

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: P709008

Luminaire Tested: **24APR-49-116L830-UNV**

Issue Date: 09/12/2023



**Test Information**

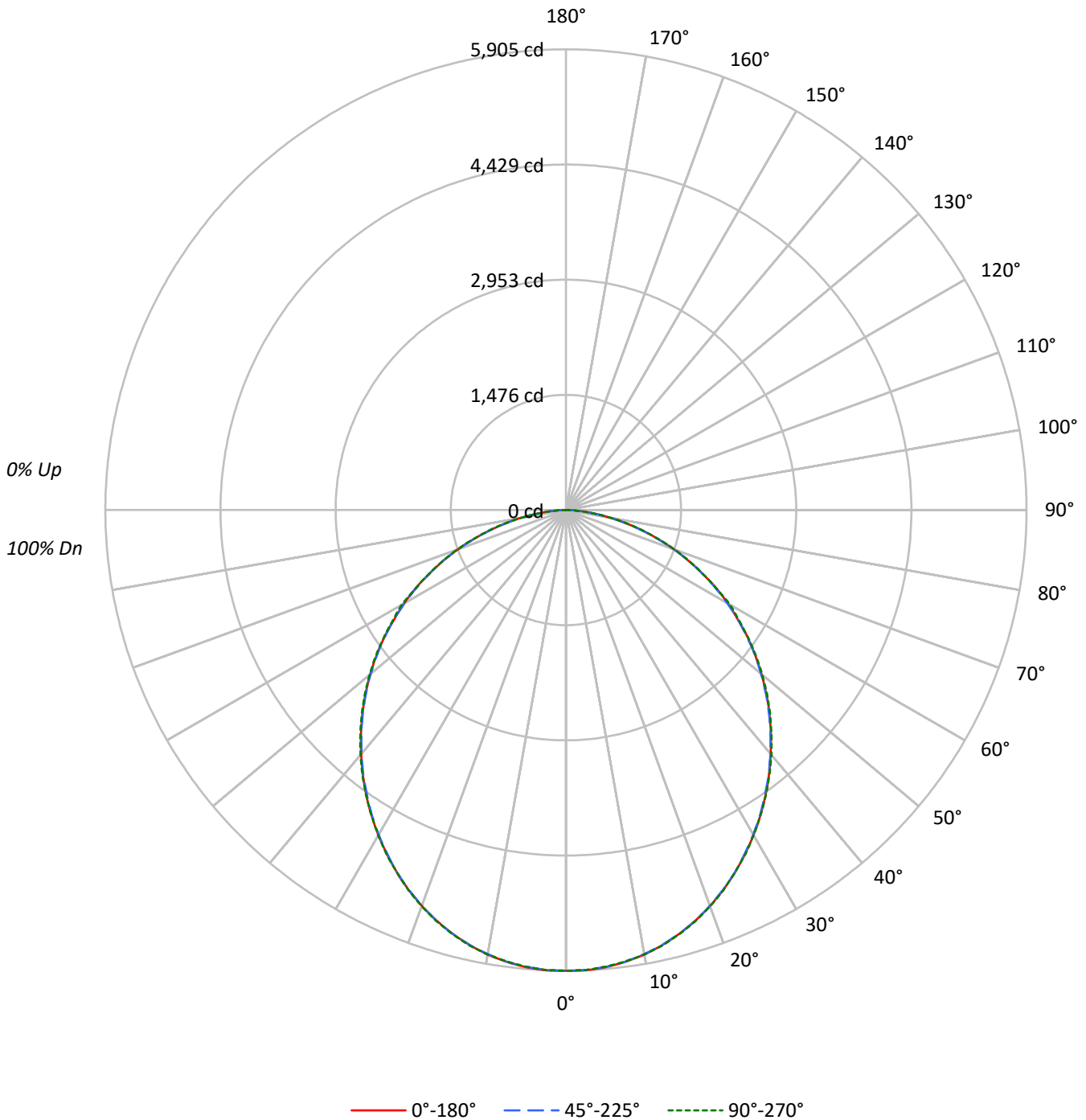
Test Method: LM-79-08  
Report Number: P709008  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 09/12/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24APR-49-116L830-UNV  
Description: ArcMed Patient Recessed 2x4 Fixture Ambient and Exam Light  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15936.6 lumens  
Efficiency: N/A  
Efficacy: 123.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 128.7  
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

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### Luminous Intensity Polar Plot





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**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	94	98	94	92	94	91	89	90	88	86	86	86	86	84
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	75	72	72	72	72	70
3	90	80	72	65	88	78	71	65	75	69	63	73	67	62	70	65	61	61	61	61	59
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	53	53	53	51
5	76	63	54	48	74	62	54	47	60	53	47	58	52	46	56	51	46	46	46	46	44
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	40	40	40	40	38
7	65	52	43	37	64	51	43	37	49	42	36	48	41	36	47	41	36	36	36	36	34
8	61	47	39	33	59	47	38	33	45	38	33	44	37	32	43	37	32	32	32	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	29	29	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	26	26	26	26	25

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

	0°	45°	90°
0°	7946	7946	7946
5°	7946	7938	7934
10°	7905	7898	7904
15°	7830	7830	7839
20°	7734	7729	7740
25°	7613	7609	7609
30°	7475	7464	7476
35°	7329	7309	7338
40°	7174	7160	7197
45°	7020	7006	7044
50°	6853	6835	6879
55°	6666	6648	6688
60°	6445	6430	6543
65°	6152	6154	6170
70°	5815	5783	5821
75°	5304	5263	5298
80°	4579	4522	4553
85°	3572	3537	3529



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	558.1	3.5
10°-20°	1585.1	9.9
20°-30°	2360.6	14.8
30°-40°	2788.9	17.5
40°-50°	2845.1	17.9
50°-60°	2538.7	15.9
60°-70°	1913.9	12.0
70°-80°	1073.1	6.7
80°-90°	273.0	1.7
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°	4503.8	28.3
0°-40°	7292.7	45.8
0°-60°	12676.5	79.5
0°-90°	15936.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15936.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5905	5905	5905	5905	5905	
5°	5883	5880	5878	5879	5874	558
15°	5621	5618	5621	5625	5628	1585
25°	5128	5122	5126	5130	5126	2362
35°	4462	4456	4450	4463	4468	2791
45°	3690	3687	3682	3693	3702	2846
55°	2842	2835	2834	2843	2851	2538
65°	1932	1923	1933	1939	1938	1917
75°	1020	1003	1012	1007	1019	1080
85°	231	223	229	229	229	277
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5905.4	5905.4	5905.4	5905.4	5905.4
2.5°	5905.4	5902.6	5900.3	5899.7	5900.9
5°	5883.3	5880.4	5877.6	5878.7	5874.2
7.5°	5840.7	5841.3	5839.0	5839.6	5834.5
10°	5785.7	5782.9	5780.6	5785.7	5785.2
12.5°	5711.4	5706.3	5708.6	5716.5	5717.1
15°	5621.2	5617.8	5621.2	5625.2	5627.5
17.5°	5518.6	5515.8	5519.7	5520.3	5524.8
20°	5401.2	5397.8	5397.8	5403.5	5405.7
22.5°	5271.3	5266.2	5267.3	5271.3	5274.1
25°	5127.8	5121.6	5125.5	5130.1	5125.5
27.5°	4973.0	4969.6	4965.6	4971.3	4978.6
30°	4811.3	4804.5	4803.9	4807.9	4811.9
32.5°	4640.6	4632.7	4632.7	4637.8	4641.2
35°	4461.9	4455.7	4450.0	4463.1	4467.6
37.5°	4277.6	4270.2	4269.7	4277.6	4285.0
40°	4084.2	4078.0	4076.3	4089.9	4097.8
42.5°	3889.1	3885.1	3881.2	3894.8	3901.0
45°	3689.5	3687.2	3682.1	3692.9	3701.9
47.5°	3484.1	3476.8	3475.1	3487.5	3496.6
50°	3273.7	3270.9	3265.2	3276.6	3286.2
52.5°	3060.5	3057.1	3053.1	3063.3	3073.5
55°	2841.5	2835.3	2834.2	2842.7	2851.2
57.5°	2613.5	2608.4	2616.4	2624.3	2631.1
60°	2395.2	2383.3	2389.5	2398.6	2431.5
62.5°	2175.7	2154.7	2159.2	2184.2	2170.0
65°	1932.4	1922.7	1932.9	1938.6	1938.0
67.5°	1704.4	1693.0	1708.3	1703.8	1710.6
70°	1478.1	1458.2	1470.1	1471.8	1479.8
72.5°	1244.4	1227.4	1237.6	1242.7	1247.8
75°	1020.3	1002.8	1012.4	1006.7	1019.2
77.5°	797.4	786.7	792.9	796.9	806.5
80°	591.0	579.1	583.6	584.2	587.6
82.5°	400.4	391.3	392.5	402.7	398.7
85°	231.4	222.9	229.1	228.6	228.6
87.5°	90.2	83.4	89.6	89.0	87.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)