

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: P688112

Luminaire Tested: FLR-HA-22-L3C3 (HI)-50-CP250

Issue Date: 5/22/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P688112  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2207-724-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/22/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FLR-HA-22-L3C3 (HI)-50-CP250  
Description: Fail-Safe - FLR Fully Luminous Recessed 2X2 5000K Luminaire at High Lumen setting for High Abuse  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

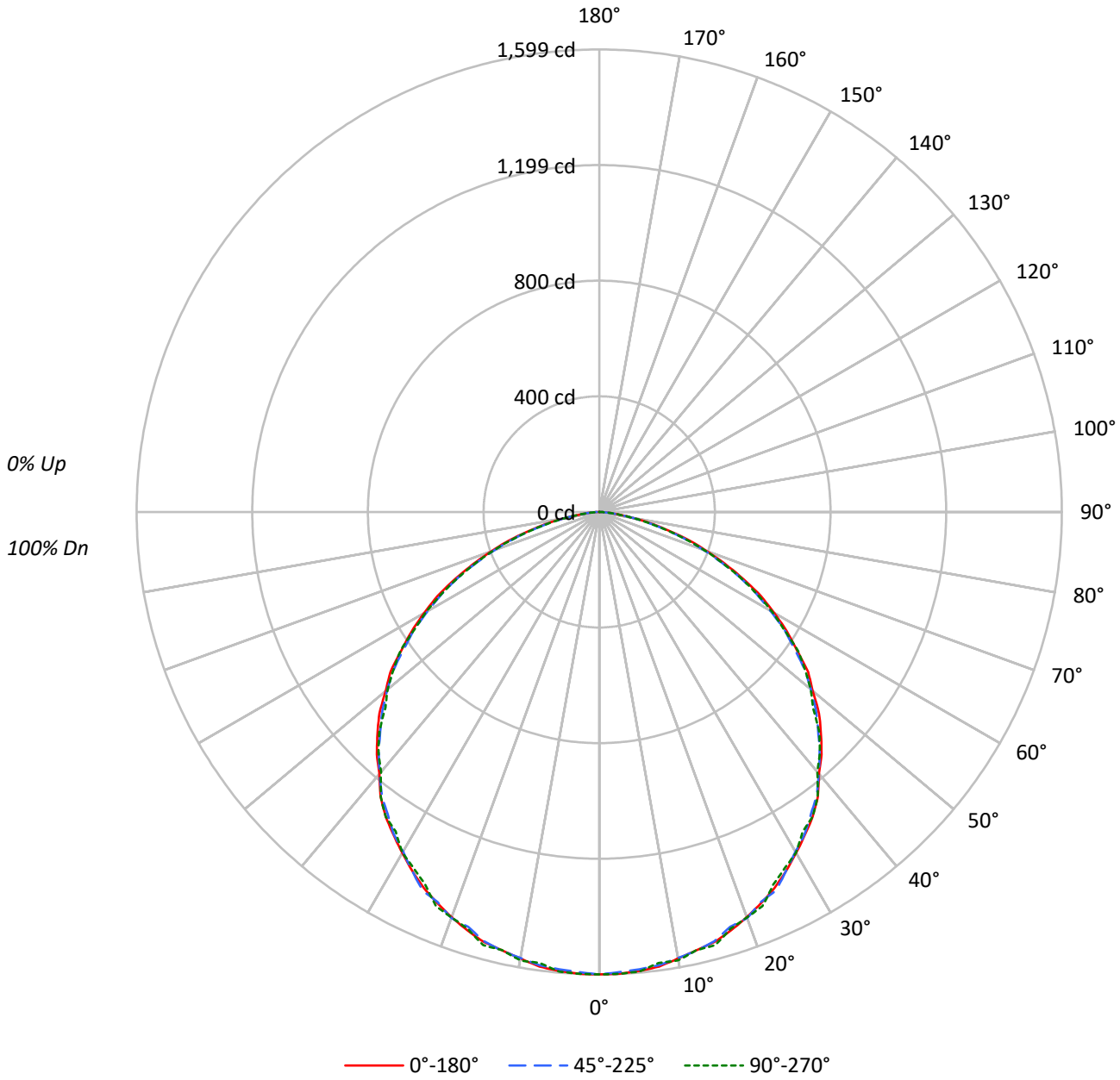
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4432.4 lumens  
Efficiency: N/A  
Efficacy: 109.4 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.26 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 40.5  
Input Voltage (V): 120  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	101	97	107	102	99	95	98	95	92	94	92	90	91	89	87	85
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71
3	91	81	73	66	88	79	72	66	76	70	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	46	44
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	38	33	43	37	32	31
9	57	44	35	30	55	43	35	30	42	35	30	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4303	4303	4303
5°	4304	4287	4308
10°	4284	4279	4302
15°	4289	4282	4320
20°	4270	4280	4273
25°	4259	4289	4223
30°	4230	4214	4227
35°	4226	4190	4226
40°	4152	4149	4119
45°	4123	4071	4091
50°	4030	3998	3995
55°	3915	3859	3939
60°	3754	3672	3714
65°	3501	3425	3430
70°	3102	3015	3049
75°	2554	2456	2491
80°	1791	1751	1777
85°	917	865	865

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4123 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	151.2	3.4
10°-20°	433.8	9.8
20°-30°	659.5	14.9
30°-40°	797.6	18.0
40°-50°	826.5	18.6
50°-60°	737.8	16.6
60°-70°	529.8	12.0
70°-80°	254.1	5.7
80°-90°	42.2	1.0
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°	1244.4	28.1
0°-40°	2042.0	46.1
0°-60°	3606.3	81.4
0°-90°	4432.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4432.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1599	1599	1599	1599	1599	
5°	1593	1598	1587	1588	1595	151
15°	1540	1541	1537	1537	1551	434
25°	1434	1431	1444	1427	1422	661
35°	1286	1276	1275	1270	1286	802
45°	1083	1076	1070	1069	1075	835
55°	834	825	822	821	840	748
65°	550	534	538	530	539	544
75°	246	229	236	236	240	265
85°	30	28	28	28	28	44
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1599.1	1599.1	1599.1	1599.1	1599.1
2.5°	1598.3	1600.0	1592.3	1590.6	1598.3
5°	1593.2	1598.3	1587.2	1588.1	1594.9
7.5°	1585.5	1582.1	1580.4	1586.4	1572.8
10°	1567.7	1575.3	1566.0	1561.7	1574.5
12.5°	1552.4	1553.2	1554.1	1555.8	1551.5
15°	1539.6	1541.3	1537.1	1537.1	1550.7
17.5°	1516.7	1520.1	1504.0	1514.2	1510.8
20°	1491.2	1487.8	1494.6	1492.1	1492.1
22.5°	1463.2	1463.2	1459.8	1461.5	1475.1
25°	1434.3	1430.9	1444.5	1426.6	1422.4
27.5°	1399.4	1396.0	1399.4	1390.1	1388.4
30°	1361.2	1352.7	1356.1	1357.0	1360.4
32.5°	1323.8	1315.3	1321.3	1315.3	1309.4
35°	1286.4	1276.2	1275.4	1270.3	1286.4
37.5°	1241.4	1230.4	1234.6	1218.5	1240.6
40°	1181.9	1175.1	1181.1	1176.0	1172.6
42.5°	1137.7	1130.1	1127.5	1124.1	1129.2
45°	1083.4	1075.7	1069.8	1068.9	1074.9
47.5°	1030.7	1011.1	1016.2	1008.6	1001.8
50°	962.7	957.6	955.1	947.4	954.2
52.5°	910.0	891.3	895.6	888.8	896.4
55°	834.4	825.1	822.5	820.8	839.5
57.5°	769.0	757.1	758.8	754.5	757.1
60°	697.6	686.6	682.3	681.5	690.0
62.5°	630.5	607.5	610.9	610.1	614.3
65°	549.8	533.6	537.9	530.2	538.7
67.5°	472.4	456.3	458.0	456.3	460.5
70°	394.3	376.4	383.2	379.8	387.5
72.5°	326.3	305.0	311.0	305.0	311.8
75°	245.6	229.4	236.2	236.2	239.6
77.5°	181.0	166.5	171.6	169.9	173.3
80°	115.6	109.6	113.0	110.5	114.7
82.5°	66.3	62.0	62.0	63.7	64.6
85°	29.7	28.0	28.0	28.0	28.0
87.5°	7.6	7.6	7.6	7.6	7.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)