

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: P561215

Luminaire Tested: FSR-12-4-LD4-1STD-40-UNV-80-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561215
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-LD4-1STD-40-UNV-80-97-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3206.0 lumens
Efficiency: N/A
Efficacy: 96.3 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

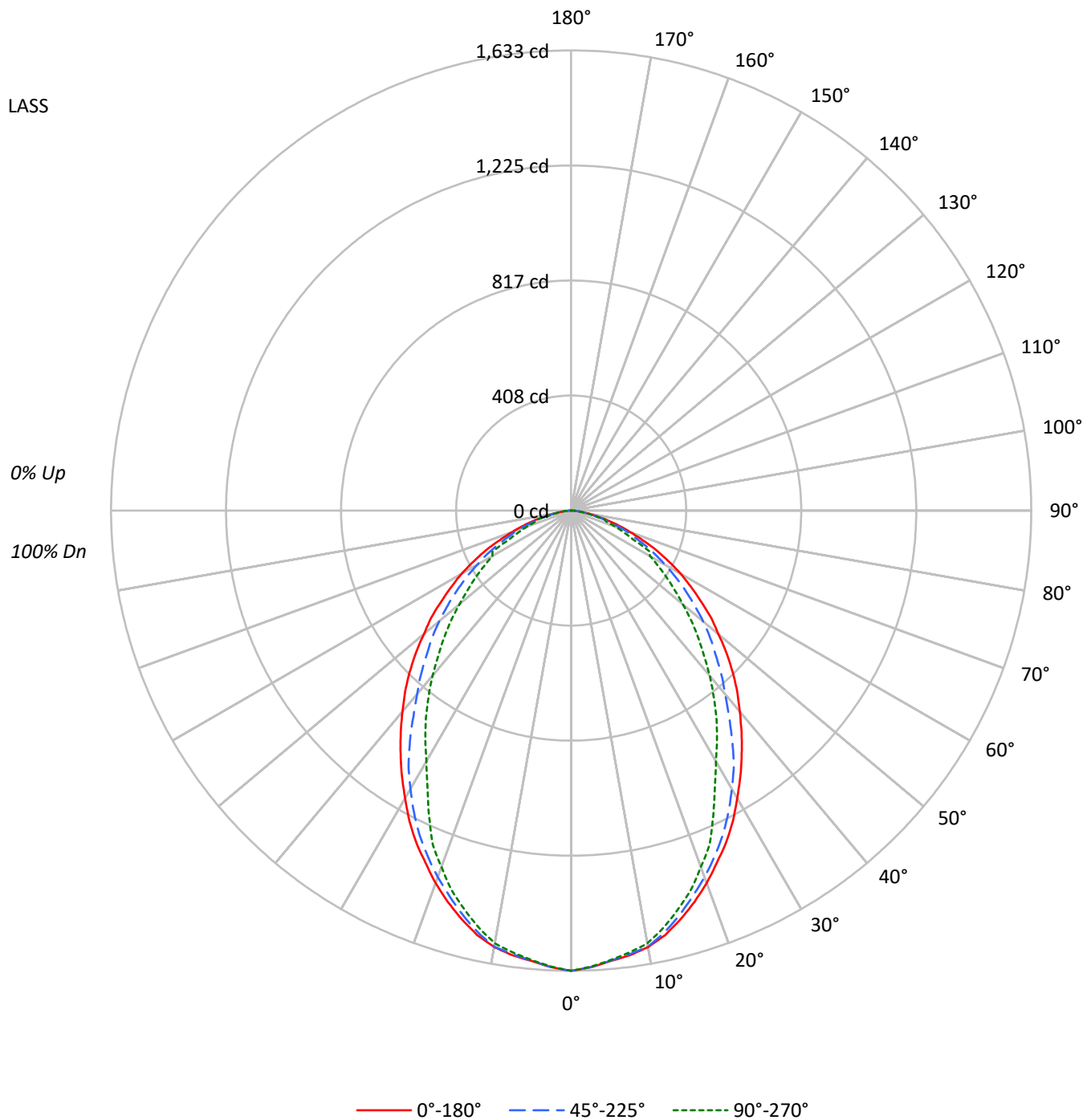
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4395	4395	4395
5°	4335	4330	4325
10°	4297	4292	4261
15°	4181	4139	4082
20°	4028	3963	3855
25°	3862	3778	3543
30°	3661	3543	3191
35°	3467	3275	2952
40°	3270	2984	2686
45°	3082	2759	2428
50°	2853	2561	2166
55°	2639	2320	1940
60°	2418	2073	1737
65°	2128	1815	1539
70°	1753	1589	1307
75°	1393	1218	1276
80°	936	877	820
85°	584	701	815

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3082 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.0	4.7
10°-20°	417.2	13.0
20°-30°	577.6	18.0
30°-40°	615.9	19.2
40°-50°	561.8	17.5
50°-60°	440.2	13.7
60°-70°	286.9	8.9
70°-80°	127.1	4.0
80°-90°	27.3	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°	1146.8	35.8
0°-40°	1762.7	55.0
0°-60°	2764.7	86.2
0°-90°	3206.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3206.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1633	1633	1633	1633	1633	
5°	1605	1603	1603	1601	1601	152
15°	1501	1501	1486	1471	1465	422
25°	1301	1293	1272	1227	1193	597
35°	1055	1048	997	921	899	660
45°	810	793	725	665	638	624
55°	563	546	495	436	414	505
65°	334	315	285	291	242	329
75°	134	125	117	111	123	144
85°	19	21	23	24	26	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1633.1	1633.1	1633.1	1633.1	1633.1
2.5°	1621.8	1621.8	1621.8	1619.9	1619.9
5°	1604.8	1602.9	1602.9	1601.0	1601.0
7.5°	1591.6	1589.7	1587.8	1585.9	1582.1
10°	1572.7	1572.7	1570.8	1561.4	1559.5
12.5°	1542.5	1540.6	1533.0	1519.8	1516.0
15°	1500.9	1500.9	1485.8	1470.7	1465.1
17.5°	1455.6	1453.7	1434.9	1419.8	1412.2
20°	1406.5	1402.8	1383.9	1359.3	1346.1
22.5°	1351.8	1351.8	1329.1	1297.0	1283.8
25°	1300.8	1293.3	1272.5	1227.2	1193.2
27.5°	1242.3	1231.0	1208.3	1144.1	1104.5
30°	1178.1	1172.4	1140.3	1057.3	1027.1
32.5°	1117.7	1108.2	1074.3	987.4	962.9
35°	1055.4	1047.8	996.8	921.3	898.7
37.5°	993.1	983.6	919.4	859.0	830.7
40°	930.8	919.4	849.6	794.8	764.6
42.5°	872.2	857.1	789.2	730.6	696.7
45°	809.9	792.9	725.0	664.6	638.1
47.5°	747.6	732.5	670.2	607.9	577.7
50°	681.6	668.3	611.7	549.4	517.3
52.5°	626.8	606.0	551.3	489.0	462.6
55°	562.6	545.6	494.6	436.1	413.5
57.5°	504.1	487.1	439.9	385.1	366.3
60°	449.3	424.8	385.1	337.9	322.8
62.5°	388.9	370.0	336.1	296.4	315.3
65°	334.2	315.3	285.1	290.7	241.7
67.5°	273.8	264.3	237.9	211.5	203.9
70°	222.8	211.5	202.0	173.7	166.1
72.5°	177.5	166.1	152.9	137.8	132.2
75°	134.0	124.6	117.1	111.4	122.7
77.5°	92.5	88.7	83.1	77.4	75.5
80°	60.4	58.5	56.6	54.8	52.9
82.5°	35.9	35.9	35.9	35.9	35.9
85°	18.9	20.8	22.7	24.5	26.4
87.5°	11.3	11.3	13.2	15.1	17.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)