

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: P708857

Luminaire Tested: **22APR-38-89L835-UNV**

Issue Date: 09/12/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P708857  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 09/12/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 22APR-38-89L835-UNV  
Description: ArcMed Patient Recessed 2x2 Fixture Ambient and Exam Light  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

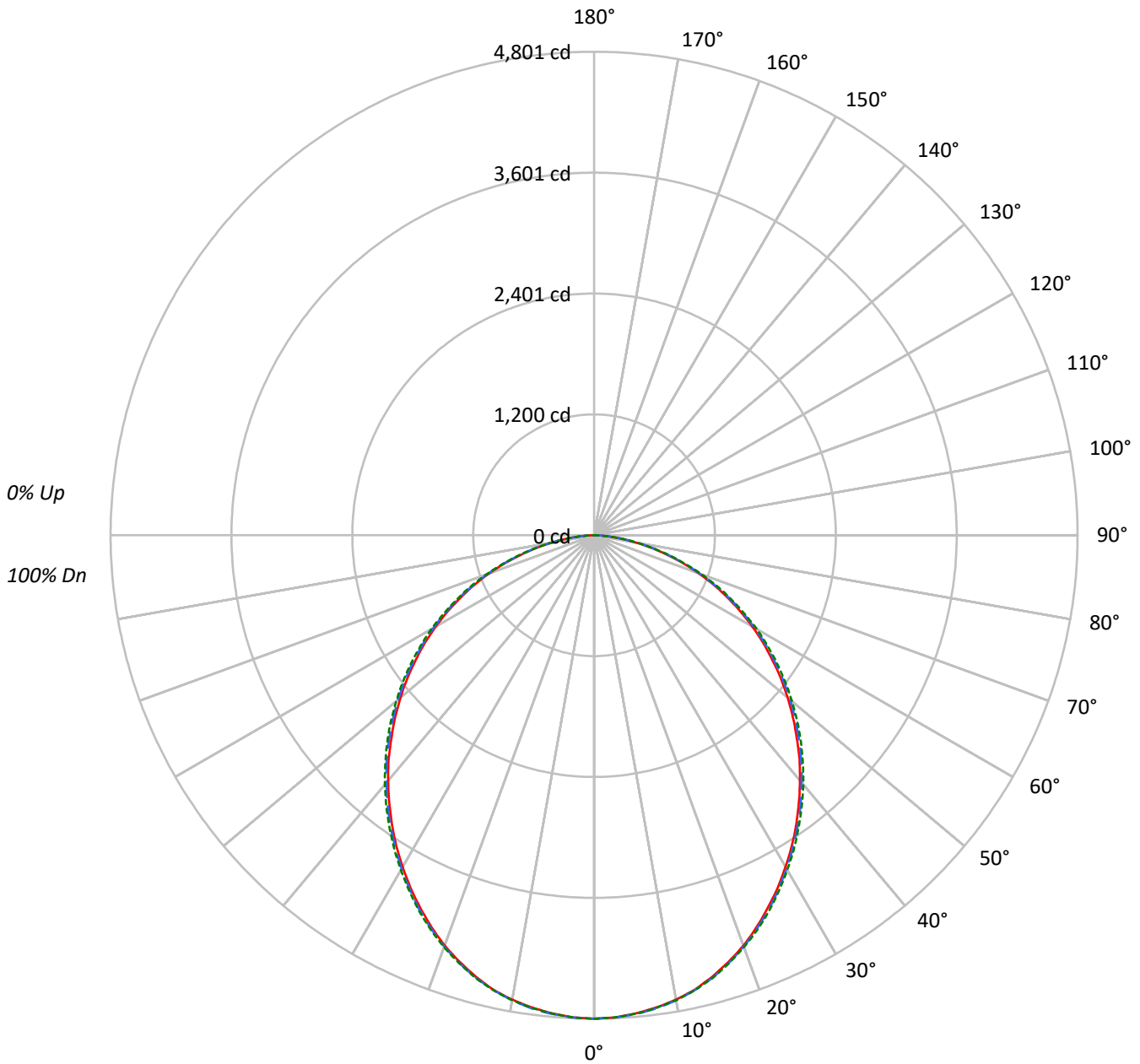
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12486.5 lumens  
Efficiency: N/A  
Efficacy: 107.0 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

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### Luminous Intensity Polar Plot



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



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

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

	0°	45°	90°
0°	12919	12919	12919
5°	12877	12893	12882
10°	12796	12815	12812
15°	12639	12673	12678
20°	12422	12448	12465
25°	12123	12179	12218
30°	11814	11879	11922
35°	11497	11576	11635
40°	11174	11262	11353
45°	10827	10960	11055
50°	10503	10629	10738
55°	10143	10279	10405
60°	9773	9902	10042
65°	9290	9443	9551
70°	8694	8812	8938
75°	7819	7964	8068
80°	6602	6772	6834
85°	4940	5156	5125



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	452.9	3.6
10°-20°	1281.1	10.3
20°-30°	1888.3	15.1
30°-40°	2203.8	17.6
40°-50°	2221.0	17.8
50°-60°	1960.1	15.7
60°-70°	1466.0	11.7
70°-80°	812.4	6.5
80°-90°	200.9	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°	3622.3	29.0
0°-40°	5826.1	46.7
0°-60°	10007.2	80.1
0°-90°	12486.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12486.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4801	4801	4801	4801	4801	
5°	4767	4773	4773	4774	4769	452
15°	4537	4545	4549	4553	4551	1278
25°	4083	4092	4102	4110	4115	1881
35°	3500	3508	3524	3538	3542	2189
45°	2845	2863	2880	2900	2905	2198
55°	2162	2175	2191	2211	2218	1935
65°	1459	1466	1483	1495	1500	1445
75°	752	756	766	774	776	799
85°	160	165	167	165	166	195
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4800.9	4800.9	4800.9	4800.9	4800.9
2.5°	4791.9	4796.9	4792.9	4796.9	4792.9
5°	4766.9	4772.9	4772.9	4773.9	4768.9
7.5°	4729.9	4736.9	4739.9	4740.9	4733.9
10°	4682.9	4689.9	4689.9	4693.9	4688.9
12.5°	4622.9	4626.9	4625.9	4631.9	4627.9
15°	4536.9	4544.9	4548.9	4552.9	4550.9
17.5°	4440.9	4450.9	4453.9	4460.9	4455.9
20°	4337.9	4344.9	4346.9	4357.9	4352.9
22.5°	4214.9	4221.9	4228.9	4238.9	4239.9
25°	4082.9	4091.9	4101.9	4109.9	4114.9
27.5°	3946.9	3955.9	3964.9	3974.9	3976.9
30°	3801.9	3812.9	3822.9	3834.9	3836.9
32.5°	3655.9	3659.9	3674.9	3687.9	3693.9
35°	3499.9	3507.9	3523.9	3537.9	3541.9
37.5°	3340.9	3352.9	3369.9	3384.9	3388.9
40°	3180.9	3190.9	3205.9	3225.9	3231.9
42.5°	3018.9	3025.9	3045.9	3062.9	3067.9
45°	2844.9	2862.9	2879.9	2899.9	2904.9
47.5°	2678.9	2692.9	2709.9	2728.9	2736.9
50°	2508.9	2525.9	2538.9	2559.9	2564.9
52.5°	2338.9	2349.9	2367.9	2385.9	2393.9
55°	2161.9	2174.9	2190.9	2210.9	2217.9
57.5°	1991.9	1998.9	2016.9	2033.9	2039.9
60°	1815.9	1822.9	1839.9	1857.9	1865.9
62.5°	1639.9	1645.9	1659.9	1680.9	1680.9
65°	1459.0	1466.0	1483.0	1495.0	1500.0
67.5°	1283.0	1289.0	1301.0	1316.0	1323.0
70°	1105.0	1110.0	1120.0	1135.0	1136.0
72.5°	927.0	932.0	945.0	950.0	957.0
75°	752.0	756.0	766.0	774.0	776.0
77.5°	585.0	591.0	598.0	601.0	604.0
80°	426.0	432.0	437.0	440.0	441.0
82.5°	282.0	288.0	291.0	293.0	292.0
85°	160.0	165.0	167.0	165.0	166.0
87.5°	63.0	66.0	68.0	67.0	65.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)