

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: P688117

Luminaire Tested: FLR-HA-22-L3C3 (MED)-40-CP250

Issue Date: 5/22/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P688117  
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)-40-CP250  
Description: Fail-Safe - FLR Fully Luminous Recessed 2X2 4000K Luminaire at Midium Lumen setting for High Abuse  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

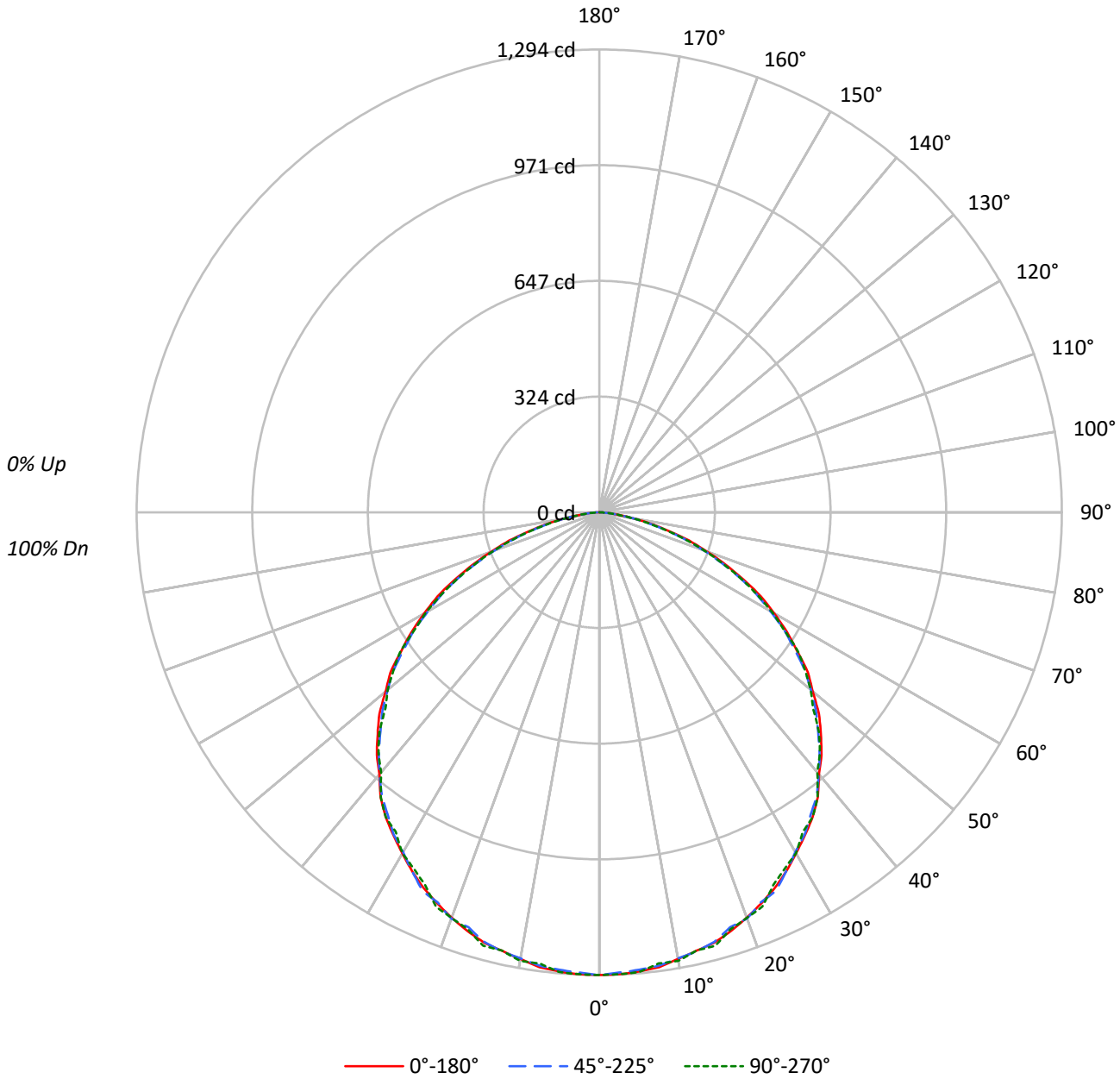
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3586.1 lumens  
Efficiency: N/A  
Efficacy: 124.1 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): 28.9  
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°	3482	3482	3482
5°	3482	3469	3486
10°	3466	3462	3481
15°	3470	3465	3495
20°	3455	3463	3457
25°	3445	3470	3417
30°	3422	3409	3420
35°	3419	3390	3419
40°	3359	3357	3333
45°	3336	3294	3309
50°	3261	3235	3232
55°	3167	3122	3187
60°	3038	2971	3004
65°	2832	2771	2775
70°	2510	2439	2467
75°	2066	1987	2016
80°	1449	1416	1438
85°	744	701	701

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3336 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	122.3	3.4
10°-20°	351.0	9.8
20°-30°	533.6	14.9
30°-40°	645.3	18.0
40°-50°	668.7	18.6
50°-60°	596.9	16.6
60°-70°	428.7	12.0
70°-80°	205.6	5.7
80°-90°	34.1	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°	1006.8	28.1
0°-40°	1652.1	46.1
0°-60°	2917.7	81.4
0°-90°	3586.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3586.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1294	1294	1294	1294	1294	
5°	1289	1293	1284	1285	1290	122
15°	1246	1247	1244	1244	1255	351
25°	1160	1158	1169	1154	1151	534
35°	1041	1033	1032	1028	1041	649
45°	876	870	866	865	870	675
55°	675	668	666	664	679	605
65°	445	432	435	429	436	440
75°	199	186	191	191	194	215
85°	24	23	23	23	23	36
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1293.8	1293.8	1293.8	1293.8	1293.8
2.5°	1293.1	1294.5	1288.3	1286.9	1293.1
5°	1289.0	1293.1	1284.2	1284.9	1290.4
7.5°	1282.8	1280.1	1278.7	1283.5	1272.5
10°	1268.4	1274.6	1267.0	1263.6	1273.9
12.5°	1256.0	1256.7	1257.4	1258.7	1255.3
15°	1245.7	1247.1	1243.6	1243.6	1254.6
17.5°	1227.1	1229.9	1216.8	1225.1	1222.3
20°	1206.5	1203.7	1209.2	1207.2	1207.2
22.5°	1183.8	1183.8	1181.1	1182.4	1193.4
25°	1160.4	1157.7	1168.7	1154.2	1150.8
27.5°	1132.2	1129.5	1132.2	1124.7	1123.3
30°	1101.3	1094.4	1097.2	1097.9	1100.6
32.5°	1071.1	1064.2	1069.0	1064.2	1059.4
35°	1040.8	1032.6	1031.9	1027.8	1040.8
37.5°	1004.4	995.4	998.9	985.8	1003.7
40°	956.3	950.8	955.6	951.4	948.7
42.5°	920.5	914.3	912.3	909.5	913.6
45°	876.5	870.3	865.5	864.8	869.6
47.5°	833.9	818.1	822.2	816.0	810.5
50°	778.9	774.8	772.7	766.5	772.0
52.5°	736.3	721.1	724.6	719.1	725.3
55°	675.1	667.5	665.5	664.1	679.2
57.5°	622.2	612.5	613.9	610.5	612.5
60°	564.4	555.5	552.0	551.3	558.2
62.5°	510.1	491.5	494.3	493.6	497.0
65°	444.8	431.7	435.2	429.0	435.8
67.5°	382.2	369.2	370.5	369.2	372.6
70°	319.0	304.5	310.0	307.3	313.5
72.5°	264.0	246.8	251.6	246.8	252.3
75°	198.7	185.6	191.1	191.1	193.9
77.5°	146.4	134.7	138.9	137.5	140.2
80°	93.5	88.7	91.4	89.4	92.8
82.5°	53.6	50.2	50.2	51.6	52.2
85°	24.1	22.7	22.7	22.7	22.7
87.5°	6.2	6.2	6.2	6.2	6.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)