

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: P562262

Luminaire Tested: FSR-24-4-LD4-1LO-50-UNV-82-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562262
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-82-87-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2271.0 lumens
Efficiency: N/A
Efficacy: 97.1 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

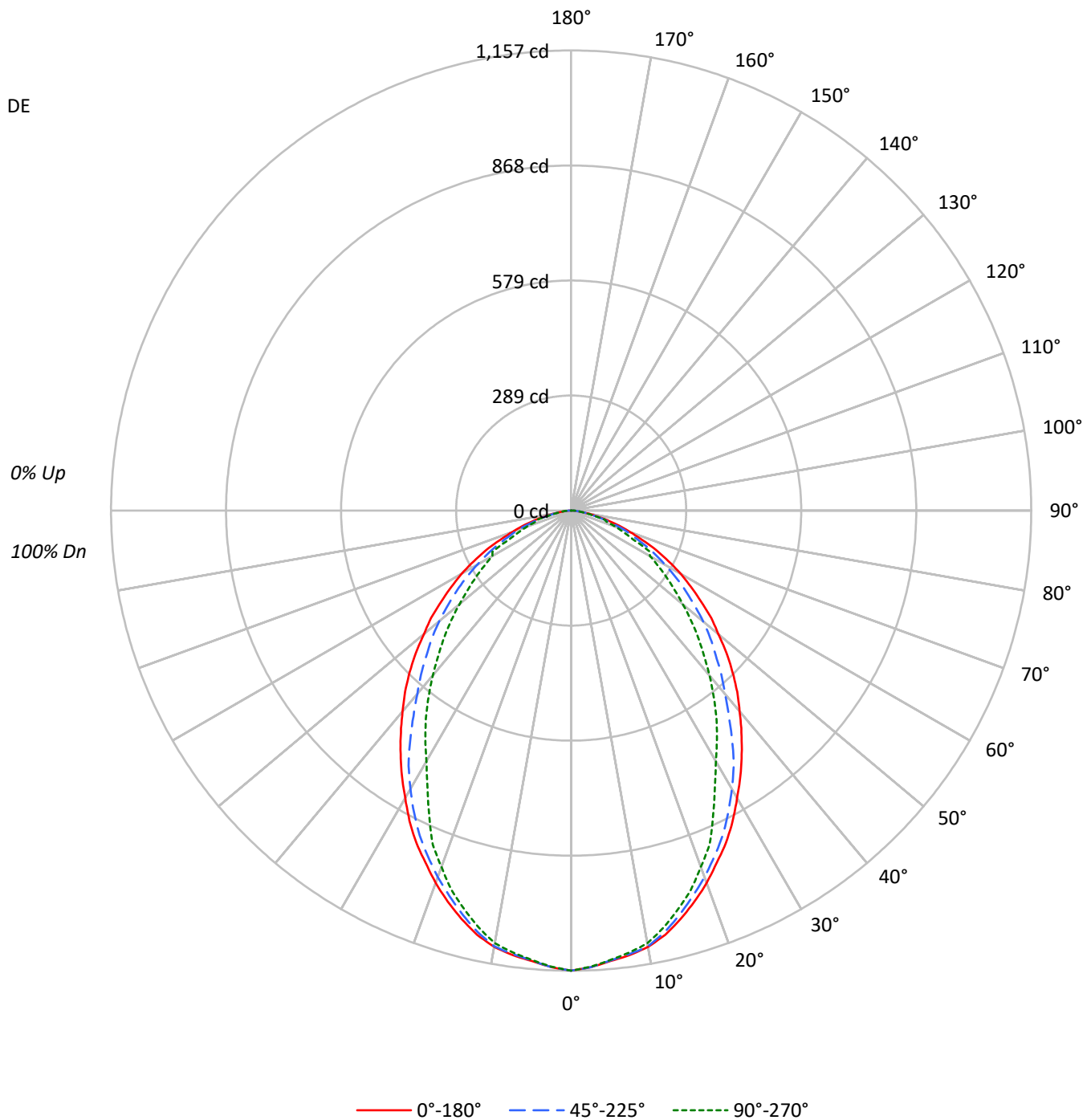
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1556	1556	1556
5°	1535	1534	1532
10°	1522	1520	1509
15°	1481	1466	1446
20°	1427	1404	1365
25°	1368	1338	1255
30°	1297	1255	1130
35°	1228	1160	1046
40°	1158	1057	951
45°	1092	977	860
50°	1011	907	767
55°	935	822	687
60°	857	734	615
65°	754	643	545
70°	621	563	463
75°	494	431	452
80°	332	311	290
85°	207	247	289

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1092 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.7	4.7
10°-20°	295.5	13.0
20°-30°	409.1	18.0
30°-40°	436.3	19.2
40°-50°	398.0	17.5
50°-60°	311.8	13.7
60°-70°	203.2	8.9
70°-80°	90.0	4.0
80°-90°	19.3	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°	812.4	35.8
0°-40°	1248.6	55.0
0°-60°	1958.4	86.2
0°-90°	2271.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2271.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1157	1157	1157	1157	1157	
5°	1137	1135	1135	1134	1134	108
15°	1063	1063	1052	1042	1038	299
25°	921	916	901	869	845	423
35°	748	742	706	653	637	467
45°	574	562	514	471	452	442
55°	398	386	350	309	293	357
65°	237	223	202	206	171	233
75°	95	88	83	79	87	102
85°	13	15	16	17	19	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1156.8	1156.8	1156.8	1156.8	1156.8
2.5°	1148.8	1148.8	1148.8	1147.5	1147.5
5°	1136.8	1135.4	1135.4	1134.1	1134.1
7.5°	1127.4	1126.1	1124.7	1123.4	1120.7
10°	1114.0	1114.0	1112.7	1106.0	1104.7
12.5°	1092.6	1091.3	1085.9	1076.6	1073.9
15°	1063.2	1063.2	1052.5	1041.8	1037.8
17.5°	1031.1	1029.8	1016.4	1005.7	1000.3
20°	996.3	993.7	980.3	962.9	953.5
22.5°	957.6	957.6	941.5	918.8	909.4
25°	921.4	916.1	901.4	869.3	845.2
27.5°	880.0	872.0	855.9	810.4	782.4
30°	834.5	830.5	807.8	748.9	727.5
32.5°	791.7	785.0	761.0	699.4	682.1
35°	747.6	742.2	706.1	652.6	636.6
37.5°	703.5	696.8	651.3	608.5	588.4
40°	659.3	651.3	601.8	563.0	541.6
42.5°	617.9	607.2	559.0	517.6	493.5
45°	573.7	561.7	513.5	470.8	452.0
47.5°	529.6	518.9	474.8	430.6	409.2
50°	482.8	473.4	433.3	389.2	366.4
52.5°	444.0	429.3	390.5	346.4	327.7
55°	398.5	386.5	350.4	308.9	292.9
57.5°	357.1	345.0	311.6	272.8	259.4
60°	318.3	300.9	272.8	239.4	228.7
62.5°	275.5	262.1	238.1	210.0	223.3
65°	236.7	223.3	201.9	206.0	171.2
67.5°	193.9	187.2	168.5	149.8	144.4
70°	157.8	149.8	143.1	123.0	117.7
72.5°	125.7	117.7	108.3	97.6	93.6
75°	95.0	88.3	82.9	78.9	86.9
77.5°	65.5	62.9	58.8	54.8	53.5
80°	42.8	41.5	40.1	38.8	37.4
82.5°	25.4	25.4	25.4	25.4	25.4
85°	13.4	14.7	16.0	17.4	18.7
87.5°	8.0	8.0	9.4	10.7	12.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)