

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: P562274

Luminaire Tested: FSR-24-4-LD4-1LO-50-UNV-93-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562274
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-LD4-1LO-50-UNV-93-85-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2557.0 lumens
Efficiency: N/A
Efficacy: 109.3 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

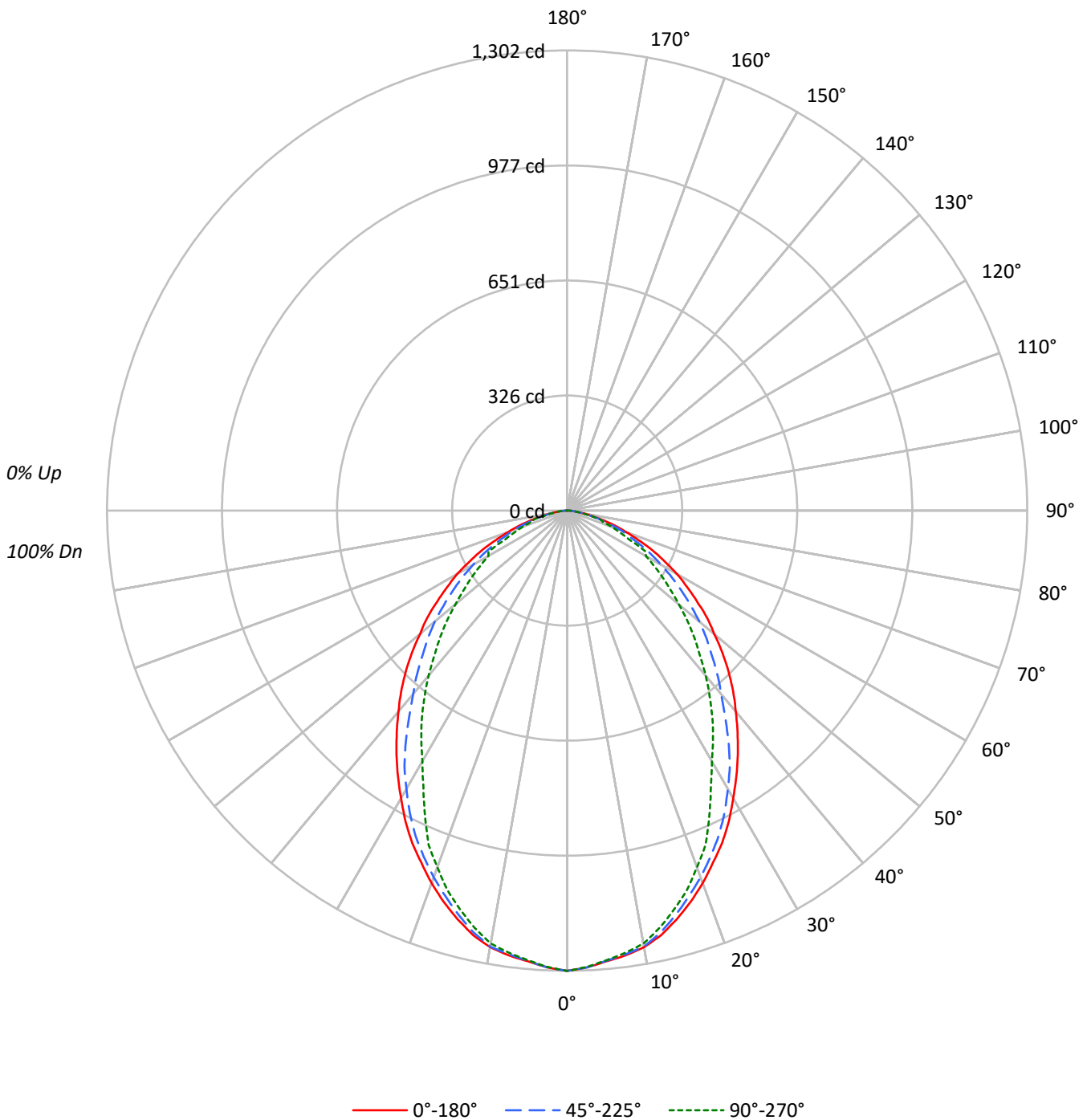
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1752	1752	1752
5°	1729	1727	1725
10°	1714	1712	1699
15°	1668	1651	1628
20°	1606	1580	1537
25°	1540	1507	1413
30°	1460	1413	1273
35°	1383	1306	1177
40°	1304	1190	1071
45°	1229	1100	969
50°	1138	1021	864
55°	1053	925	774
60°	964	827	693
65°	848	724	613
70°	699	634	521
75°	556	486	509
80°	373	350	327
85°	233	279	326

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1229 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.2	4.7
10°-20°	332.7	13.0
20°-30°	460.7	18.0
30°-40°	491.2	19.2
40°-50°	448.1	17.5
50°-60°	351.1	13.7
60°-70°	228.8	8.9
70°-80°	101.4	4.0
80°-90°	21.8	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°	914.7	35.8
0°-40°	1405.9	55.0
0°-60°	2205.0	86.2
0°-90°	2557.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2557.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1302	1302	1302	1302	1302	
5°	1280	1278	1278	1277	1277	121
15°	1197	1197	1185	1173	1168	337
25°	1038	1032	1015	979	952	476
35°	842	836	795	735	717	526
45°	646	632	578	530	509	498
55°	449	435	394	348	330	402
65°	266	252	227	232	193	263
75°	107	99	93	89	98	115
85°	15	17	18	20	21	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1302.5	1302.5	1302.5	1302.5	1302.5
2.5°	1293.5	1293.5	1293.5	1292.0	1292.0
5°	1279.9	1278.4	1278.4	1276.9	1276.9
7.5°	1269.4	1267.9	1266.4	1264.9	1261.8
10°	1254.3	1254.3	1252.8	1245.3	1243.8
12.5°	1230.2	1228.7	1222.7	1212.2	1209.1
15°	1197.1	1197.1	1185.1	1173.0	1168.5
17.5°	1161.0	1159.5	1144.4	1132.3	1126.3
20°	1121.8	1118.8	1103.7	1084.2	1073.6
22.5°	1078.1	1078.1	1060.1	1034.5	1023.9
25°	1037.5	1031.5	1014.9	978.8	951.7
27.5°	990.8	981.8	963.7	912.5	880.9
30°	939.6	935.1	909.5	843.2	819.1
32.5°	891.4	883.9	856.8	787.5	767.9
35°	841.7	835.7	795.1	734.8	716.8
37.5°	792.0	784.5	733.3	685.1	662.5
40°	742.4	733.3	677.6	633.9	609.8
42.5°	695.7	683.6	629.4	582.7	555.6
45°	646.0	632.4	578.2	530.0	509.0
47.5°	596.3	584.2	534.6	484.9	460.8
50°	543.6	533.0	487.9	438.2	412.6
52.5°	499.9	483.4	439.7	390.0	368.9
55°	448.7	435.2	394.5	347.8	329.8
57.5°	402.0	388.5	350.8	307.2	292.1
60°	358.4	338.8	307.2	269.5	257.5
62.5°	310.2	295.1	268.0	236.4	251.5
65°	266.5	251.5	227.4	231.9	192.7
67.5°	218.3	210.8	189.7	168.6	162.6
70°	177.7	168.6	161.1	138.5	132.5
72.5°	141.5	132.5	122.0	109.9	105.4
75°	106.9	99.4	93.4	88.8	97.9
77.5°	73.8	70.8	66.3	61.7	60.2
80°	48.2	46.7	45.2	43.7	42.2
82.5°	28.6	28.6	28.6	28.6	28.6
85°	15.1	16.6	18.1	19.6	21.1
87.5°	9.0	9.0	10.5	12.0	13.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)