

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: P688218

Luminaire Tested: FLR-HA-24-L3C3 (LOW)-35-CP187

Issue Date: 5/22/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P688218  
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-HA-24-L3C3 (LOW)-35-CP187  
Description: Fail-Safe - FLR Fully Luminous Recessed 2X4 3500K Luminaire at Low Lumen setting for High Abuse  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

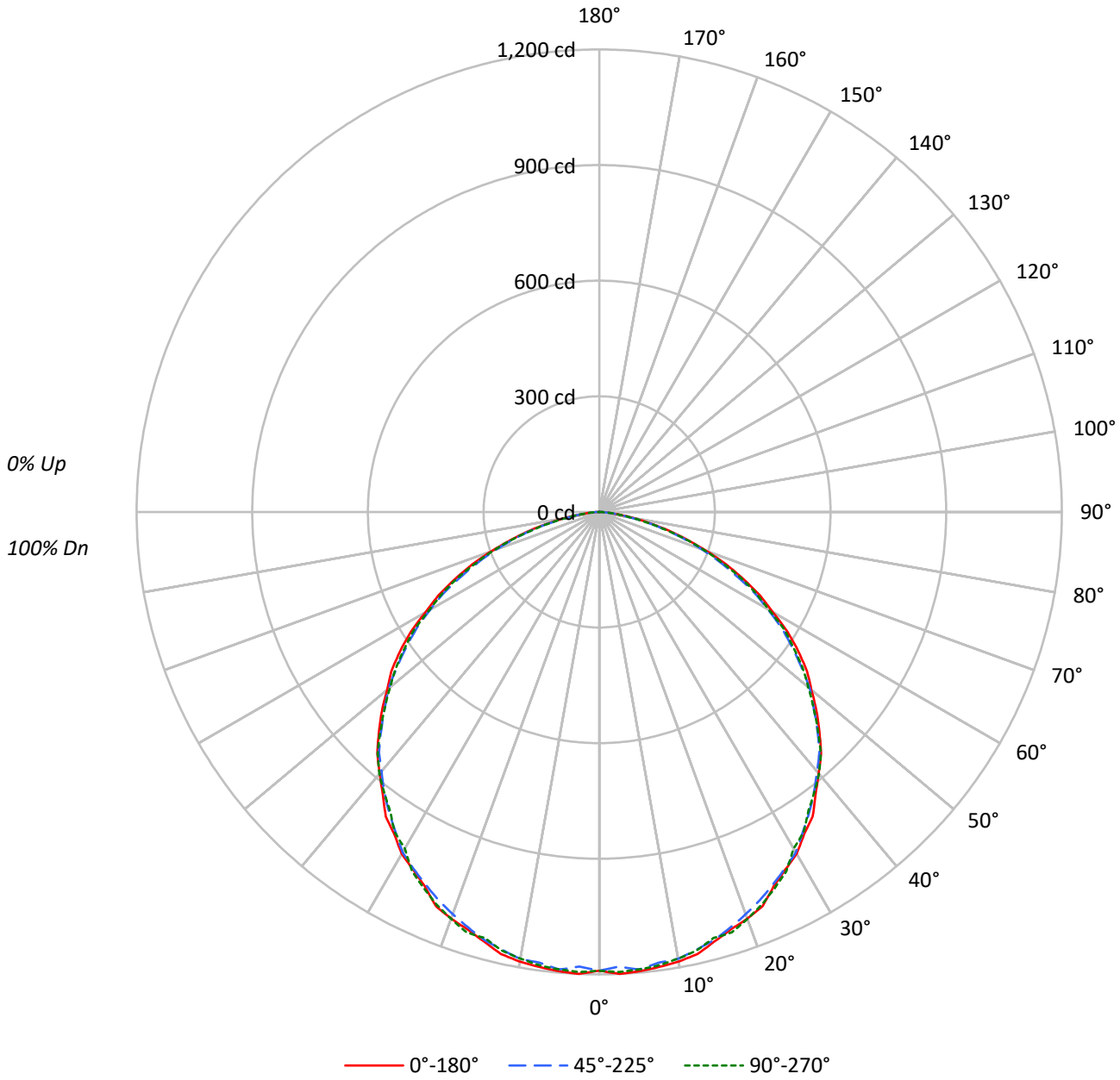
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3304.1 lumens  
Efficiency: N/A  
Efficacy: 118.9 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): 27.8  
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	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	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°	1602	1602	1602
5°	1616	1610	1610
10°	1619	1609	1608
15°	1608	1602	1594
20°	1608	1591	1609
25°	1591	1583	1599
30°	1591	1585	1567
35°	1585	1561	1554
40°	1555	1543	1558
45°	1537	1522	1527
50°	1504	1493	1482
55°	1479	1431	1445
60°	1397	1359	1366
65°	1315	1252	1290
70°	1164	1109	1144
75°	959	916	913
80°	685	636	636
85°	333	324	333

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1537 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	113.1	3.4
10°-20°	324.3	9.8
20°-30°	492.9	14.9
30°-40°	595.8	18.0
40°-50°	617.4	18.7
50°-60°	548.8	16.6
60°-70°	393.5	11.9
70°-80°	187.3	5.7
80°-90°	31.0	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°	930.3	28.2
0°-40°	1526.1	46.2
0°-60°	2692.3	81.5
0°-90°	3304.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3304.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1190	1190	1190	1190	1190	
5°	1197	1191	1192	1186	1192	114
15°	1154	1150	1150	1144	1145	326
25°	1071	1069	1066	1066	1077	496
35°	965	950	950	951	946	600
45°	808	799	800	797	802	623
55°	630	611	610	613	616	561
65°	413	391	393	398	405	408
75°	184	167	176	178	176	196
85°	22	19	21	21	22	33
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1190.4	1190.4	1190.4	1190.4	1190.4
2.5°	1199.9	1193.6	1180.9	1189.1	1194.9
5°	1196.8	1191.0	1191.7	1185.9	1191.7
7.5°	1191.0	1185.3	1179.6	1177.7	1186.6
10°	1184.7	1173.9	1177.7	1173.2	1177.0
12.5°	1175.1	1166.2	1163.7	1158.0	1166.2
15°	1154.1	1150.3	1150.3	1144.0	1144.6
17.5°	1135.7	1128.0	1130.6	1127.4	1144.0
20°	1123.0	1110.9	1110.9	1109.0	1123.6
22.5°	1107.1	1093.1	1089.9	1091.1	1102.6
25°	1071.4	1068.9	1066.3	1065.7	1077.1
27.5°	1046.0	1039.0	1043.4	1041.5	1051.1
30°	1024.3	1012.3	1019.9	1012.9	1008.4
32.5°	990.0	985.5	983.6	984.3	986.2
35°	965.2	949.9	950.5	951.2	946.1
37.5°	921.9	923.8	915.5	915.5	916.8
40°	885.6	883.1	878.6	878.6	886.9
42.5°	851.9	840.5	845.6	837.9	850.6
45°	808.0	799.1	799.7	796.6	802.3
47.5°	764.8	757.1	754.6	757.1	754.6
50°	718.3	713.2	713.2	710.7	708.1
52.5°	679.5	661.7	660.4	664.2	664.9
55°	630.5	611.4	610.2	613.3	615.9
57.5°	579.0	556.7	561.2	566.3	569.4
60°	519.2	503.3	505.2	513.4	507.7
62.5°	470.8	449.2	452.4	459.4	459.4
65°	412.9	390.6	393.2	398.3	405.3
67.5°	356.9	333.4	337.2	342.9	344.8
70°	295.8	271.0	281.9	287.6	290.8
72.5°	237.3	218.2	227.8	231.0	233.5
75°	184.5	166.7	176.2	177.5	175.6
77.5°	131.1	118.3	126.0	128.5	126.6
80°	88.4	75.7	82.1	84.0	82.1
82.5°	48.4	44.5	47.1	47.7	46.4
85°	21.6	19.1	21.0	21.0	21.6
87.5°	6.4	5.7	5.7	6.4	5.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)