

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: P560762

Luminaire Tested: FSR-12-4-LD4-1HI-35-UNV-80-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560762
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-12-4-LD4-1HI-35-UNV-80-94-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3417.0 lumens
Efficiency: N/A
Efficacy: 79.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

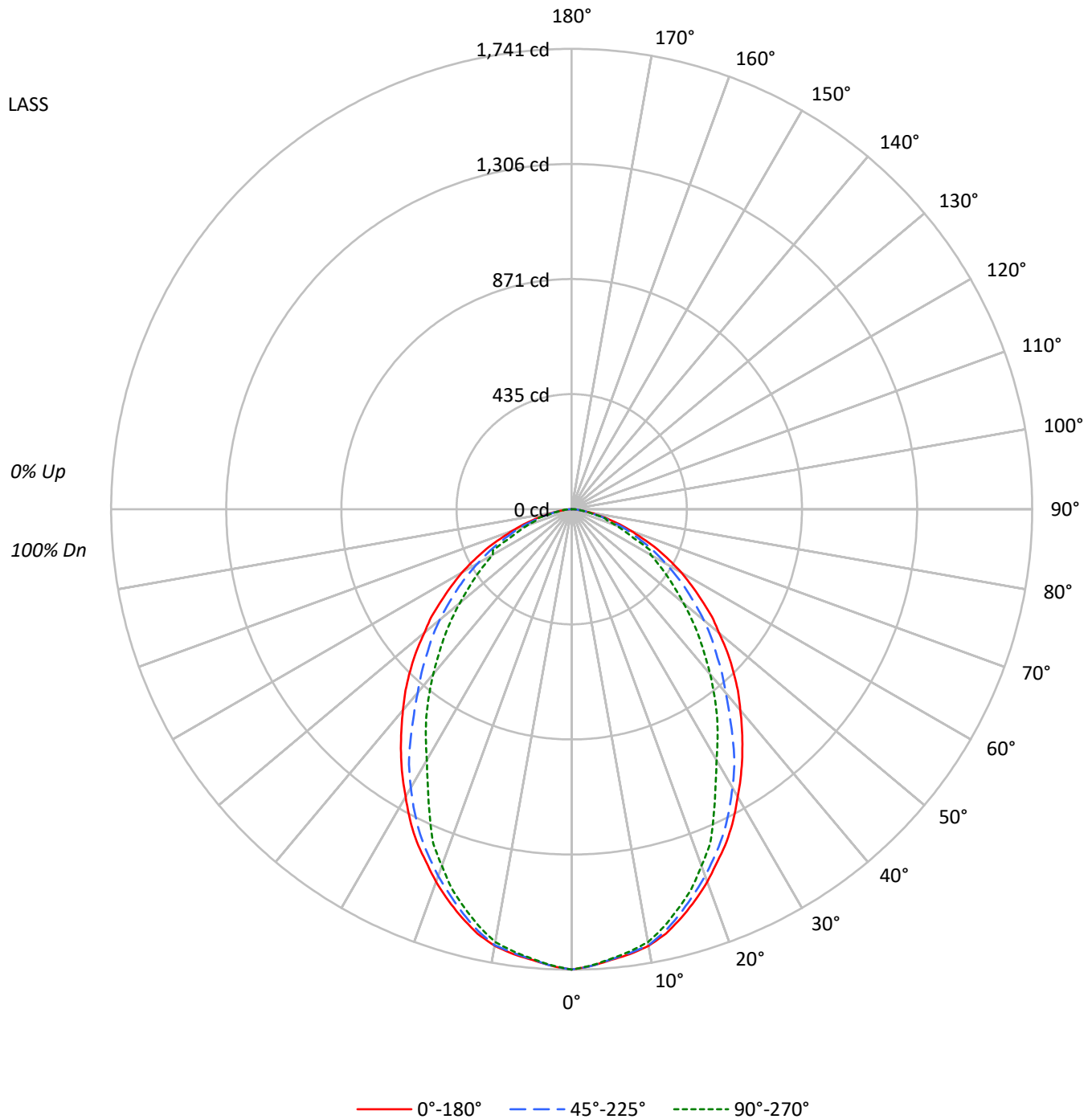
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4684	4684	4684
5°	4620	4615	4609
10°	4580	4575	4542
15°	4457	4412	4350
20°	4293	4224	4109
25°	4116	4027	3776
30°	3901	3777	3402
35°	3695	3490	3146
40°	3485	3181	2863
45°	3285	2941	2588
50°	3041	2730	2308
55°	2813	2473	2068
60°	2577	2209	1852
65°	2268	1934	1640
70°	1868	1694	1393
75°	1486	1298	1360
80°	998	936	872
85°	621	744	871

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3285 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.0	4.7
10°-20°	444.7	13.0
20°-30°	615.6	18.0
30°-40°	656.4	19.2
40°-50°	598.8	17.5
50°-60°	469.1	13.7
60°-70°	305.8	8.9
70°-80°	135.5	4.0
80°-90°	29.1	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°	1222.3	35.8
0°-40°	1878.7	55.0
0°-60°	2946.7	86.2
0°-90°	3417.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3417.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1741	1741	1741	1741	1741	
5°	1710	1708	1708	1706	1706	162
15°	1600	1600	1584	1568	1562	450
25°	1386	1378	1356	1308	1272	636
35°	1125	1117	1062	982	958	703
45°	863	845	773	708	680	665
55°	600	582	527	465	441	538
65°	356	336	304	310	258	351
75°	143	133	125	119	131	153
85°	20	22	24	26	28	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1740.6	1740.6	1740.6	1740.6	1740.6
2.5°	1728.5	1728.5	1728.5	1726.5	1726.5
5°	1710.4	1708.4	1708.4	1706.4	1706.4
7.5°	1696.3	1694.3	1692.3	1690.3	1686.2
10°	1676.2	1676.2	1674.2	1664.1	1662.1
12.5°	1644.0	1642.0	1633.9	1619.8	1615.8
15°	1599.7	1599.7	1583.6	1567.5	1561.5
17.5°	1551.4	1549.4	1529.3	1513.2	1505.1
20°	1499.1	1495.1	1475.0	1448.8	1434.7
22.5°	1440.8	1440.8	1416.6	1382.4	1368.3
25°	1386.4	1378.4	1356.2	1307.9	1271.7
27.5°	1324.0	1312.0	1287.8	1219.4	1177.2
30°	1255.6	1249.6	1215.4	1126.8	1094.7
32.5°	1191.2	1181.2	1145.0	1052.4	1026.2
35°	1124.8	1116.8	1062.5	982.0	957.8
37.5°	1058.4	1048.4	980.0	915.6	885.4
40°	992.0	980.0	905.5	847.1	815.0
42.5°	929.6	913.5	841.1	778.7	742.5
45°	863.2	845.1	772.7	708.3	680.1
47.5°	796.8	780.7	714.3	647.9	615.7
50°	726.4	712.3	652.0	585.6	551.3
52.5°	668.1	645.9	587.6	521.2	493.0
55°	599.6	581.5	527.2	464.8	440.7
57.5°	537.3	519.2	468.8	410.5	390.4
60°	478.9	452.8	410.5	360.2	344.1
62.5°	414.5	394.4	358.2	315.9	336.0
65°	356.2	336.0	303.8	309.9	257.6
67.5°	291.8	281.7	253.5	225.4	217.3
70°	237.4	225.4	215.3	185.1	177.1
72.5°	189.1	177.1	163.0	146.9	140.9
75°	142.9	132.8	124.8	118.7	130.8
77.5°	98.6	94.6	88.5	82.5	80.5
80°	64.4	62.4	60.4	58.4	56.3
82.5°	38.2	38.2	38.2	38.2	38.2
85°	20.1	22.1	24.1	26.2	28.2
87.5°	12.1	12.1	14.1	16.1	18.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)