

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: P688244

Luminaire Tested: FLR-MC-24-55-50-CP187

Issue Date: 5/22/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P688244  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2207-724-13)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/22/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FLR-MC-24-55-50-CP187  
Description: Fail-Safe - FLR Fully Luminous Recessed 2X4 5000K Luminaire for Medical/Cleanroom  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

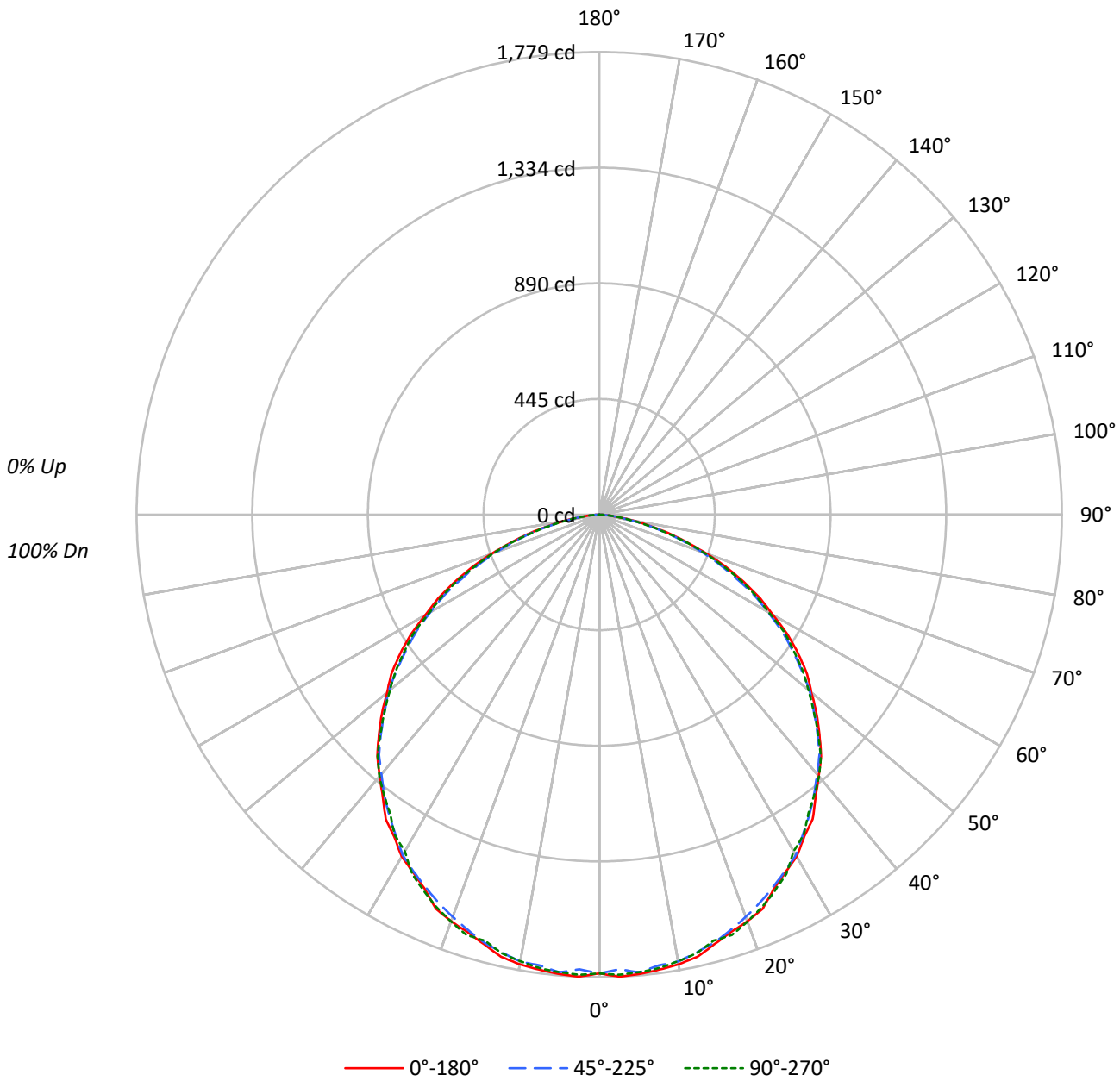
Lumens per Lamp: N/A  
Luminaire Lumens: 4898.4 lumens  
Efficiency: N/A  
Efficacy: 104.7 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
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	103	99	95	98	95	92	94	92	90	91	89	87	85		
2	100	92	85	79	97	90	84	79	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	54	51		
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44		
6	71	57	49	42	69	57	48	42	55	47	42	53	46	41	51	46	41	39		
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34		
8	61	48	39	33	59	47	39	33	45	38	33	44	38	33	43	37	33	31		
9	57	44	35	30	56	43	35	30	42	35	30	41	34	29	40	34	29	28		
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°	2375	2375	2375
5°	2396	2386	2386
10°	2400	2385	2384
15°	2383	2375	2364
20°	2384	2358	2385
25°	2358	2347	2371
30°	2359	2349	2323
35°	2350	2315	2304
40°	2306	2288	2309
45°	2279	2256	2263
50°	2229	2213	2197
55°	2193	2122	2142
60°	2071	2015	2025
65°	1949	1856	1913
70°	1725	1644	1696
75°	1422	1358	1353
80°	1016	943	943
85°	496	480	496

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2279 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	167.6	3.4
10°-20°	480.8	9.8
20°-30°	730.7	14.9
30°-40°	883.3	18.0
40°-50°	915.3	18.7
50°-60°	813.6	16.6
60°-70°	583.4	11.9
70°-80°	277.7	5.7
80°-90°	46.0	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°	1379.1	28.2
0°-40°	2262.4	46.2
0°-60°	3991.3	81.5
0°-90°	4898.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4898.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1765	1765	1765	1765	1765	
5°	1774	1766	1767	1758	1767	169
15°	1711	1705	1705	1696	1697	484
25°	1588	1585	1581	1580	1597	735
35°	1431	1408	1409	1410	1403	890
45°	1198	1185	1186	1181	1189	924
55°	935	906	904	909	913	831
65°	612	579	583	590	601	604
75°	274	247	261	263	260	291
85°	32	28	31	31	32	49
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1764.8	1764.8	1764.8	1764.8	1764.8
2.5°	1778.9	1769.5	1750.6	1762.9	1771.4
5°	1774.2	1765.7	1766.7	1758.2	1766.7
7.5°	1765.7	1757.2	1748.7	1745.9	1759.1
10°	1756.3	1740.2	1745.9	1739.3	1745.0
12.5°	1742.1	1728.9	1725.2	1716.7	1728.9
15°	1711.0	1705.3	1705.3	1695.9	1696.9
17.5°	1683.6	1672.3	1676.1	1671.4	1695.9
20°	1664.8	1646.9	1646.9	1644.0	1665.7
22.5°	1641.2	1620.5	1615.7	1617.6	1634.6
25°	1588.4	1584.6	1580.8	1579.9	1596.9
27.5°	1550.7	1540.3	1546.9	1544.1	1558.2
30°	1518.6	1500.7	1512.0	1501.6	1495.0
32.5°	1467.7	1461.0	1458.2	1459.2	1462.0
35°	1430.9	1408.2	1409.2	1410.1	1402.6
37.5°	1366.7	1369.6	1357.3	1357.3	1359.2
40°	1313.0	1309.2	1302.6	1302.6	1314.8
42.5°	1263.0	1246.0	1253.5	1242.2	1261.1
45°	1197.9	1184.7	1185.6	1180.9	1189.4
47.5°	1133.8	1122.4	1118.7	1122.4	1118.7
50°	1064.9	1057.4	1057.4	1053.6	1049.8
52.5°	1007.4	980.9	979.1	984.7	985.7
55°	934.7	906.4	904.5	909.3	913.0
57.5°	858.3	825.3	831.9	839.5	844.2
60°	769.7	746.1	748.9	761.2	752.7
62.5°	698.0	665.9	670.6	681.0	681.0
65°	612.2	579.1	582.9	590.5	600.8
67.5°	529.1	494.2	499.9	508.4	511.2
70°	438.6	401.8	417.8	426.3	431.1
72.5°	351.8	323.5	337.7	342.4	346.2
75°	273.5	247.1	261.3	263.2	260.3
77.5°	194.3	175.4	186.8	190.5	187.7
80°	131.1	112.2	121.7	124.5	121.7
82.5°	71.7	66.0	69.8	70.7	68.9
85°	32.1	28.3	31.1	31.1	32.1
87.5°	9.4	8.5	8.5	9.4	8.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)