

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: P562281

Luminaire Tested: FSR-24-4-LD4-1LO-50-UNV-93-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562281
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-93-88-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2532.0 lumens
Efficiency: N/A
Efficacy: 108.2 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

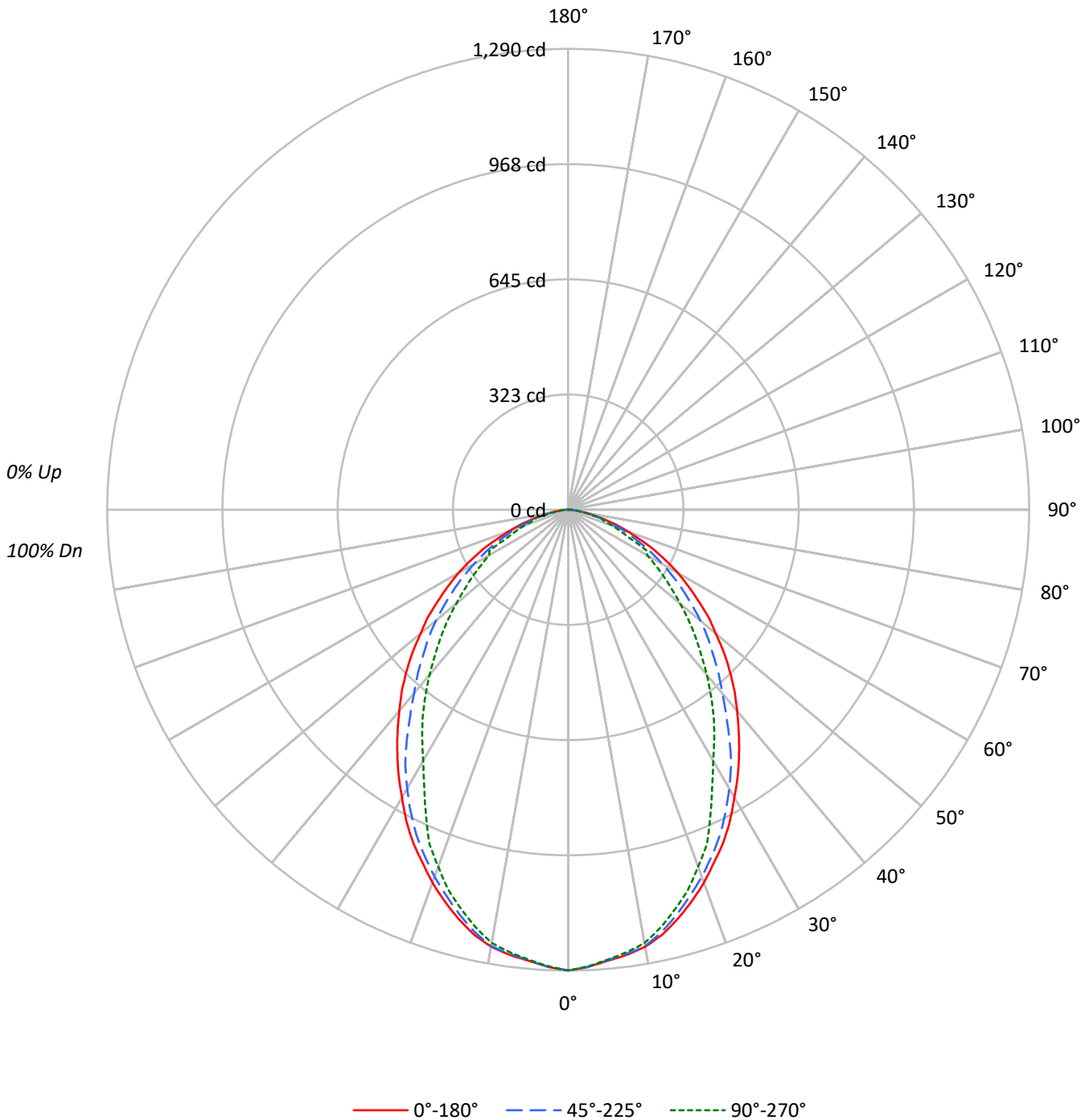
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1735	1735	1735
5°	1712	1710	1708
10°	1697	1695	1683
15°	1651	1635	1612
20°	1590	1565	1522
25°	1525	1492	1399
30°	1446	1399	1260
35°	1369	1293	1166
40°	1291	1179	1061
45°	1217	1090	959
50°	1127	1011	855
55°	1042	916	766
60°	955	819	686
65°	840	717	608
70°	692	627	516
75°	551	480	504
80°	370	346	323
85°	230	276	323

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1217 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.1	4.7
10°-20°	329.5	13.0
20°-30°	456.2	18.0
30°-40°	486.4	19.2
40°-50°	443.7	17.5
50°-60°	347.6	13.7
60°-70°	226.6	8.9
70°-80°	100.4	4.0
80°-90°	21.5	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°	905.7	35.8
0°-40°	1392.1	55.0
0°-60°	2183.5	86.2
0°-90°	2532.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2532.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1290	1290	1290	1290	1290	
5°	1267	1266	1266	1264	1264	120
15°	1185	1185	1174	1162	1157	333
25°	1027	1021	1005	969	942	472
35°	834	828	787	728	710	521
45°	640	626	573	525	504	493
55°	444	431	391	344	326	399
65°	264	249	225	230	191	260
75°	106	98	92	88	97	113
85°	15	16	18	19	21	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1289.8	1289.8	1289.8	1289.8	1289.8
2.5°	1280.8	1280.8	1280.8	1279.3	1279.3
5°	1267.4	1265.9	1265.9	1264.4	1264.4
7.5°	1257.0	1255.5	1254.0	1252.5	1249.5
10°	1242.1	1242.1	1240.6	1233.1	1231.6
12.5°	1218.2	1216.7	1210.7	1200.3	1197.3
15°	1185.4	1185.4	1173.5	1161.5	1157.1
17.5°	1149.6	1148.1	1133.2	1121.3	1115.3
20°	1110.8	1107.9	1092.9	1073.6	1063.1
22.5°	1067.6	1067.6	1049.7	1024.4	1013.9
25°	1027.3	1021.4	1005.0	969.2	942.3
27.5°	981.1	972.2	954.3	903.6	872.3
30°	930.4	925.9	900.6	835.0	811.1
32.5°	882.7	875.3	848.4	779.8	760.4
35°	833.5	827.5	787.3	727.6	709.7
37.5°	784.3	776.8	726.1	678.4	656.1
40°	735.1	726.1	671.0	627.7	603.9
42.5°	688.9	676.9	623.3	577.0	550.2
45°	639.7	626.2	572.6	524.9	504.0
47.5°	590.5	578.5	529.3	480.1	456.3
50°	538.3	527.8	483.1	433.9	408.6
52.5°	495.0	478.6	435.4	386.2	365.3
55°	444.3	430.9	390.7	344.4	326.5
57.5°	398.1	384.7	347.4	304.2	289.3
60°	354.9	335.5	304.2	266.9	255.0
62.5°	307.2	292.2	265.4	234.1	249.0
65°	263.9	249.0	225.2	229.6	190.9
67.5°	216.2	208.7	187.9	167.0	161.0
70°	175.9	167.0	159.5	137.2	131.2
72.5°	140.2	131.2	120.8	108.8	104.4
75°	105.9	98.4	92.4	88.0	96.9
77.5°	73.1	70.1	65.6	61.1	59.6
80°	47.7	46.2	44.7	43.2	41.7
82.5°	28.3	28.3	28.3	28.3	28.3
85°	14.9	16.4	17.9	19.4	20.9
87.5°	8.9	8.9	10.4	11.9	13.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)