

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: P559884

Luminaire Tested: FSR-12-2-LD4-1LO-40-UNV-81-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559884
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-LD4-1LO-40-UNV-81-96-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 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: 910.0 lumens
Efficiency: N/A
Efficacy: 77.8 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

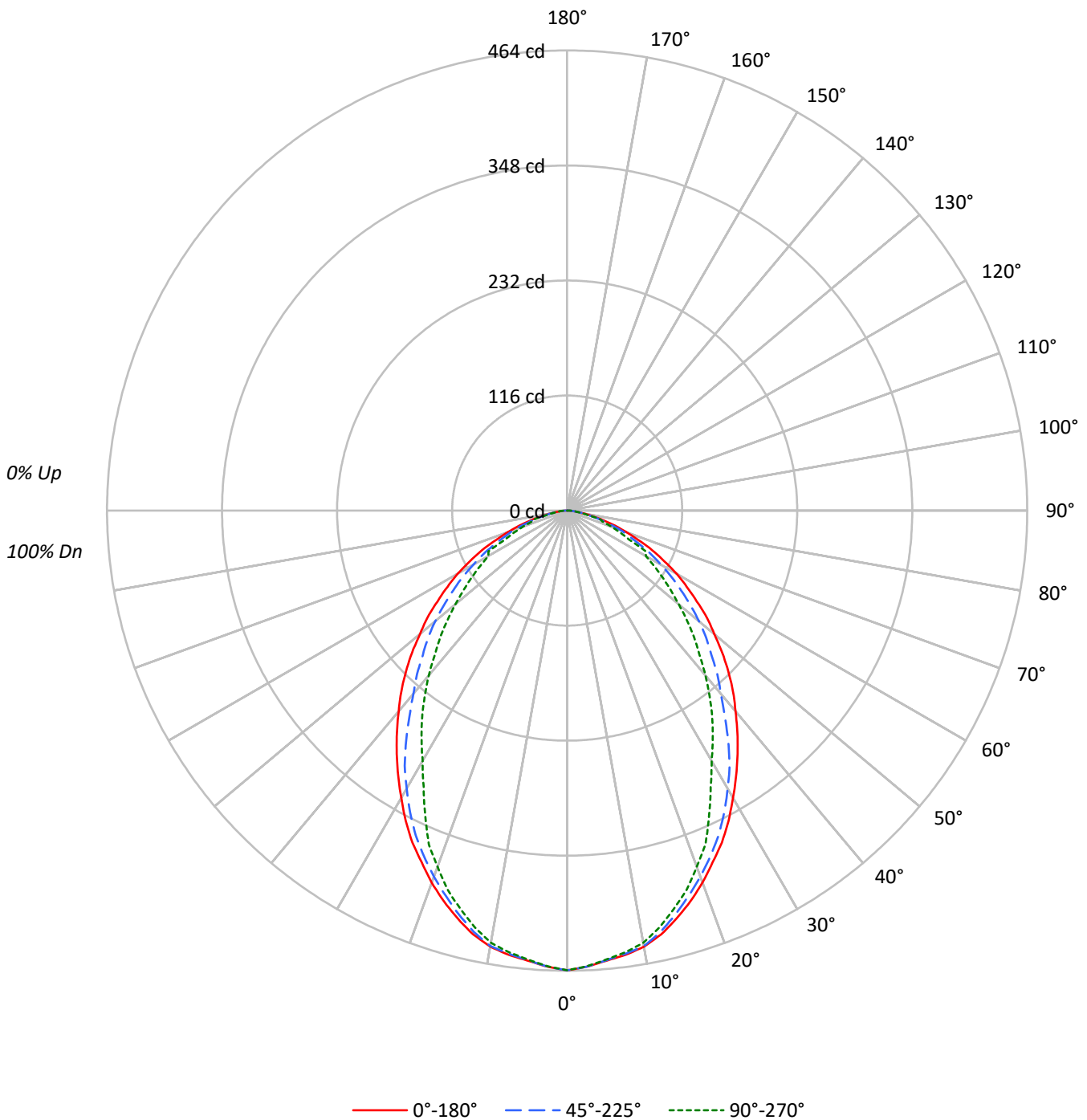
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2495	2495	2495
5°	2461	2458	2455
10°	2440	2437	2419
15°	2374	2350	2317
20°	2286	2250	2188
25°	2192	2145	2011
30°	2078	2012	1812
35°	1968	1859	1676
40°	1856	1694	1525
45°	1750	1566	1378
50°	1620	1454	1229
55°	1498	1317	1102
60°	1372	1176	986
65°	1209	1030	874
70°	995	902	743
75°	790	690	724
80°	530	499	465
85°	333	395	463

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1750 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.1	4.7
10°-20°	118.4	13.0
20°-30°	163.9	18.0
30°-40°	174.8	19.2
40°-50°	159.5	17.5
50°-60°	124.9	13.7
60°-70°	81.4	8.9
70°-80°	36.1	4.0
80°-90°	7.8	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°	325.5	35.8
0°-40°	500.3	55.0
0°-60°	784.7	86.2
0°-90°	910.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	910.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	464	464	464	464	464	
5°	456	455	455	454	454	43
15°	426	426	422	418	416	120
25°	369	367	361	348	339	170
35°	300	297	283	262	255	187
45°	230	225	206	189	181	177
55°	160	155	140	124	117	143
65°	95	90	81	82	69	93
75°	38	35	33	32	35	41
85°	5	6	6	7	8	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	463.5	463.5	463.5	463.5	463.5
2.5°	460.3	460.3	460.3	459.8	459.8
5°	455.5	455.0	455.0	454.4	454.4
7.5°	451.8	451.2	450.7	450.1	449.1
10°	446.4	446.4	445.9	443.2	442.6
12.5°	437.8	437.3	435.1	431.4	430.3
15°	426.0	426.0	421.7	417.5	415.8
17.5°	413.2	412.6	407.3	403.0	400.8
20°	399.2	398.2	392.8	385.8	382.1
22.5°	383.7	383.7	377.3	368.2	364.4
25°	369.2	367.1	361.2	348.3	338.7
27.5°	352.6	349.4	343.0	324.7	313.5
30°	334.4	332.8	323.7	300.1	291.5
32.5°	317.2	314.6	304.9	280.3	273.3
35°	299.6	297.4	282.9	261.5	255.1
37.5°	281.9	279.2	261.0	243.8	235.8
40°	264.2	261.0	241.1	225.6	217.0
42.5°	247.6	243.3	224.0	207.4	197.7
45°	229.9	225.1	205.8	188.6	181.1
47.5°	212.2	207.9	190.2	172.6	164.0
50°	193.5	189.7	173.6	155.9	146.8
52.5°	177.9	172.0	156.5	138.8	131.3
55°	159.7	154.9	140.4	123.8	117.4
57.5°	143.1	138.3	124.9	109.3	104.0
60°	127.5	120.6	109.3	95.9	91.6
62.5°	110.4	105.0	95.4	84.1	89.5
65°	94.9	89.5	80.9	82.5	68.6
67.5°	77.7	75.0	67.5	60.0	57.9
70°	63.2	60.0	57.3	49.3	47.2
72.5°	50.4	47.2	43.4	39.1	37.5
75°	38.0	35.4	33.2	31.6	34.8
77.5°	26.3	25.2	23.6	22.0	21.4
80°	17.1	16.6	16.1	15.5	15.0
82.5°	10.2	10.2	10.2	10.2	10.2
85°	5.4	5.9	6.4	7.0	7.5
87.5°	3.2	3.2	3.8	4.3	4.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)