

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: P708887

Luminaire Tested: **22APR-38-89L950-UNV**

Issue Date: 09/12/2023



**Test Information**

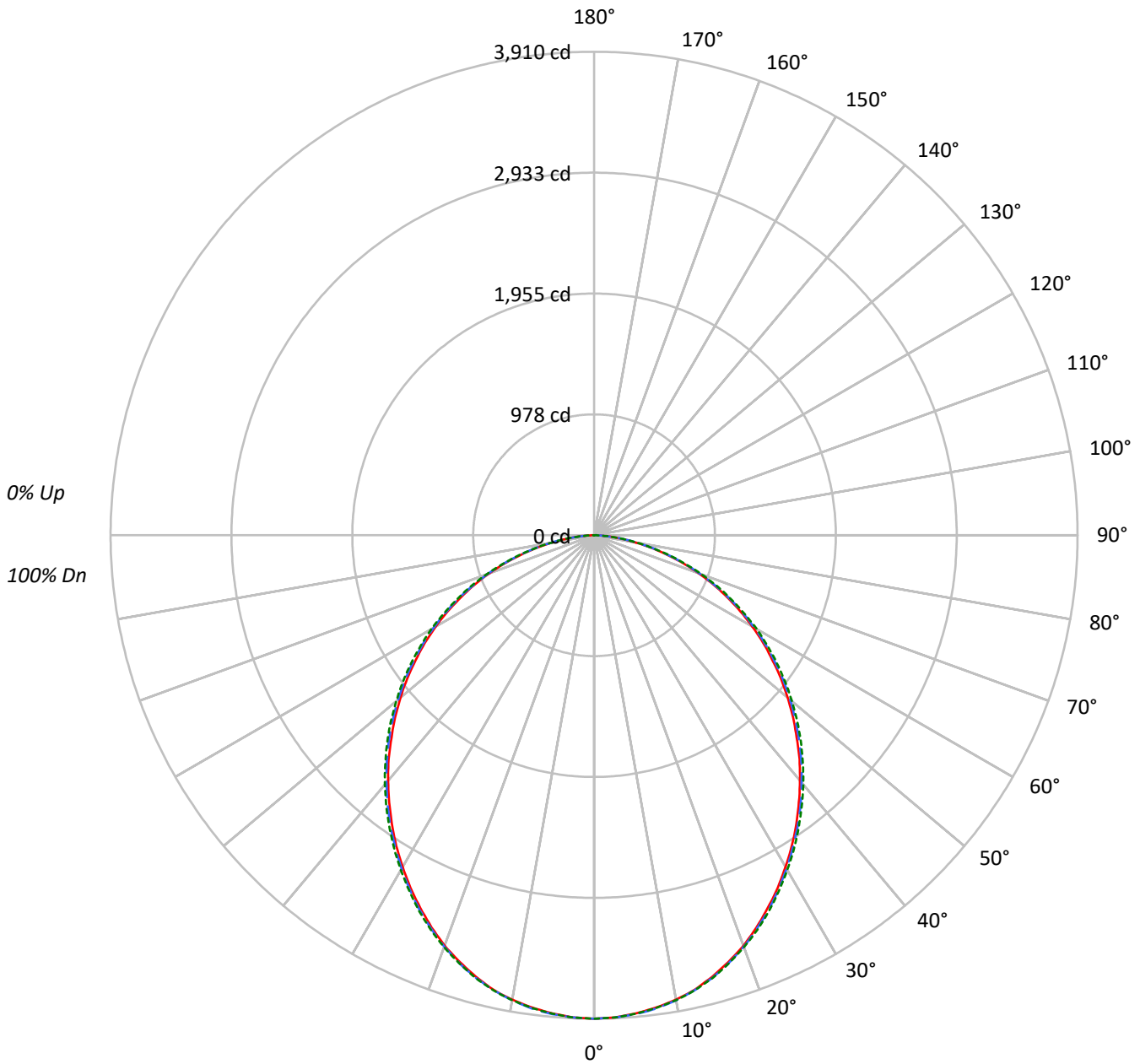
Test Method: LM-79-08  
Report Number: P708887  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 09/12/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 22APR-38-89L950-UNV  
Description: ArcMed Patient Recessed 2x2 Fixture Ambient and Exam Light  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10169.6 lumens  
Efficiency: N/A  
Efficacy: 87.1 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

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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	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°	10522	10522	10522
5°	10487	10501	10492
10°	10422	10437	10435
15°	10294	10321	10326
20°	10117	10138	10152
25°	9873	9919	9951
30°	9622	9675	9710
35°	9364	9428	9476
40°	9101	9172	9246
45°	8818	8926	9004
50°	8555	8657	8745
55°	8261	8372	8475
60°	7960	8065	8179
65°	7566	7691	7778
70°	7080	7177	7279
75°	6367	6487	6571
80°	5376	5515	5566
85°	4023	4199	4174



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	368.9	3.6
10°-20°	1043.4	10.3
20°-30°	1537.9	15.1
30°-40°	1794.8	17.6
40°-50°	1808.9	17.8
50°-60°	1596.4	15.7
60°-70°	1194.0	11.7
70°-80°	661.7	6.5
80°-90°	163.7	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°	2950.2	29.0
0°-40°	4745.0	46.7
0°-60°	8150.4	80.1
0°-90°	10169.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10169.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3910	3910	3910	3910	3910	
5°	3882	3887	3887	3888	3884	368
15°	3695	3702	3705	3708	3706	1041
25°	3325	3333	3341	3347	3351	1532
35°	2850	2857	2870	2881	2885	1783
45°	2317	2332	2346	2362	2366	1790
55°	1761	1771	1784	1801	1806	1576
65°	1188	1194	1208	1218	1222	1177
75°	612	616	624	630	632	650
85°	130	134	136	134	135	159
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3910.1	3910.1	3910.1	3910.1	3910.1
2.5°	3902.7	3906.8	3903.6	3906.8	3903.6
5°	3882.4	3887.3	3887.3	3888.1	3884.0
7.5°	3852.2	3857.9	3860.4	3861.2	3855.5
10°	3814.0	3819.7	3819.7	3822.9	3818.9
12.5°	3765.1	3768.4	3767.5	3772.4	3769.2
15°	3695.1	3701.6	3704.8	3708.1	3706.5
17.5°	3616.9	3625.0	3627.5	3633.2	3629.1
20°	3533.0	3538.7	3540.3	3549.3	3545.2
22.5°	3432.8	3438.5	3444.2	3452.4	3453.2
25°	3325.3	3332.6	3340.8	3347.3	3351.4
27.5°	3214.5	3221.9	3229.2	3237.3	3239.0
30°	3096.5	3105.4	3113.6	3123.3	3125.0
32.5°	2977.5	2980.8	2993.0	3003.6	3008.5
35°	2850.5	2857.0	2870.0	2881.4	2884.7
37.5°	2721.0	2730.8	2744.6	2756.8	2760.1
40°	2590.7	2598.8	2611.1	2627.3	2632.2
42.5°	2458.8	2464.5	2480.7	2494.6	2498.7
45°	2317.0	2331.7	2345.6	2361.8	2365.9
47.5°	2181.9	2193.3	2207.1	2222.6	2229.1
50°	2043.4	2057.2	2067.8	2084.9	2089.0
52.5°	1904.9	1913.9	1928.6	1943.2	1949.7
55°	1760.8	1771.4	1784.4	1800.7	1806.4
57.5°	1622.3	1628.0	1642.7	1656.5	1661.4
60°	1479.0	1484.7	1498.5	1513.2	1519.7
62.5°	1335.7	1340.5	1351.9	1369.1	1369.1
65°	1188.2	1194.0	1207.8	1217.6	1221.6
67.5°	1044.9	1049.8	1059.6	1071.8	1077.5
70°	899.9	904.0	912.2	924.4	925.2
72.5°	755.0	759.0	769.6	773.7	779.4
75°	612.4	615.7	623.9	630.4	632.0
77.5°	476.4	481.3	487.0	489.5	491.9
80°	346.9	351.8	355.9	358.3	359.2
82.5°	229.7	234.6	237.0	238.6	237.8
85°	130.3	134.4	136.0	134.4	135.2
87.5°	51.3	53.8	55.4	54.6	52.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)