

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: P562208

Luminaire Tested: FSR-24-4-LD4-1LO-40-UNV-93-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562208
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2478.0 lumens
Efficiency: N/A
Efficacy: 105.9 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

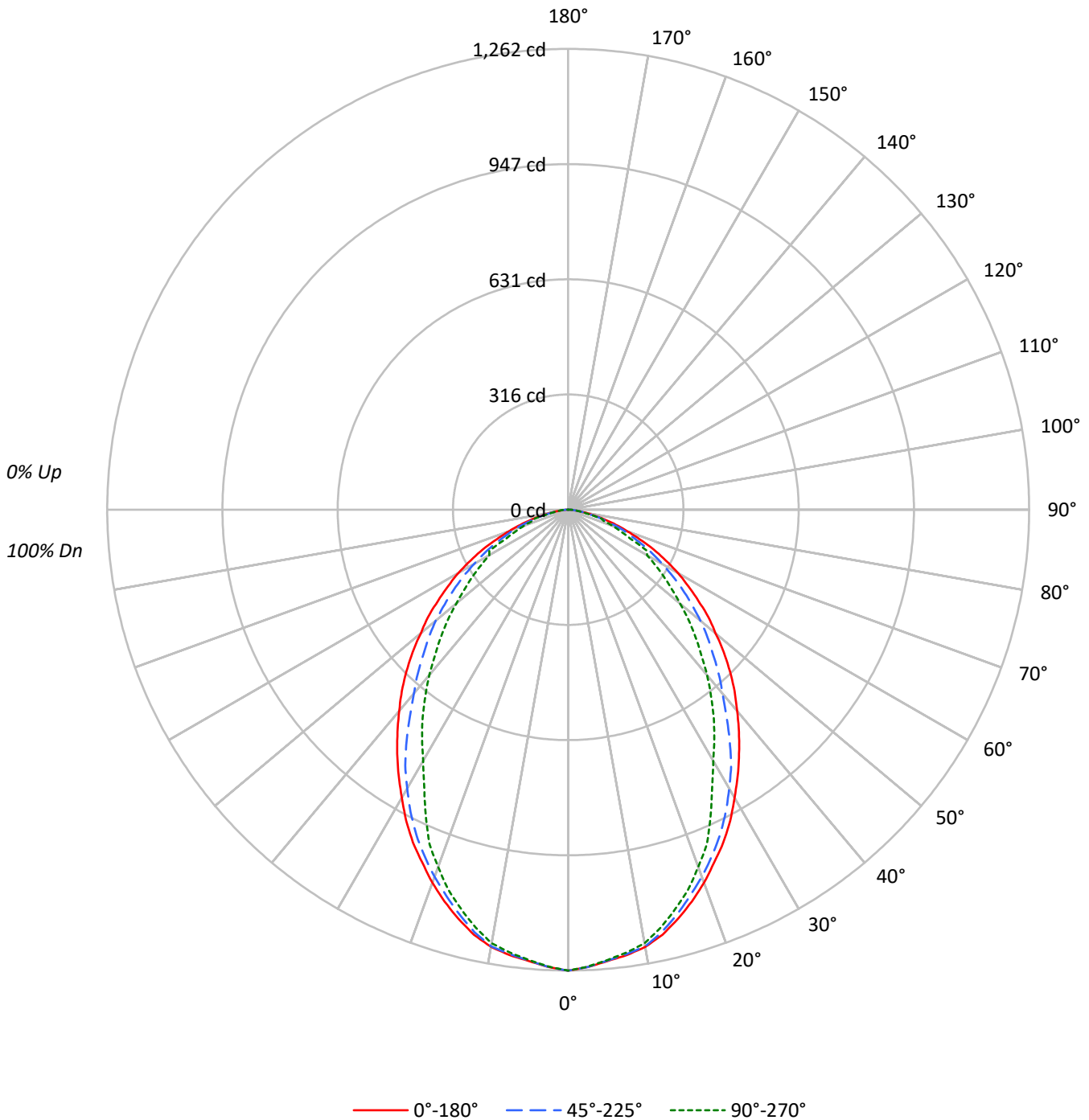
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1698	1698	1698
5°	1675	1673	1671
10°	1661	1659	1647
15°	1616	1600	1577
20°	1557	1531	1490
25°	1493	1460	1369
30°	1415	1369	1233
35°	1340	1266	1141
40°	1264	1153	1038
45°	1191	1066	938
50°	1103	990	837
55°	1020	897	750
60°	935	801	671
65°	822	701	595
70°	677	614	505
75°	539	470	493
80°	362	339	317
85°	225	270	315

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1191 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.5	4.7
10°-20°	322.5	13.0
20°-30°	446.4	18.0
30°-40°	476.0	19.2
40°-50°	434.3	17.5
50°-60°	340.2	13.7
60°-70°	221.7	8.9
70°-80°	98.2	4.0
80°-90°	21.1	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°	886.4	35.8
0°-40°	1362.4	55.0
0°-60°	2136.9	86.2
0°-90°	2478.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2478.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1262	1262	1262	1262	1262	
5°	1240	1239	1239	1238	1238	118
15°	1160	1160	1148	1137	1132	326
25°	1005	1000	984	948	922	462
35°	816	810	770	712	695	510
45°	626	613	560	514	493	482
55°	435	422	382	337	320	390
65°	258	244	220	225	187	255
75°	104	96	90	86	95	111
85°	15	16	18	19	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1262.3	1262.3	1262.3	1262.3	1262.3
2.5°	1253.5	1253.5	1253.5	1252.0	1252.0
5°	1240.4	1238.9	1238.9	1237.5	1237.5
7.5°	1230.2	1228.7	1227.2	1225.8	1222.9
10°	1215.6	1215.6	1214.1	1206.8	1205.3
12.5°	1192.2	1190.8	1184.9	1174.7	1171.8
15°	1160.1	1160.1	1148.4	1136.8	1132.4
17.5°	1125.1	1123.6	1109.0	1097.4	1091.5
20°	1087.1	1084.2	1069.6	1050.7	1040.5
22.5°	1044.8	1044.8	1027.3	1002.5	992.3
25°	1005.4	999.6	983.5	948.5	922.3
27.5°	960.2	951.4	933.9	884.3	853.7
30°	910.6	906.2	881.4	817.2	793.8
32.5°	863.9	856.6	830.3	763.2	744.2
35°	815.7	809.9	770.5	712.1	694.6
37.5°	767.6	760.3	710.7	664.0	642.1
40°	719.4	710.7	656.7	614.3	591.0
42.5°	674.2	662.5	610.0	564.7	538.5
45°	626.0	612.9	560.4	513.7	493.2
47.5°	577.9	566.2	518.0	469.9	446.5
50°	526.8	516.6	472.8	424.6	399.8
52.5°	484.5	468.4	426.1	377.9	357.5
55°	434.9	421.7	382.3	337.1	319.6
57.5°	389.6	376.5	340.0	297.7	283.1
60°	347.3	328.3	297.7	261.2	249.5
62.5°	300.6	286.0	259.7	229.1	243.7
65°	258.3	243.7	220.3	224.7	186.8
67.5°	211.6	204.3	183.9	163.4	157.6
70°	172.2	163.4	156.1	134.3	128.4
72.5°	137.2	128.4	118.2	106.5	102.1
75°	103.6	96.3	90.5	86.1	94.9
77.5°	71.5	68.6	64.2	59.8	58.4
80°	46.7	45.2	43.8	42.3	40.9
82.5°	27.7	27.7	27.7	27.7	27.7
85°	14.6	16.1	17.5	19.0	20.4
87.5°	8.8	8.8	10.2	11.7	13.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)