

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: P562272

Luminaire Tested: FSR-24-4-LD4-1LO-50-UNV-93-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562272
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-93-84-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2609.0 lumens
Efficiency: N/A
Efficacy: 111.5 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

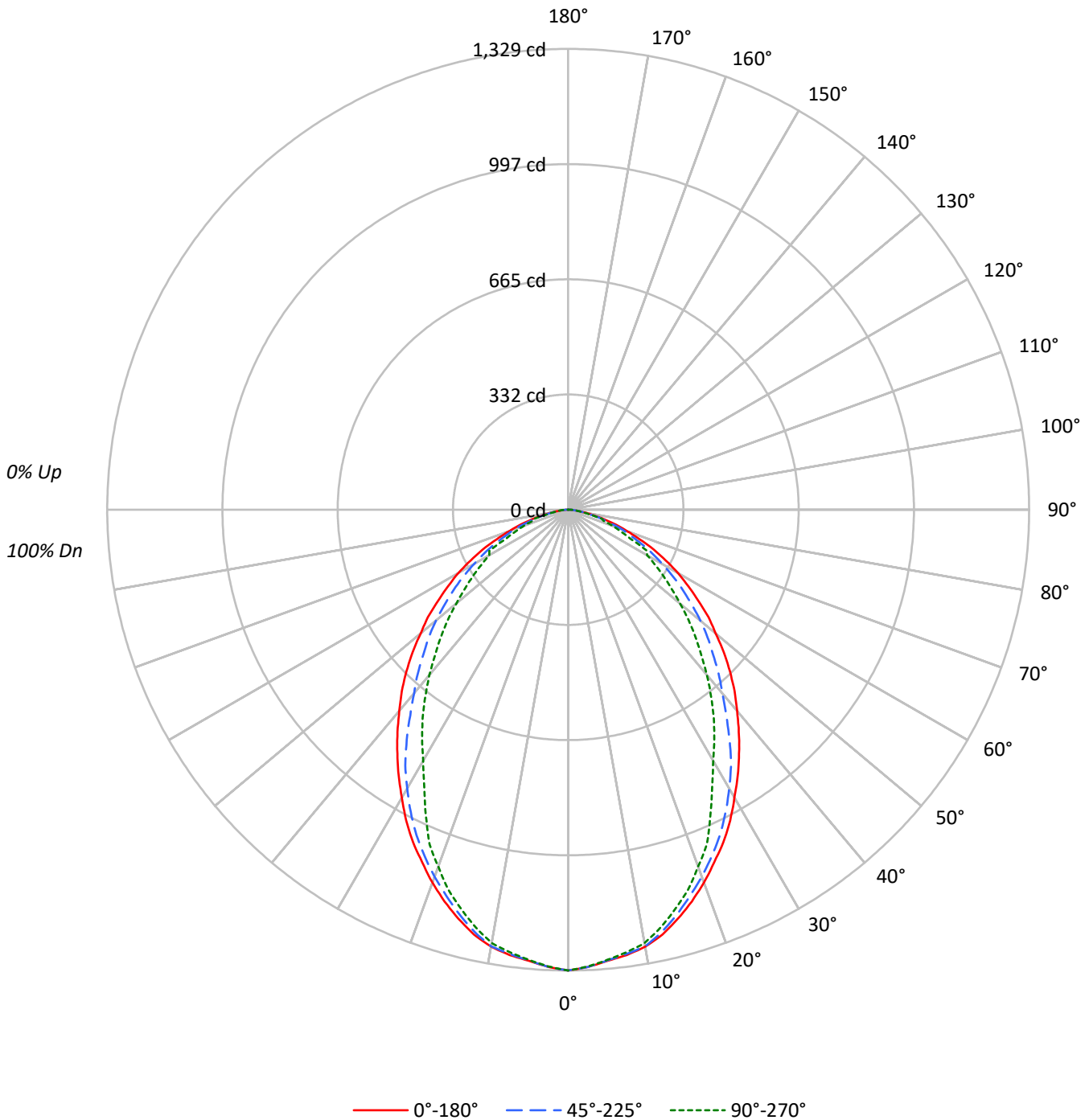
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	1788	1788	1788
5°	1764	1762	1760
10°	1749	1746	1734
15°	1701	1684	1661
20°	1639	1613	1569
25°	1572	1537	1442
30°	1489	1442	1299
35°	1411	1332	1201
40°	1330	1214	1093
45°	1254	1123	988
50°	1161	1042	881
55°	1074	944	789
60°	984	843	707
65°	866	739	626
70°	713	647	532
75°	567	495	519
80°	381	357	333
85°	238	284	332

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1254 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.7	4.7
10°-20°	339.5	13.0
20°-30°	470.0	18.0
30°-40°	501.2	19.2
40°-50°	457.2	17.5
50°-60°	358.2	13.7
60°-70°	233.5	8.9
70°-80°	103.4	4.0
80°-90°	22.2	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°	933.3	35.8
0°-40°	1434.5	55.0
0°-60°	2249.9	86.2
0°-90°	2609.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2609.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1329	1329	1329	1329	1329	
5°	1306	1304	1304	1303	1303	124
15°	1221	1221	1209	1197	1192	343
25°	1059	1052	1036	999	971	486
35°	859	853	811	750	731	537
45°	659	645	590	541	519	508
55°	458	444	402	355	336	411
65°	272	257	232	237	197	268
75°	109	101	95	91	100	117
85°	15	17	18	20	22	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1329.0	1329.0	1329.0	1329.0	1329.0
2.5°	1319.8	1319.8	1319.8	1318.2	1318.2
5°	1305.9	1304.4	1304.4	1302.9	1302.9
7.5°	1295.2	1293.7	1292.1	1290.6	1287.5
10°	1279.8	1279.8	1278.3	1270.6	1269.1
12.5°	1255.2	1253.7	1247.6	1236.8	1233.7
15°	1221.4	1221.4	1209.2	1196.9	1192.2
17.5°	1184.6	1183.0	1167.7	1155.4	1149.2
20°	1144.6	1141.5	1126.2	1106.2	1095.5
22.5°	1100.1	1100.1	1081.6	1055.5	1044.8
25°	1058.6	1052.4	1035.5	998.7	971.0
27.5°	1011.0	1001.7	983.3	931.1	898.8
30°	958.7	954.1	928.0	860.4	835.8
32.5°	909.6	901.9	874.2	803.5	783.6
35°	858.9	852.7	811.2	749.8	731.3
37.5°	808.1	800.5	748.2	699.1	676.0
40°	757.4	748.2	691.4	646.8	622.2
42.5°	709.8	697.5	642.2	594.6	566.9
45°	659.1	645.3	590.0	540.8	519.3
47.5°	608.4	596.1	545.4	494.7	470.1
50°	554.6	543.9	497.8	447.1	421.0
52.5°	510.1	493.2	448.6	397.9	376.4
55°	457.8	444.0	402.5	354.9	336.5
57.5°	410.2	396.4	358.0	313.4	298.1
60°	365.7	345.7	313.4	275.0	262.7
62.5°	316.5	301.1	273.5	241.2	256.6
65°	271.9	256.6	232.0	236.6	196.7
67.5°	222.8	215.1	193.6	172.1	165.9
70°	181.3	172.1	164.4	141.3	135.2
72.5°	144.4	135.2	124.4	112.2	107.5
75°	109.1	101.4	95.3	90.6	99.9
77.5°	75.3	72.2	67.6	63.0	61.5
80°	49.2	47.6	46.1	44.6	43.0
82.5°	29.2	29.2	29.2	29.2	29.2
85°	15.4	16.9	18.4	20.0	21.5
87.5°	9.2	9.2	10.8	12.3	13.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)