

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: P688203

Luminaire Tested: FLR-HA-22-L3C3 (LOW)-35-CP187

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P688203
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-22-L3C3 (LOW)-35-CP187
Description: Fail-Safe - FLR Fully Luminous Recessed 2X2 3500K Luminaire at Low Lumen setting for High Abuse
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

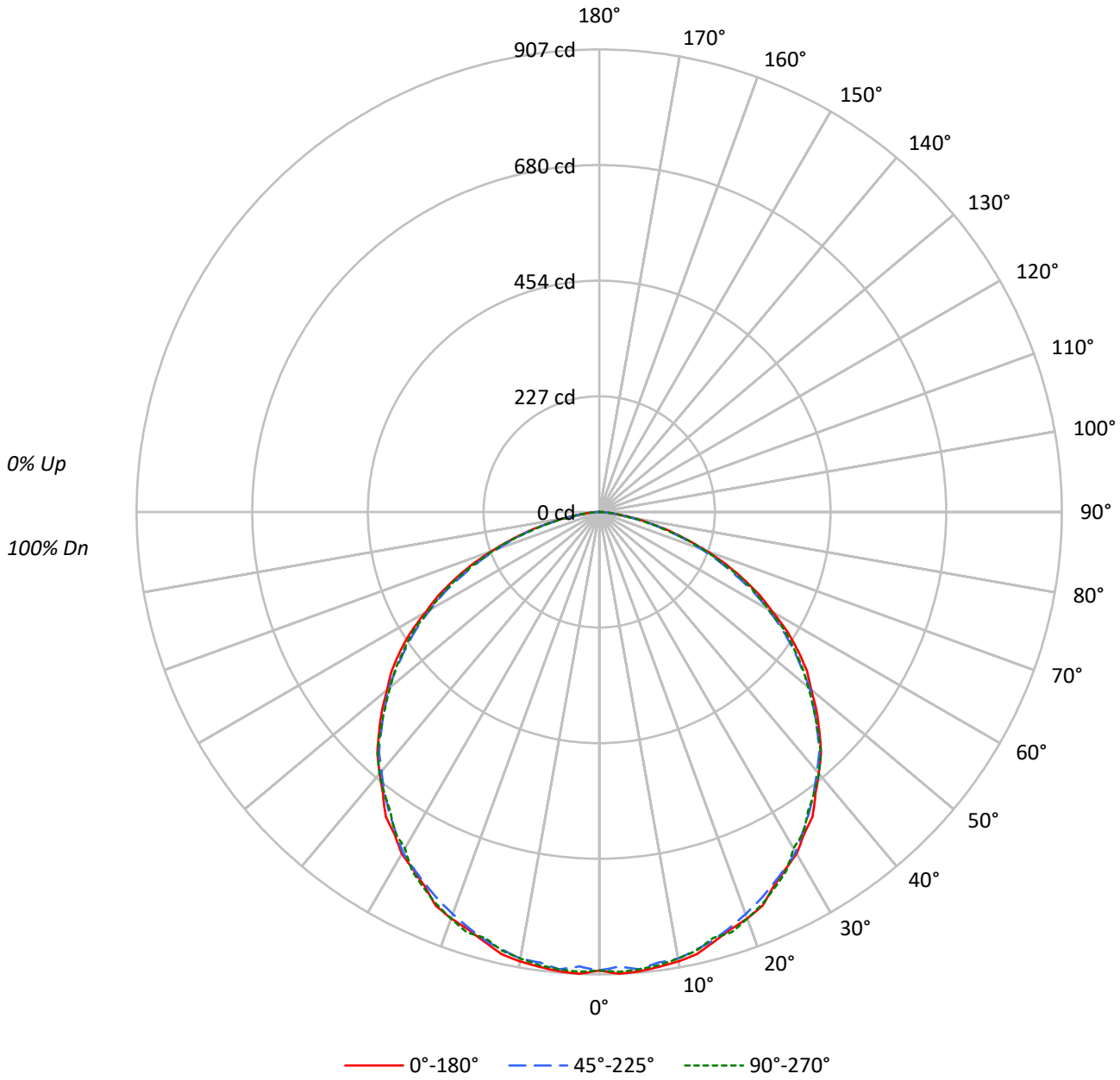
Lumens per Lamp: N/A
Luminaire Lumens: 2496.5 lumens
Efficiency: N/A
Efficacy: 113.5 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 22
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°	2420	2420	2420
5°	2442	2432	2432
10°	2446	2431	2430
15°	2429	2421	2409
20°	2430	2403	2431
25°	2404	2392	2416
30°	2405	2394	2367
35°	2395	2359	2348
40°	2351	2332	2354
45°	2323	2300	2307
50°	2272	2256	2240
55°	2235	2163	2183
60°	2111	2054	2065
65°	1987	1892	1950
70°	1758	1676	1729
75°	1449	1385	1380
80°	1035	961	961
85°	503	491	503

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2323 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.4	3.4
10°-20°	245.0	9.8
20°-30°	372.4	14.9
30°-40°	450.2	18.0
40°-50°	466.5	18.7
50°-60°	414.6	16.6
60°-70°	297.3	11.9
70°-80°	141.5	5.7
80°-90°	23.4	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°	702.9	28.2
0°-40°	1153.0	46.2
0°-60°	2034.2	81.5
0°-90°	2496.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2496.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	899	899	899	899	899	
5°	904	900	900	896	900	86
15°	872	869	869	864	865	247
25°	810	808	806	805	814	375
35°	729	718	718	719	715	453
45°	610	604	604	602	606	471
55°	476	462	461	463	465	424
65°	312	295	297	301	306	308
75°	139	126	133	134	133	148
85°	16	14	16	16	16	25
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	899.4	899.4	899.4	899.4	899.4
2.5°	906.6	901.8	892.2	898.5	902.8
5°	904.2	899.9	900.4	896.0	900.4
7.5°	899.9	895.6	891.2	889.8	896.5
10°	895.1	886.9	889.8	886.4	889.3
12.5°	887.9	881.1	879.2	874.9	881.1
15°	872.0	869.1	869.1	864.3	864.8
17.5°	858.1	852.3	854.2	851.8	864.3
20°	848.5	839.3	839.3	837.9	848.9
22.5°	836.4	825.9	823.5	824.4	833.1
25°	809.5	807.6	805.7	805.2	813.8
27.5°	790.3	785.0	788.4	786.9	794.1
30°	773.9	764.8	770.6	765.3	761.9
32.5°	748.0	744.6	743.2	743.7	745.1
35°	729.2	717.7	718.2	718.7	714.8
37.5°	696.6	698.0	691.7	691.7	692.7
40°	669.2	667.2	663.9	663.9	670.1
42.5°	643.7	635.0	638.9	633.1	642.7
45°	610.5	603.8	604.3	601.9	606.2
47.5°	577.8	572.0	570.1	572.0	570.1
50°	542.7	538.9	538.9	537.0	535.0
52.5°	513.4	499.9	499.0	501.9	502.3
55°	476.4	462.0	461.0	463.4	465.3
57.5°	437.4	420.6	424.0	427.8	430.2
60°	392.3	380.2	381.7	387.9	383.6
62.5°	355.7	339.4	341.8	347.1	347.1
65°	312.0	295.2	297.1	300.9	306.2
67.5°	269.7	251.9	254.8	259.1	260.5
70°	223.5	204.8	213.0	217.3	219.7
72.5°	179.3	164.9	172.1	174.5	176.4
75°	139.4	125.9	133.2	134.1	132.7
77.5°	99.0	89.4	95.2	97.1	95.7
80°	66.8	57.2	62.0	63.5	62.0
82.5°	36.5	33.6	35.6	36.1	35.1
85°	16.3	14.4	15.9	15.9	16.3
87.5°	4.8	4.3	4.3	4.8	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)