

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: P688116

Luminaire Tested: FLR-HA-22-L3C3 (MED)-35-CP250

Issue Date: 5/22/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P688116  
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 (MED)-35-CP250  
Description: Fail-Safe - FLR Fully Luminous Recessed 2X2 3500K Luminaire at Midium Lumen setting for High Abuse  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

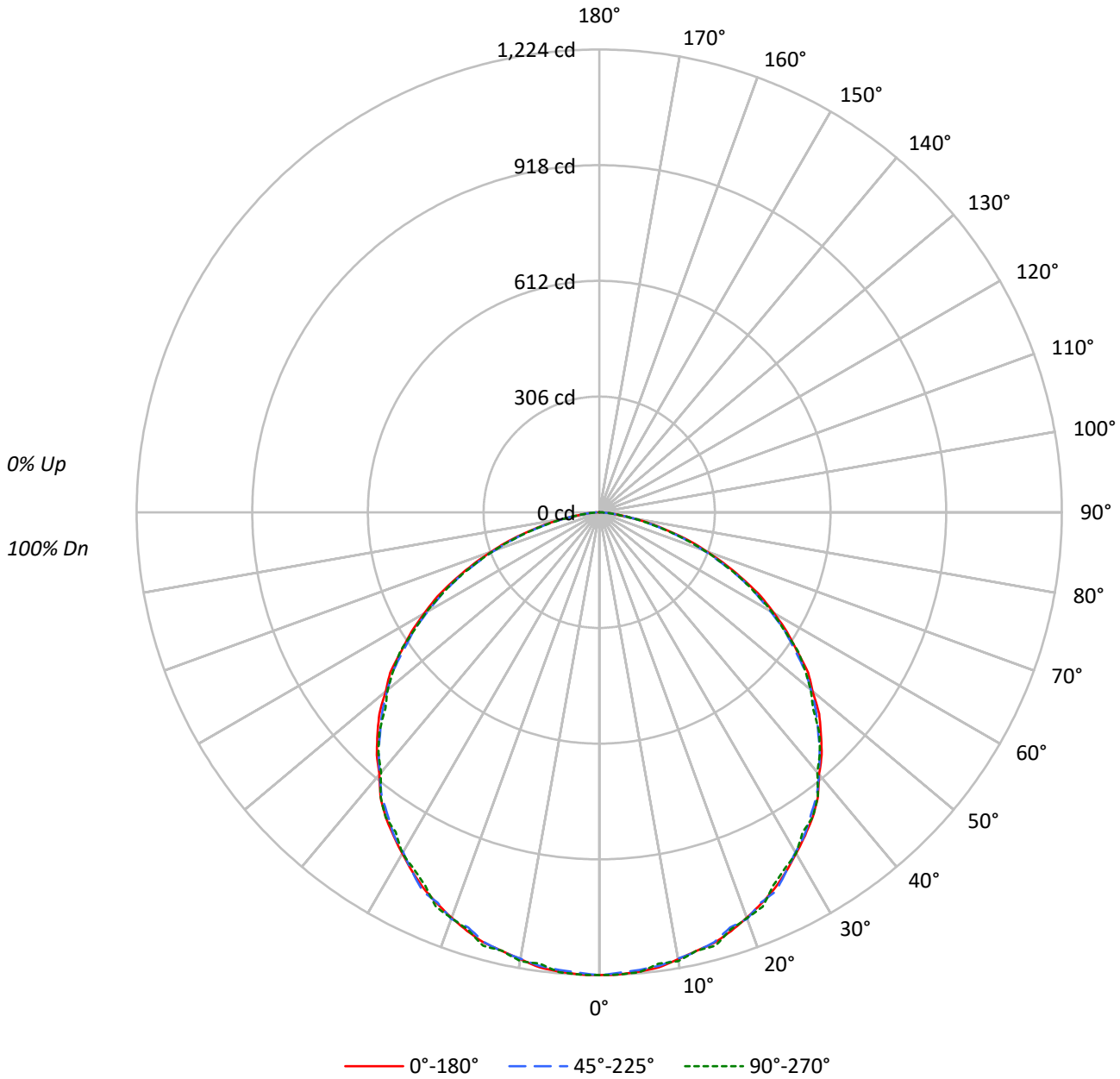
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3393.4 lumens  
Efficiency: N/A  
Efficacy: 112.4 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): 30.2  
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°	3295	3295	3295
5°	3295	3283	3298
10°	3280	3276	3294
15°	3284	3278	3307
20°	3269	3277	3271
25°	3260	3284	3233
30°	3238	3226	3236
35°	3235	3208	3235
40°	3179	3176	3153
45°	3156	3117	3132
50°	3085	3061	3058
55°	2997	2954	3015
60°	2875	2812	2843
65°	2680	2622	2626
70°	2375	2308	2334
75°	1955	1880	1907
80°	1371	1340	1361
85°	704	664	664

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3156 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	115.7	3.4
10°-20°	332.1	9.8
20°-30°	504.9	14.9
30°-40°	610.6	18.0
40°-50°	632.8	18.6
50°-60°	564.8	16.6
60°-70°	405.6	12.0
70°-80°	194.5	5.7
80°-90°	32.3	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°	952.7	28.1
0°-40°	1563.4	46.1
0°-60°	2761.0	81.4
0°-90°	3393.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3393.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1224	1224	1224	1224	1224	
5°	1220	1224	1215	1216	1221	116
15°	1179	1180	1177	1177	1187	332
25°	1098	1096	1106	1092	1089	506
35°	985	977	976	972	985	614
45°	829	824	819	818	823	639
55°	639	632	630	628	643	572
65°	421	408	412	406	412	416
75°	188	176	181	181	183	203
85°	23	22	22	22	22	34
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1224.3	1224.3	1224.3	1224.3	1224.3
2.5°	1223.6	1224.9	1219.1	1217.8	1223.6
5°	1219.7	1223.6	1215.2	1215.8	1221.0
7.5°	1213.9	1211.3	1210.0	1214.5	1204.1
10°	1200.2	1206.1	1198.9	1195.7	1205.4
12.5°	1188.5	1189.2	1189.8	1191.1	1187.9
15°	1178.8	1180.1	1176.8	1176.8	1187.2
17.5°	1161.2	1163.8	1151.4	1159.2	1156.6
20°	1141.7	1139.1	1144.3	1142.3	1142.3
22.5°	1120.2	1120.2	1117.6	1118.9	1129.3
25°	1098.1	1095.5	1105.9	1092.2	1089.0
27.5°	1071.4	1068.8	1071.4	1064.3	1063.0
30°	1042.1	1035.6	1038.2	1038.9	1041.5
32.5°	1013.5	1007.0	1011.6	1007.0	1002.5
35°	984.9	977.1	976.4	972.5	984.9
37.5°	950.4	942.0	945.2	932.9	949.8
40°	904.9	899.7	904.2	900.3	897.7
42.5°	871.1	865.2	863.2	860.6	864.5
45°	829.4	823.6	819.0	818.4	822.9
47.5°	789.1	774.1	778.0	772.2	767.0
50°	737.0	733.1	731.2	725.3	730.5
52.5°	696.7	682.4	685.7	680.4	686.3
55°	638.8	631.7	629.7	628.4	642.7
57.5°	588.7	579.6	580.9	577.7	579.6
60°	534.1	525.6	522.4	521.7	528.2
62.5°	482.7	465.1	467.7	467.1	470.3
65°	420.9	408.5	411.8	405.9	412.4
67.5°	361.7	349.3	350.6	349.3	352.6
70°	301.8	288.2	293.4	290.8	296.6
72.5°	249.8	233.5	238.1	233.5	238.7
75°	188.0	175.6	180.8	180.8	183.4
77.5°	138.6	127.5	131.4	130.1	132.7
80°	88.5	83.9	86.5	84.6	87.8
82.5°	50.7	47.5	47.5	48.8	49.4
85°	22.8	21.5	21.5	21.5	21.5
87.5°	5.9	5.9	5.9	5.9	5.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)