70°	1435	1301	1070
75°	1142	996	1046
80°	766	719	669
85°	475	574	667

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2525 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.3	4.7
10°-20°	170.9	13.0
20°-30°	236.5	18.0
30°-40°	252.2	19.2
40°-50°	230.1	17.5
50°-60°	180.3	13.7
60°-70°	117.5	8.9
70°-80°	52.0	4.0
80°-90°	11.2	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°	469.7	35.8
0°-40°	721.9	55.0
0°-60°	1132.3	86.2
0°-90°	1313.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1313.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	669	669	669	669	669	
5°	657	656	656	656	656	62
15°	615	615	608	602	600	173
25°	533	530	521	503	489	245
35°	432	429	408	377	368	270
45°	332	325	297	272	261	256
55°	230	224	203	179	169	207
65°	137	129	117	119	99	135
75°	55	51	48	46	50	59
85°	8	8	9	10	11	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	668.8	668.8	668.8	668.8	668.8
2.5°	664.2	664.2	664.2	663.4	663.4
5°	657.2	656.5	656.5	655.7	655.7
7.5°	651.8	651.0	650.3	649.5	647.9
10°	644.1	644.1	643.3	639.4	638.7
12.5°	631.7	630.9	627.8	622.4	620.9
15°	614.7	614.7	608.5	602.3	600.0
17.5°	596.1	595.4	587.6	581.5	578.4
20°	576.0	574.5	566.8	556.7	551.3
22.5°	553.6	553.6	544.3	531.2	525.8
25°	532.7	529.6	521.1	502.6	488.7
27.5°	508.8	504.1	494.9	468.6	452.3
30°	482.5	480.2	467.0	433.0	420.6
32.5°	457.7	453.9	440.0	404.4	394.3
35°	432.2	429.1	408.3	377.3	368.0
37.5°	406.7	402.8	376.6	351.8	340.2
40°	381.2	376.6	347.9	325.5	313.1
42.5°	357.2	351.0	323.2	299.2	285.3
45°	331.7	324.7	296.9	272.2	261.3
47.5°	306.2	300.0	274.5	249.0	236.6
50°	279.1	273.7	250.5	225.0	211.9
52.5°	256.7	248.2	225.8	200.3	189.4
55°	230.4	223.5	202.6	178.6	169.3
57.5°	206.4	199.5	180.2	157.7	150.0
60°	184.0	174.0	157.7	138.4	132.2
62.5°	159.3	151.5	137.6	121.4	129.1
65°	136.9	129.1	116.8	119.1	99.0
67.5°	112.1	108.2	97.4	86.6	83.5
70°	91.2	86.6	82.7	71.1	68.0
72.5°	72.7	68.0	62.6	56.4	54.1
75°	54.9	51.0	47.9	45.6	50.3
77.5°	37.9	36.3	34.0	31.7	30.9
80°	24.7	24.0	23.2	22.4	21.6
82.5°	14.7	14.7	14.7	14.7	14.7
85°	7.7	8.5	9.3	10.1	10.8
87.5°	4.6	4.6	5.4	6.2	7.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)