

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: P708812

Luminaire Tested: **24APR-X-89L830-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P708812
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24APR-X-89L830-UNV
Description: ArcMed Patient Recessed 2x2 Fixture EXAM Light
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

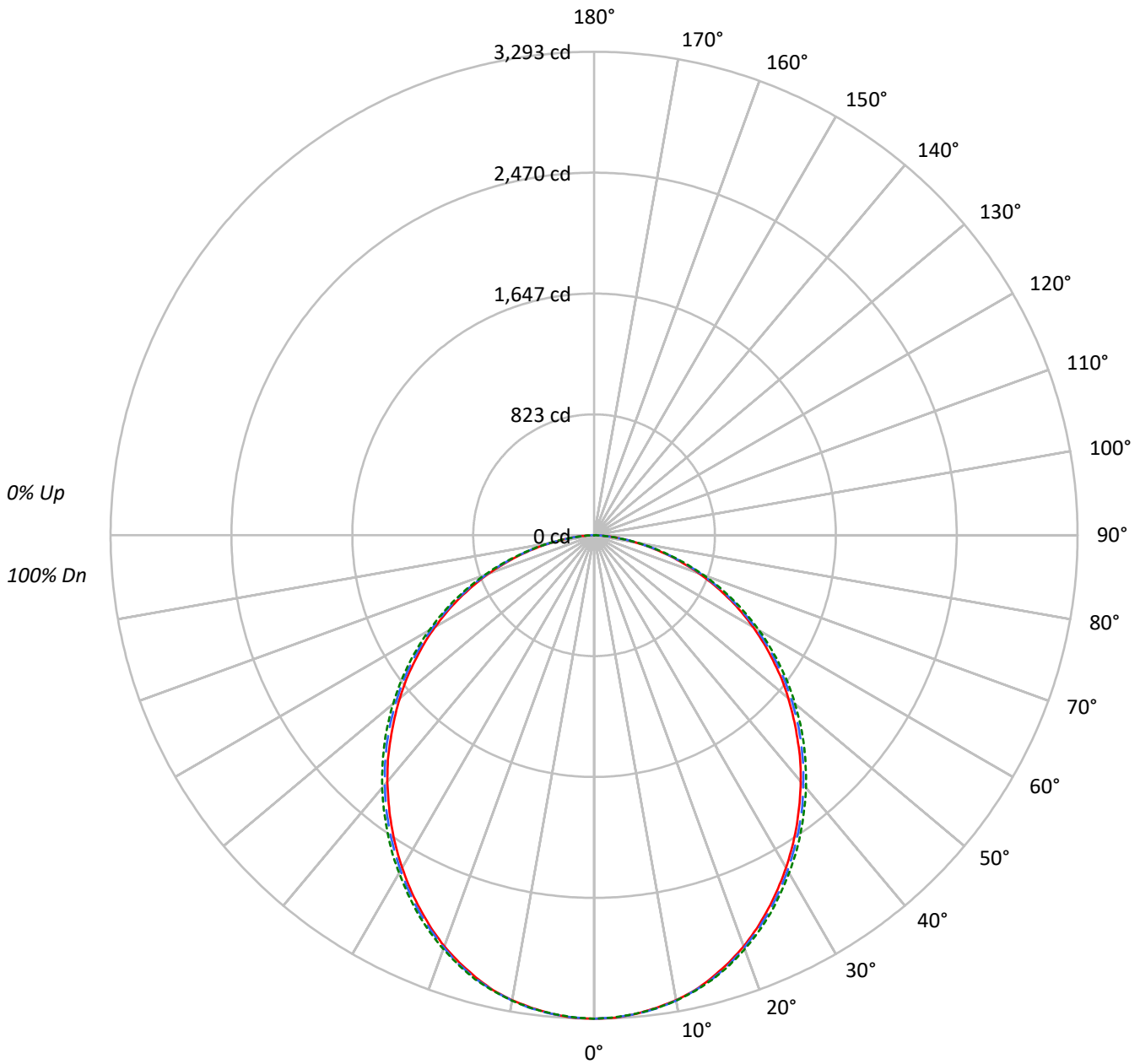
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8630.4 lumens
Efficiency: N/A
Efficacy: 111.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.2 / 1.31
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 77.7
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: P708812
CATALOG NUMBER: 24APR-X-89L830-UNV

Luminous Intensity Polar Plot



— 0°-180° - - 45°-225° - - - 90°-270°



TEST NUMBER: P708812
 CATALOG NUMBER: 24APR-X-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	80	76	82	78	74	79	76	73	73	73	73	70
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	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	53	53	53	51
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	57	51	46	46	46	46	44
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	45	41	41	41	41	39
7	66	52	43	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	40	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°	8862	8862	8862
5°	8840	8842	8837
10°	8786	8794	8797
15°	8682	8706	8723
20°	8536	8564	8592
25°	8334	8390	8439
30°	8124	8191	8252
35°	7908	7995	8072
40°	7694	7783	7887
45°	7453	7587	7692
50°	7228	7364	7479
55°	6981	7128	7253
60°	6729	6866	6998
65°	6404	6548	6672
70°	5996	6128	6251
75°	5412	5545	5647
80°	4565	4733	4779
85°	3396	3609	3548



TEST NUMBER: P708812
 CATALOG NUMBER: 24APR-X-89L830-UNV

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	310.7	3.6
10°-20°	880.4	10.2
20°-30°	1300.5	15.1
30°-40°	1521.7	17.6
40°-50°	1536.9	17.8
50°-60°	1358.4	15.7
60°-70°	1016.8	11.8
70°-80°	565.1	6.5
80°-90°	139.7	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°	2491.7	28.9
0°-40°	4013.4	46.5
0°-60°	6908.7	80.1
0°-90°	8630.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8630.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3293	3293	3293	3293	3293	
5°	3272	3273	3273	3274	3272	311
15°	3116	3118	3125	3131	3131	878
25°	2807	2811	2826	2834	2842	1293
35°	2407	2414	2434	2450	2457	1506
45°	1958	1973	1994	2014	2021	1512
55°	1488	1500	1519	1538	1546	1332
65°	1006	1013	1028	1042	1048	996
75°	520	524	533	543	543	552
85°	110	114	117	115	115	135
90°	0	0	0	0	0	



TEST NUMBER: P708812

CATALOG NUMBER: 24APR-X-89L830-UNV

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3293.1	3293.1	3293.1	3293.1	3293.1
2.5°	3290.1	3290.1	3287.2	3288.2	3286.2
5°	3272.5	3273.4	3273.4	3274.4	3271.5
7.5°	3246.9	3248.9	3251.8	3252.8	3249.9
10°	3215.5	3217.5	3218.4	3222.4	3219.4
12.5°	3174.3	3175.2	3176.2	3182.1	3179.2
15°	3116.3	3118.3	3125.1	3131.0	3131.0
17.5°	3051.5	3055.4	3063.3	3071.1	3069.2
20°	2980.8	2983.7	2990.6	3001.4	3000.4
22.5°	2897.3	2900.2	2910.1	2921.8	2924.8
25°	2806.9	2810.9	2825.6	2834.4	2842.3
27.5°	2713.6	2718.5	2732.3	2746.0	2750.0
30°	2614.4	2622.3	2636.0	2650.8	2655.7
32.5°	2513.3	2517.2	2535.9	2551.6	2561.4
35°	2407.2	2414.1	2433.7	2450.4	2457.3
37.5°	2298.2	2308.0	2328.6	2346.3	2352.2
40°	2190.2	2198.0	2215.7	2238.3	2245.2
42.5°	2078.2	2085.1	2106.7	2126.3	2133.2
45°	1958.4	1973.1	1993.7	2014.4	2021.2
47.5°	1842.5	1856.2	1876.9	1897.5	1905.3
50°	1726.6	1741.3	1759.0	1780.6	1786.5
52.5°	1610.7	1622.5	1641.1	1659.8	1668.6
55°	1487.9	1499.7	1519.4	1538.0	1545.9
57.5°	1372.0	1379.9	1398.6	1416.2	1423.1
60°	1250.3	1258.1	1275.8	1294.5	1300.3
62.5°	1130.4	1135.3	1152.0	1169.7	1173.6
65°	1005.7	1012.6	1028.3	1042.0	1047.9
67.5°	883.9	889.8	903.6	918.3	921.2
70°	762.1	766.1	778.8	789.6	794.5
72.5°	639.4	643.3	657.0	662.9	667.8
75°	520.5	523.5	533.3	543.1	543.1
77.5°	404.6	409.5	417.4	421.3	423.3
80°	294.6	299.6	305.4	309.4	308.4
82.5°	194.5	199.4	203.3	205.3	203.3
85°	110.0	113.9	116.9	114.9	114.9
87.5°	43.2	45.2	47.1	46.2	44.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)