

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P708852

Luminaire Tested: **22APR-38-89L830-UNV**

Issue Date: 09/12/2023



**Test Information**

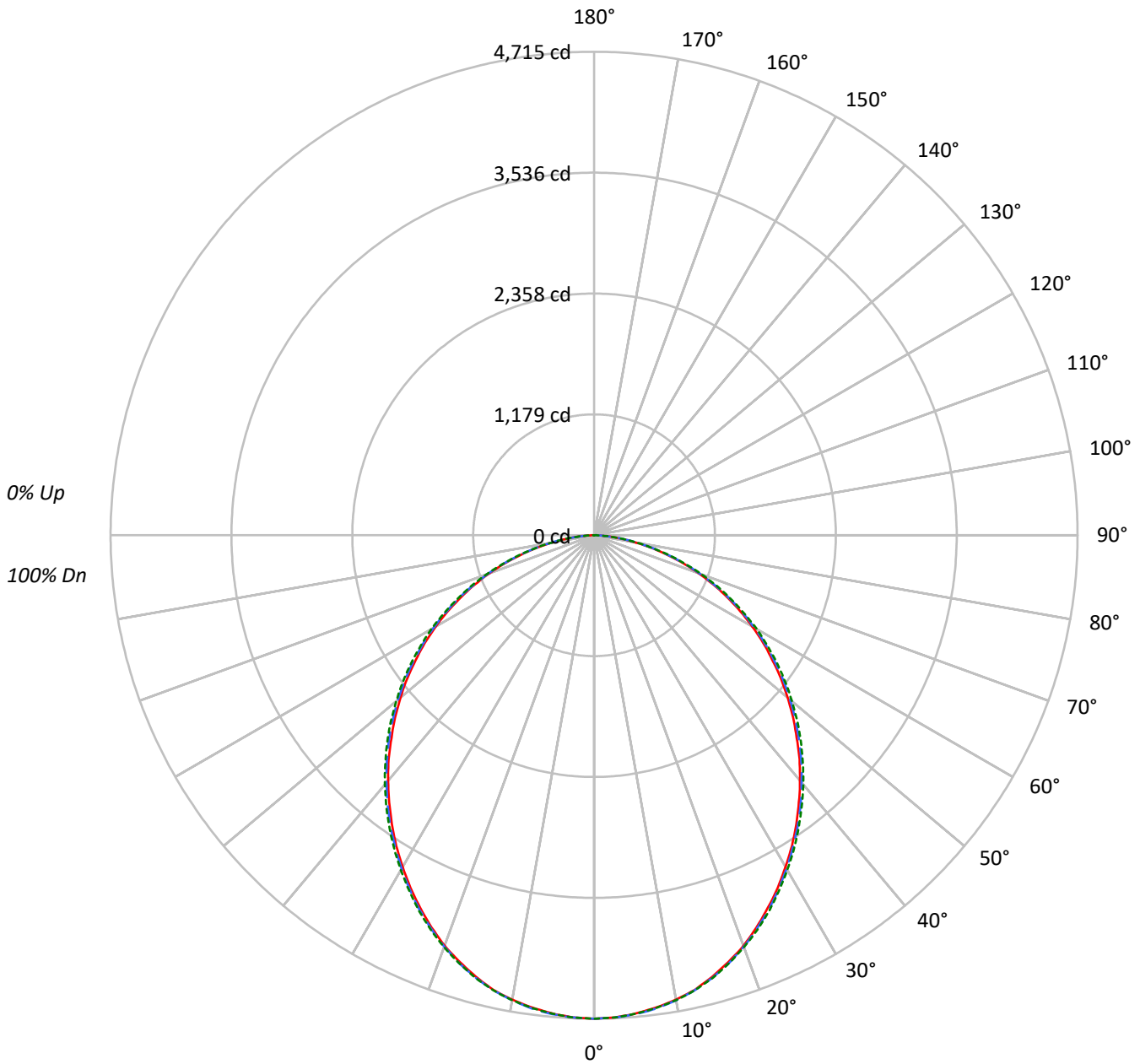
Test Method: LM-79-08  
Report Number: P708852  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 09/12/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 22APR-38-89L830-UNV  
Description: ArcMed Patient Recessed 2x2 Fixture Ambient and Exam Light  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12264.0 lumens  
Efficiency: N/A  
Efficacy: 105.1 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.19 / 1.31  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 116.7  
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: 25 FT

TEST NUMBER: P708852  
CATALOG NUMBER: 22APR-38-89L830-UNV

### Luminous Intensity Polar Plot



— 0°-180°    - - 45°-225°    ···· 90°-270°



TEST NUMBER: P708852  
 CATALOG NUMBER: 22APR-38-89L830-UNV

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				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	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	86	86	86	84
2	99	91	84	79	97	89	83	78	86	81	76	82	78	74	79	76	73	73	73	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	62	62	62	60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	53	53	53	51
5	76	64	55	48	74	63	54	48	61	53	47	59	52	47	57	51	46	46	46	46	44
6	71	57	49	42	69	57	48	42	55	47	42	53	46	41	51	46	41	41	41	41	39
7	66	52	44	37	64	51	43	37	50	42	37	48	42	37	47	41	36	36	36	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	33	33	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	30	30	30	28
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	27	27	27	25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	12689	12689	12689
5°	12647	12663	12652
10°	12568	12587	12584
15°	12414	12447	12452
20°	12201	12226	12243
25°	11907	11962	12000
30°	11603	11667	11710
35°	11293	11370	11428
40°	10975	11061	11151
45°	10634	10765	10858
50°	10316	10440	10546
55°	9962	10096	10220
60°	9599	9726	9864
65°	9124	9274	9380
70°	8539	8655	8778
75°	7679	7822	7925
80°	6484	6651	6712
85°	4851	5064	5033



TEST NUMBER: P708852  
 CATALOG NUMBER: 22APR-38-89L830-UNV

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	444.8	3.6
10°-20°	1258.3	10.3
20°-30°	1854.6	15.1
30°-40°	2164.5	17.6
40°-50°	2181.4	17.8
50°-60°	1925.2	15.7
60°-70°	1439.8	11.7
70°-80°	797.9	6.5
80°-90°	197.4	1.6
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°	3557.8	29.0
0°-40°	5722.3	46.7
0°-60°	9828.9	80.1
0°-90°	12264.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12264.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4715	4715	4715	4715	4715	
5°	4682	4688	4688	4689	4684	444
15°	4456	4464	4468	4472	4470	1256
25°	4010	4019	4029	4037	4042	1847
35°	3438	3445	3461	3475	3479	2150
45°	2794	2812	2829	2848	2853	2158
55°	2123	2136	2152	2172	2178	1901
65°	1433	1440	1456	1468	1473	1420
75°	739	742	752	760	762	784
85°	157	162	164	162	163	192
90°	0	0	0	0	0	



TEST NUMBER: P708852

CATALOG NUMBER: 22APR-38-89L830-UNV

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4715.3	4715.3	4715.3	4715.3	4715.3
2.5°	4706.5	4711.4	4707.5	4711.4	4707.5
5°	4681.9	4687.8	4687.8	4688.8	4683.9
7.5°	4645.6	4652.5	4655.4	4656.4	4649.5
10°	4599.4	4606.3	4606.3	4610.2	4605.3
12.5°	4540.5	4544.4	4543.5	4549.4	4545.4
15°	4456.0	4463.9	4467.8	4471.8	4469.8
17.5°	4361.8	4371.6	4374.5	4381.4	4376.5
20°	4260.6	4267.5	4269.4	4280.2	4275.3
22.5°	4139.8	4146.7	4153.5	4163.4	4164.3
25°	4010.1	4019.0	4028.8	4036.7	4041.6
27.5°	3876.6	3885.4	3894.3	3904.1	3906.0
30°	3734.2	3745.0	3754.8	3766.6	3768.5
32.5°	3590.8	3594.7	3609.4	3622.2	3628.1
35°	3437.6	3445.4	3461.1	3474.9	3478.8
37.5°	3281.4	3293.2	3309.9	3324.6	3328.5
40°	3124.2	3134.1	3148.8	3168.4	3174.3
42.5°	2965.1	2972.0	2991.7	3008.3	3013.3
45°	2794.2	2811.9	2828.6	2848.3	2853.2
47.5°	2631.2	2645.0	2661.6	2680.3	2688.2
50°	2464.2	2480.9	2493.7	2514.3	2519.2
52.5°	2297.3	2308.1	2325.7	2343.4	2351.3
55°	2123.4	2136.2	2151.9	2171.6	2178.4
57.5°	1956.5	1963.3	1981.0	1997.7	2003.6
60°	1783.6	1790.5	1807.2	1824.8	1832.7
62.5°	1610.7	1616.6	1630.4	1651.0	1651.0
65°	1433.0	1439.8	1456.5	1468.3	1473.2
67.5°	1260.1	1266.0	1277.8	1292.5	1299.4
70°	1085.3	1090.2	1100.0	1114.7	1115.7
72.5°	910.5	915.4	928.1	933.0	939.9
75°	738.6	742.5	752.3	760.2	762.2
77.5°	574.6	580.5	587.3	590.3	593.2
80°	418.4	424.3	429.2	432.1	433.1
82.5°	277.0	282.9	285.8	287.8	286.8
85°	157.1	162.1	164.0	162.1	163.0
87.5°	61.9	64.8	66.8	65.8	63.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)