

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: P688204

Luminaire Tested: FLR-HA-22-L3C3 (LOW)-40-CP187

Issue Date: 5/22/2023

Test Information

Test Method: LM-79-2019
Report Number: P688204
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)-40-CP187
Description: Fail-Safe - FLR Fully Luminous Recessed 2X2 4000K Luminaire at Low Lumen setting for High Abuse
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

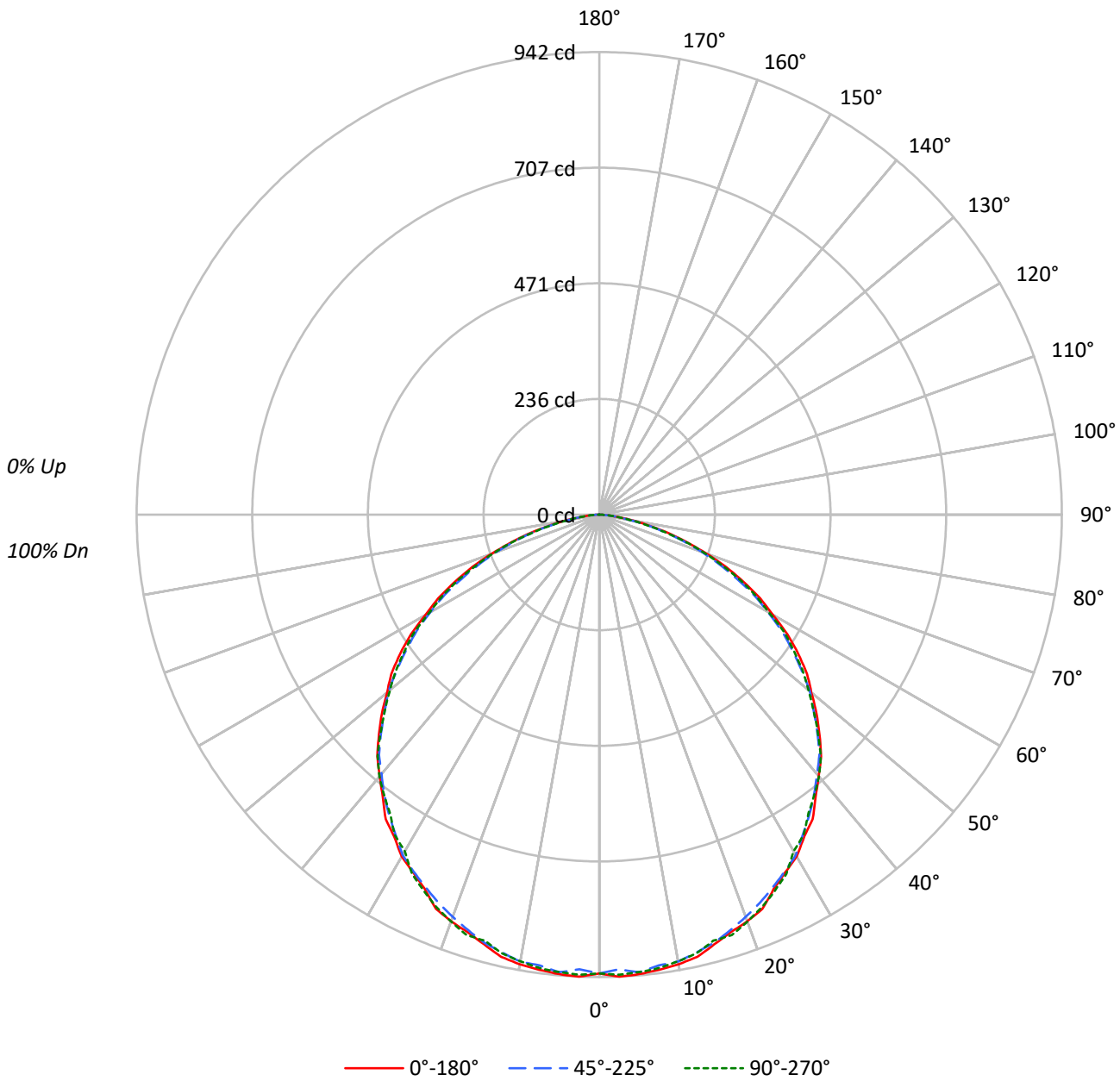
Lumens per Lamp: N/A
Luminaire Lumens: 2593.8 lumens
Efficiency: N/A
Efficacy: 121.8 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.3
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°	2515	2515	2515
5°	2538	2527	2527
10°	2541	2526	2525
15°	2524	2516	2503
20°	2524	2497	2526
25°	2497	2485	2511
30°	2499	2488	2460
35°	2489	2451	2440
40°	2442	2423	2446
45°	2414	2389	2397
50°	2361	2344	2327
55°	2322	2247	2268
60°	2193	2134	2145
65°	2064	1966	2025
70°	1827	1741	1795
75°	1506	1438	1433
80°	1075	998	998
85°	525	509	525

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2414 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.8	3.4
10°-20°	254.6	9.8
20°-30°	386.9	14.9
30°-40°	467.7	18.0
40°-50°	484.7	18.7
50°-60°	430.8	16.6
60°-70°	308.9	11.9
70°-80°	147.0	5.7
80°-90°	24.4	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°	730.3	28.2
0°-40°	1198.0	46.2
0°-60°	2113.4	81.5
0°-90°	2593.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2593.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	934	934	934	934	934	
5°	940	935	936	931	936	89
15°	906	903	903	898	898	256
25°	841	839	837	837	846	389
35°	758	746	746	747	743	471
45°	634	627	628	625	630	489
55°	495	480	479	482	484	440
65°	324	307	309	313	318	320
75°	145	131	138	139	138	154
85°	17	15	16	16	17	26
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	934.5	934.5	934.5	934.5	934.5
2.5°	942.0	937.0	927.0	933.5	938.0
5°	939.5	935.0	935.5	931.0	935.5
7.5°	935.0	930.5	926.0	924.5	931.5
10°	930.0	921.5	924.5	921.0	924.0
12.5°	922.5	915.5	913.5	909.0	915.5
15°	906.0	903.0	903.0	898.0	898.5
17.5°	891.5	885.5	887.5	885.0	898.0
20°	881.5	872.0	872.0	870.5	882.0
22.5°	869.0	858.0	855.6	856.5	865.5
25°	841.1	839.1	837.1	836.6	845.6
27.5°	821.1	815.6	819.1	817.6	825.1
30°	804.1	794.6	800.6	795.1	791.6
32.5°	777.1	773.6	772.1	772.6	774.1
35°	757.7	745.7	746.2	746.7	742.7
37.5°	723.7	725.2	718.7	718.7	719.7
40°	695.2	693.2	689.7	689.7	696.2
42.5°	668.8	659.8	663.8	657.8	667.8
45°	634.3	627.3	627.8	625.3	629.8
47.5°	600.3	594.3	592.3	594.3	592.3
50°	563.9	559.9	559.9	557.9	555.9
52.5°	533.4	519.4	518.4	521.4	521.9
55°	495.0	480.0	479.0	481.5	483.5
57.5°	454.5	437.0	440.5	444.5	447.0
60°	407.5	395.1	396.6	403.1	398.6
62.5°	369.6	352.6	355.1	360.6	360.6
65°	324.1	306.7	308.7	312.7	318.1
67.5°	280.2	261.7	264.7	269.2	270.7
70°	232.2	212.8	221.3	225.7	228.2
72.5°	186.3	171.3	178.8	181.3	183.3
75°	144.8	130.9	138.3	139.3	137.8
77.5°	102.9	92.9	98.9	100.9	99.4
80°	69.4	59.4	64.4	65.9	64.4
82.5°	38.0	35.0	37.0	37.5	36.5
85°	17.0	15.0	16.5	16.5	17.0
87.5°	5.0	4.5	4.5	5.0	4.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)