

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: P560231

Luminaire Tested: FSR-12-2-LD4-2HI-35-UNV-93-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560231
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-12-2-LD4-2HI-35-UNV-93-87-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3516.0 lumens
Efficiency: N/A
Efficacy: 81.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

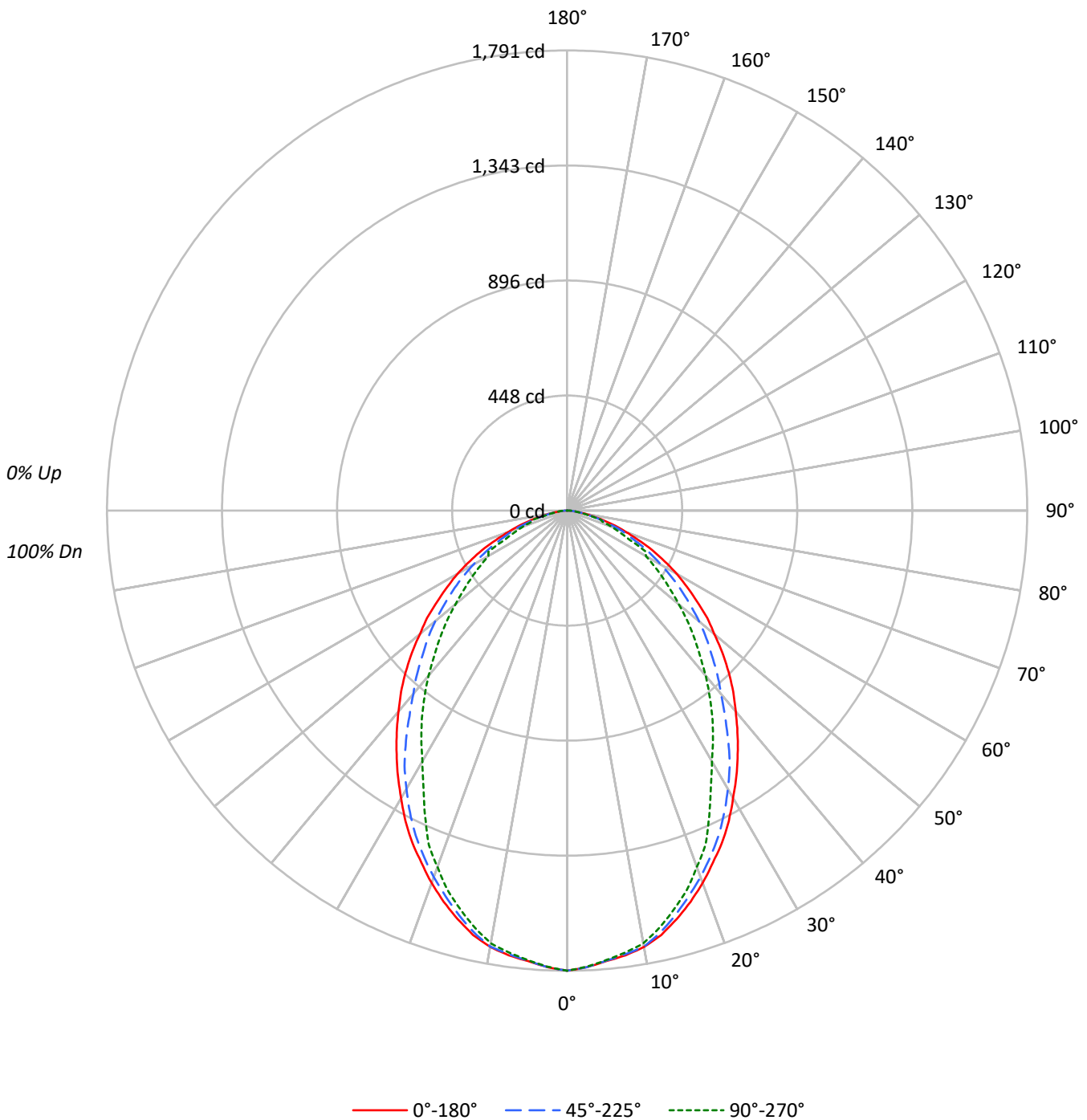
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9639	9639	9639
5°	9508	9497	9486
10°	9425	9415	9347
15°	9172	9079	8952
20°	8834	8692	8455
25°	8472	8287	7771
30°	8029	7772	7000
35°	7604	7182	6476
40°	7172	6546	5892
45°	6761	6052	5326
50°	6259	5617	4750
55°	5789	5090	4254
60°	5304	4547	3812
65°	4667	3981	3375
70°	3844	3485	2867
75°	3057	2670	2799
80°	2055	1925	1798
85°	1278	1531	1791

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6761 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.7	4.7
10°-20°	457.5	13.0
20°-30°	633.4	18.0
30°-40°	675.4	19.2
40°-50°	616.2	17.5
50°-60°	482.7	13.7
60°-70°	314.6	8.9
70°-80°	139.4	4.0
80°-90°	29.9	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°	1257.7	35.8
0°-40°	1933.1	55.0
0°-60°	3032.0	86.2
0°-90°	3516.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3516.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1791	1791	1791	1791	1791	
5°	1760	1758	1758	1756	1756	167
15°	1646	1646	1630	1613	1607	463
25°	1427	1418	1396	1346	1309	655
35°	1157	1149	1093	1010	986	724
45°	888	870	795	729	700	684
55°	617	598	542	478	453	553
65°	366	346	313	319	265	361
75°	147	137	128	122	135	158
85°	21	23	25	27	29	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1791.0	1791.0	1791.0	1791.0	1791.0
2.5°	1778.6	1778.6	1778.6	1776.5	1776.5
5°	1759.9	1757.9	1757.9	1755.8	1755.8
7.5°	1745.5	1743.4	1741.3	1739.2	1735.1
10°	1724.7	1724.7	1722.7	1712.3	1710.3
12.5°	1691.6	1689.5	1681.3	1666.8	1662.6
15°	1646.1	1646.1	1629.5	1612.9	1606.7
17.5°	1596.4	1594.3	1573.6	1557.0	1548.8
20°	1542.5	1538.4	1517.7	1490.8	1476.3
22.5°	1482.5	1482.5	1457.6	1422.5	1408.0
25°	1426.6	1418.3	1395.5	1345.8	1308.6
27.5°	1362.4	1350.0	1325.1	1254.7	1211.3
30°	1292.0	1285.8	1250.6	1159.5	1126.4
32.5°	1225.8	1215.4	1178.1	1082.9	1056.0
35°	1157.4	1149.1	1093.2	1010.4	985.6
37.5°	1089.1	1078.7	1008.3	942.1	911.0
40°	1020.8	1008.3	931.7	871.7	838.6
42.5°	956.6	940.0	865.5	801.3	764.0
45°	888.3	869.6	795.1	728.8	699.8
47.5°	819.9	803.4	735.0	666.7	633.6
50°	747.5	733.0	670.8	602.5	567.3
52.5°	687.4	664.6	604.6	536.3	507.3
55°	617.0	598.4	542.5	478.3	453.4
57.5°	552.8	534.2	482.4	422.4	401.7
60°	492.8	465.9	422.4	370.6	354.1
62.5°	426.5	405.8	368.6	325.1	345.8
65°	366.5	345.8	312.6	318.9	265.0
67.5°	300.2	289.9	260.9	231.9	223.6
70°	244.3	231.9	221.5	190.5	182.2
72.5°	194.6	182.2	167.7	151.1	144.9
75°	147.0	136.7	128.4	122.2	134.6
77.5°	101.5	97.3	91.1	84.9	82.8
80°	66.3	64.2	62.1	60.0	58.0
82.5°	39.3	39.3	39.3	39.3	39.3
85°	20.7	22.8	24.8	26.9	29.0
87.5°	12.4	12.4	14.5	16.6	18.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)