

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: P687842

Luminaire Tested: FLR-HA-22-L3C3 (HI)-50-CA08

Issue Date: 5/22/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P687842  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2303-938-1)  
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-CA08  
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: -

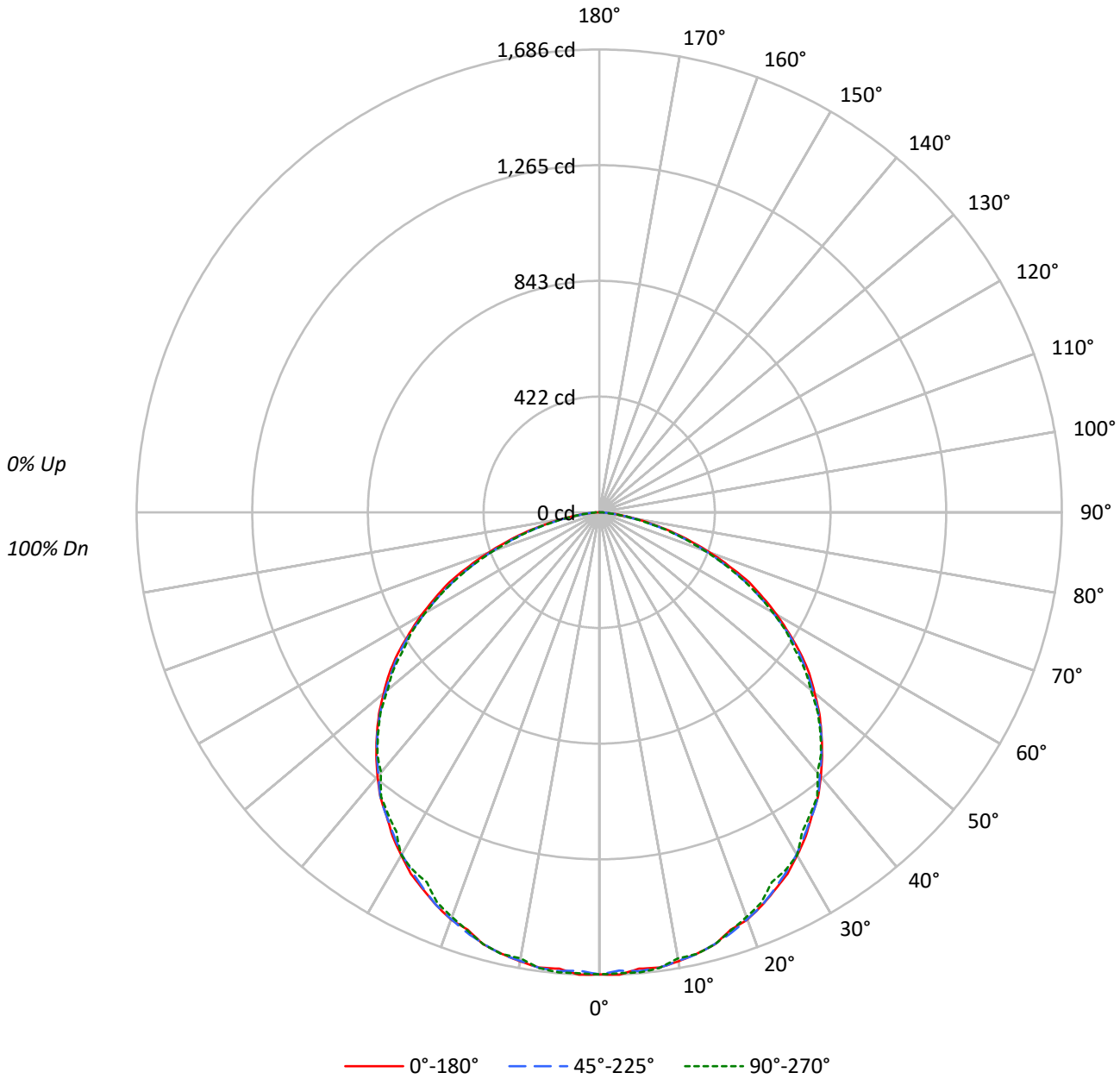
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4728.9 lumens  
Efficiency: N/A  
Efficacy: 116.8 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.26 / 1.39  
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	50	30	10
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	89	91	89	87	85		
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71		
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	70	66	62	60		
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51		
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	57	51	46	44		
6	70	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39		
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	34		
8	61	47	39	33	59	47	38	33	45	38	33	44	37	32	43	37	32	30		
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	27		
10	53	40	32	27	52	39	32	27	38	31	27	38	31	27	37	31	26	25		

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

	0°	45°	90°
0°	4530	4530	4530
5°	4509	4532	4545
10°	4540	4535	4510
15°	4541	4536	4539
20°	4522	4517	4493
25°	4504	4494	4416
30°	4484	4471	4481
35°	4436	4439	4408
40°	4415	4395	4347
45°	4360	4353	4337
50°	4291	4259	4212
55°	4202	4162	4083
60°	4020	3934	3934
65°	3836	3680	3642
70°	3377	3243	3203
75°	2819	2677	2704
80°	2015	1897	1883
85°	1050	969	1022

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 4369 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	159.6	3.4
10°-20°	458.7	9.7
20°-30°	697.9	14.8
30°-40°	845.6	17.9
40°-50°	880.5	18.6
50°-60°	788.4	16.7
60°-70°	572.4	12.1
70°-80°	277.9	5.9
80°-90°	47.8	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°	1316.2	27.8
0°-40°	2161.9	45.7
0°-60°	3830.8	81.0
0°-90°	4728.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4728.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1684	1684	1684	1684	1684	
5°	1669	1679	1678	1674	1683	160
15°	1630	1627	1628	1616	1629	459
25°	1517	1520	1514	1511	1487	700
35°	1350	1358	1351	1356	1342	847
45°	1146	1148	1144	1138	1140	884
55°	896	889	887	877	870	797
65°	602	586	578	576	572	588
75°	271	265	258	258	260	288
85°	34	35	31	31	33	50
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1683.5	1683.5	1683.5	1683.5	1683.5
2.5°	1686.1	1685.2	1671.6	1677.6	1681.0
5°	1669.1	1679.3	1677.6	1674.2	1682.7
7.5°	1673.3	1669.1	1674.2	1673.3	1675.0
10°	1661.4	1657.2	1659.7	1660.6	1650.4
12.5°	1647.0	1644.5	1648.7	1652.1	1647.9
15°	1630.0	1626.6	1628.3	1616.4	1629.2
17.5°	1594.3	1602.8	1605.4	1598.6	1597.7
20°	1579.0	1576.5	1577.3	1574.8	1568.8
22.5°	1550.1	1560.3	1550.1	1545.0	1540.8
25°	1517.0	1520.4	1513.6	1511.0	1487.2
27.5°	1485.5	1484.7	1477.0	1477.0	1470.2
30°	1443.0	1437.1	1438.8	1432.0	1442.2
32.5°	1400.5	1401.4	1393.7	1396.3	1377.6
35°	1350.4	1358.1	1351.3	1355.5	1341.9
37.5°	1309.6	1304.5	1309.6	1302.8	1305.4
40°	1256.9	1255.2	1251.0	1252.7	1237.4
42.5°	1202.5	1200.0	1199.1	1195.7	1196.6
45°	1145.6	1148.1	1143.9	1137.9	1139.6
47.5°	1088.7	1091.2	1083.6	1075.9	1081.0
50°	1024.9	1026.6	1017.3	1014.7	1006.2
52.5°	964.6	956.9	951.8	947.6	946.7
55°	895.7	888.9	887.2	877.0	870.2
57.5°	819.3	817.6	812.5	804.8	808.2
60°	747.0	740.2	730.9	729.2	730.9
62.5°	673.1	665.4	653.5	656.9	653.5
65°	602.5	586.4	577.9	576.2	571.9
67.5°	512.5	500.6	493.8	491.2	492.9
70°	429.2	428.3	412.2	409.6	407.1
72.5°	348.4	341.6	332.3	331.4	330.6
75°	271.1	265.2	257.5	258.4	260.1
77.5°	195.5	189.5	182.7	185.3	181.9
80°	130.0	128.3	122.4	121.5	121.5
82.5°	77.3	73.9	70.5	70.5	71.4
85°	34.0	34.8	31.4	31.4	33.1
87.5°	8.5	9.3	8.5	8.5	8.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)