

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: P559690

Luminaire Tested: FSR-12-2-LD4-1HI-40-UNV-81-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559690
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-40-UNV-81-94-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1512.0 lumens
Efficiency: N/A
Efficacy: 70.0 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

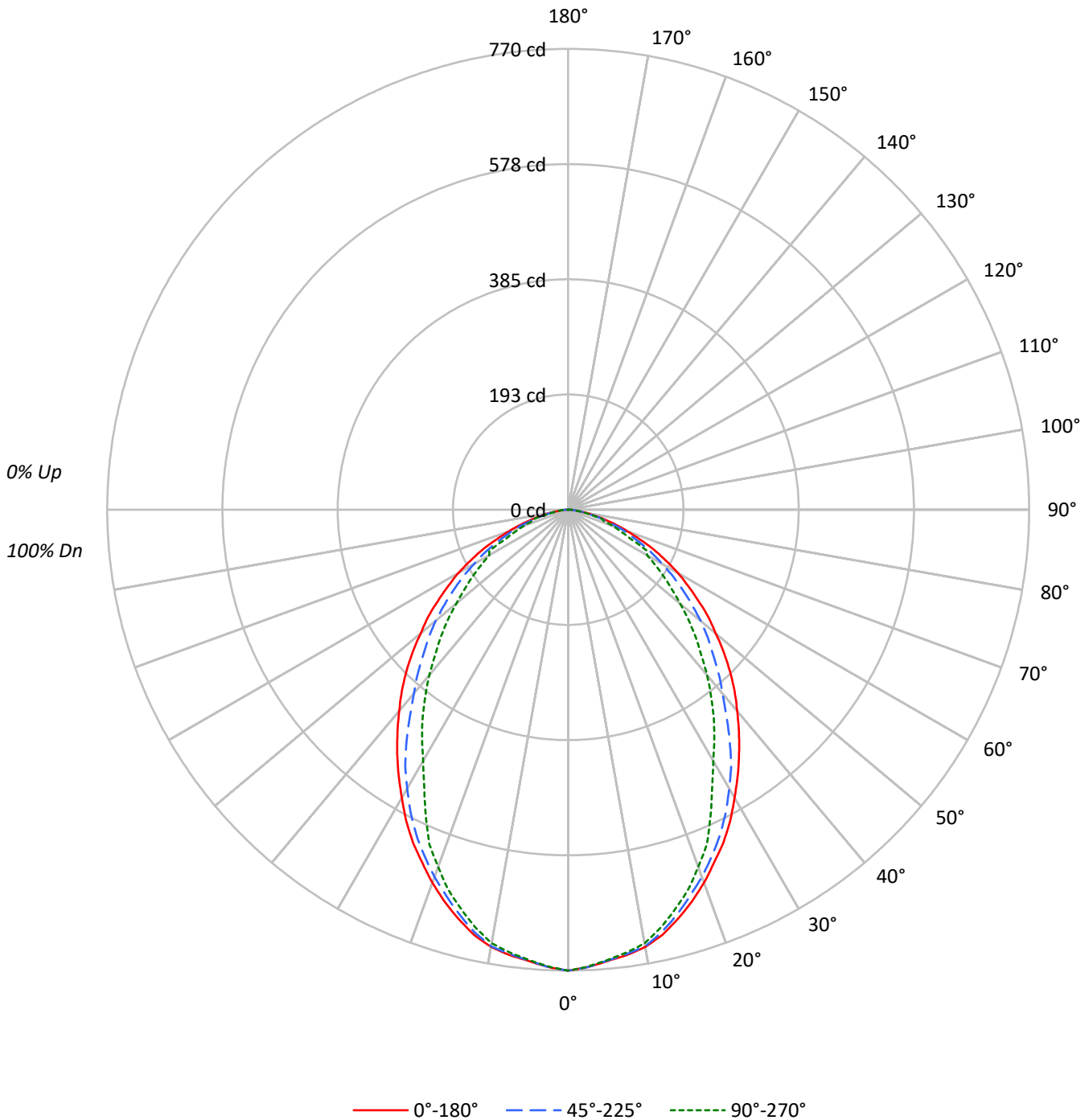
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4145	4145	4145
5°	4089	4084	4079
10°	4053	4048	4019
15°	3944	3904	3850
20°	3799	3738	3636
25°	3643	3564	3342
30°	3453	3342	3010
35°	3270	3089	2784
40°	3084	2815	2533
45°	2907	2602	2291
50°	2691	2416	2043
55°	2489	2189	1830
60°	2281	1955	1639
65°	2007	1712	1452
70°	1654	1500	1234
75°	1314	1148	1204
80°	883	828	772
85°	550	661	772

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2907 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.7	4.7
10°-20°	196.8	13.0
20°-30°	272.4	18.0
30°-40°	290.5	19.2
40°-50°	265.0	17.5
50°-60°	207.6	13.7
60°-70°	135.3	8.9
70°-80°	59.9	4.0
80°-90°	12.9	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°	540.9	35.8
0°-40°	831.3	55.0
0°-60°	1303.9	86.2
0°-90°	1512.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1512.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	770	770	770	770	770	
5°	757	756	756	755	755	72
15°	708	708	701	694	691	199
25°	614	610	600	579	563	282
35°	498	494	470	434	424	311
45°	382	374	342	313	301	294
55°	265	257	233	206	195	238
65°	158	149	134	137	114	155
75°	63	59	55	52	58	68
85°	9	10	11	12	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	770.2	770.2	770.2	770.2	770.2
2.5°	764.9	764.9	764.9	764.0	764.0
5°	756.8	755.9	755.9	755.1	755.1
7.5°	750.6	749.7	748.8	747.9	746.2
10°	741.7	741.7	740.8	736.4	735.5
12.5°	727.5	726.6	723.0	716.8	715.0
15°	707.9	707.9	700.7	693.6	690.9
17.5°	686.5	685.6	676.7	669.6	666.0
20°	663.3	661.6	652.7	641.1	634.9
22.5°	637.5	637.5	626.8	611.7	605.5
25°	613.5	609.9	600.1	578.8	562.7
27.5°	585.9	580.5	569.9	539.6	520.9
30°	555.6	552.9	537.8	498.6	484.4
32.5°	527.1	522.7	506.6	465.7	454.1
35°	497.7	494.2	470.1	434.5	423.8
37.5°	468.3	463.9	433.6	405.1	391.8
40°	439.0	433.6	400.7	374.9	360.6
42.5°	411.4	404.2	372.2	344.6	328.6
45°	382.0	374.0	341.9	313.4	301.0
47.5°	352.6	345.5	316.1	286.7	272.5
50°	321.4	315.2	288.5	259.1	244.0
52.5°	295.6	285.8	260.0	230.6	218.1
55°	265.3	257.3	233.3	205.7	195.0
57.5°	237.7	229.7	207.5	181.6	172.7
60°	211.9	200.3	181.6	159.4	152.3
62.5°	183.4	174.5	158.5	139.8	148.7
65°	157.6	148.7	134.4	137.1	114.0
67.5°	129.1	124.7	112.2	99.7	96.2
70°	105.1	99.7	95.3	81.9	78.4
72.5°	83.7	78.4	72.1	65.0	62.3
75°	63.2	58.8	55.2	52.5	57.9
77.5°	43.6	41.8	39.2	36.5	35.6
80°	28.5	27.6	26.7	25.8	24.9
82.5°	16.9	16.9	16.9	16.9	16.9
85°	8.9	9.8	10.7	11.6	12.5
87.5°	5.3	5.3	6.2	7.1	8.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)