

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: P562210

Luminaire Tested: FSR-24-4-LD4-1LO-40-UNV-93-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562210
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-93-85-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2429.0 lumens
Efficiency: N/A
Efficacy: 103.8 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

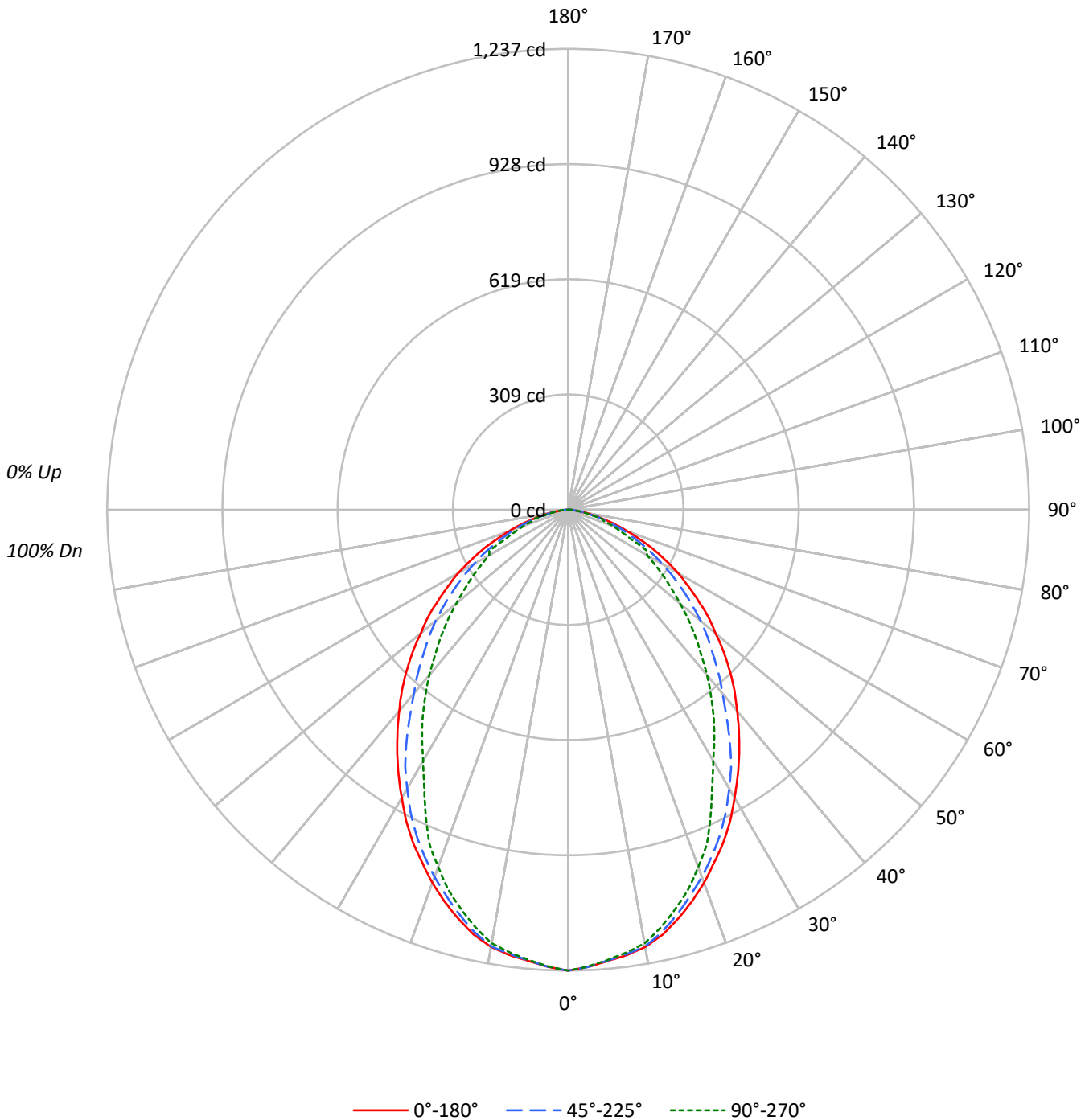
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1665	1665	1665
5°	1642	1640	1638
10°	1628	1626	1614
15°	1584	1568	1546
20°	1526	1501	1460
25°	1463	1431	1342
30°	1387	1342	1209
35°	1313	1241	1118
40°	1239	1131	1017
45°	1168	1045	920
50°	1081	970	820
55°	1000	879	735
60°	916	785	658
65°	806	688	583
70°	664	602	495
75°	528	461	483
80°	355	332	311
85°	221	266	309

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1168 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.2	4.7
10°-20°	316.1	13.0
20°-30°	437.6	18.0
30°-40°	466.6	19.2
40°-50°	425.7	17.5
50°-60°	333.5	13.7
60°-70°	217.4	8.9
70°-80°	96.3	4.0
80°-90°	20.7	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°	868.9	35.8
0°-40°	1335.5	55.0
0°-60°	2094.7	86.2
0°-90°	2429.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2429.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1237	1237	1237	1237	1237	
5°	1216	1214	1214	1213	1213	115
15°	1137	1137	1126	1114	1110	320
25°	986	980	964	930	904	452
35°	800	794	755	698	681	500
45°	614	601	549	504	484	473
55°	426	413	375	330	313	382
65°	253	239	216	220	183	250
75°	102	94	89	84	93	109
85°	14	16	17	19	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1237.3	1237.3	1237.3	1237.3	1237.3
2.5°	1228.7	1228.7	1228.7	1227.3	1227.3
5°	1215.8	1214.4	1214.4	1213.0	1213.0
7.5°	1205.8	1204.4	1203.0	1201.5	1198.7
10°	1191.5	1191.5	1190.1	1182.9	1181.5
12.5°	1168.6	1167.2	1161.5	1151.5	1148.6
15°	1137.2	1137.2	1125.7	1114.3	1110.0
17.5°	1102.8	1101.4	1087.1	1075.7	1069.9
20°	1065.7	1062.8	1048.5	1029.9	1019.9
22.5°	1024.2	1024.2	1007.0	982.7	972.7
25°	985.5	979.8	964.1	929.8	904.0
27.5°	941.2	932.6	915.5	866.8	836.8
30°	892.6	888.3	864.0	801.0	778.1
32.5°	846.8	839.6	813.9	748.1	729.5
35°	799.6	793.9	755.3	698.0	680.9
37.5°	752.4	745.2	696.6	650.8	629.4
40°	705.2	696.6	643.7	602.2	579.3
42.5°	660.8	649.4	597.9	553.6	527.8
45°	613.6	600.8	549.3	503.5	483.5
47.5°	566.4	555.0	507.8	460.6	437.7
50°	516.4	506.4	463.5	416.2	391.9
52.5°	474.9	459.2	417.7	370.5	350.4
55°	426.3	413.4	374.8	330.4	313.3
57.5°	381.9	369.0	333.3	291.8	277.5
60°	340.4	321.8	291.8	256.0	244.6
62.5°	294.7	280.4	254.6	224.6	238.9
65°	253.2	238.9	216.0	220.3	183.1
67.5°	207.4	200.3	180.2	160.2	154.5
70°	168.8	160.2	153.1	131.6	125.9
72.5°	134.5	125.9	115.9	104.4	100.1
75°	101.6	94.4	88.7	84.4	93.0
77.5°	70.1	67.2	62.9	58.6	57.2
80°	45.8	44.3	42.9	41.5	40.1
82.5°	27.2	27.2	27.2	27.2	27.2
85°	14.3	15.7	17.2	18.6	20.0
87.5°	8.6	8.6	10.0	11.4	12.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)