

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: P708956

Luminaire Tested: **24APR-X-160L940-UNV**

Issue Date: 09/12/2023



**Test Information**

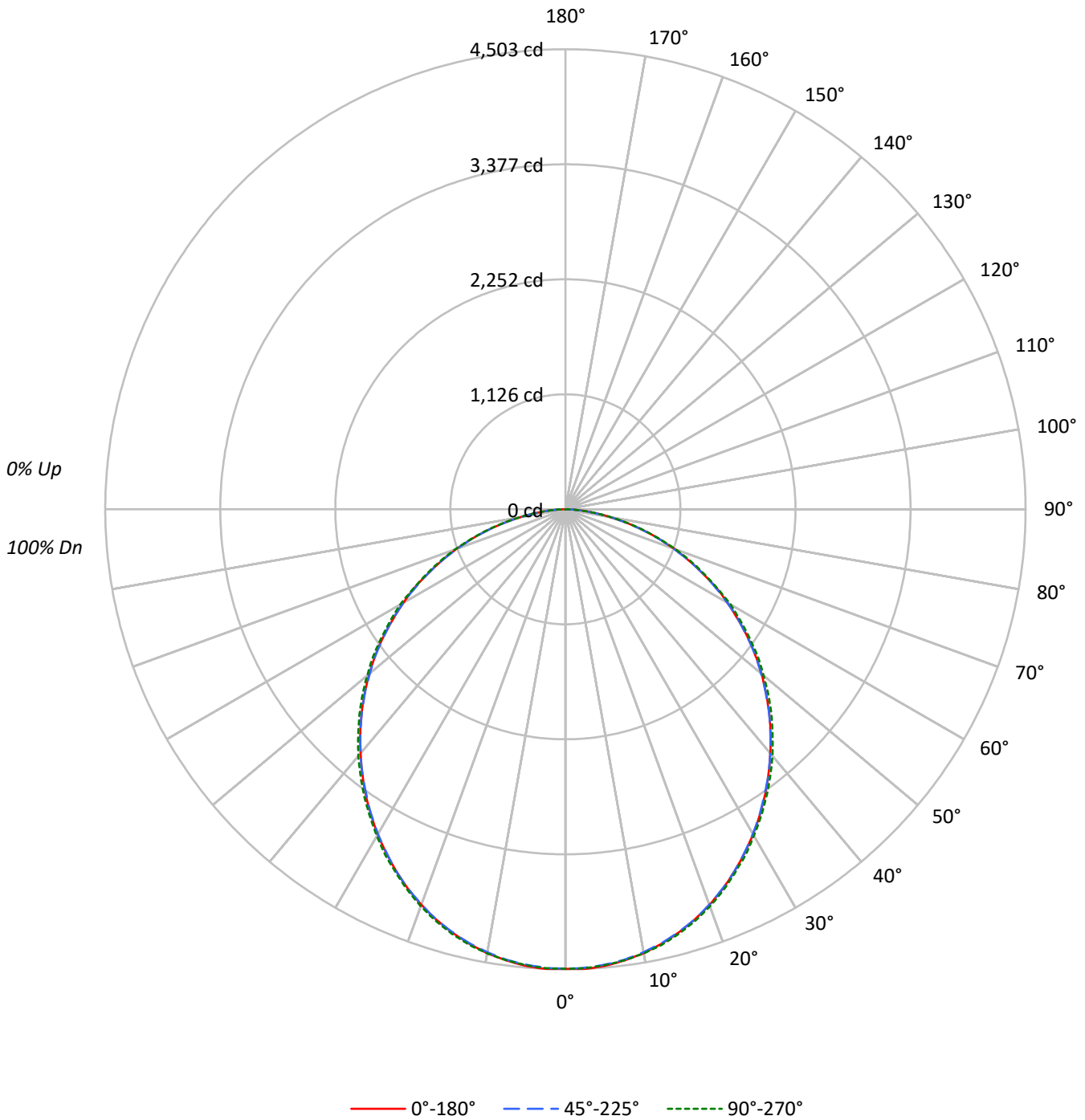
Test Method: LM-79-08  
Report Number: P708956  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 09/12/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24APR-X-160L940-UNV  
Description: ArcMed Patient Recessed 2x4 Fixture EXAM Light  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12206.7 lumens  
Efficiency: N/A  
Efficacy: 100.7 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.22 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 121.2  
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: P708956  
CATALOG NUMBER: 24APR-X-160L940-UNV

### Luminous Intensity Polar Plot





TEST NUMBER: P708956  
 CATALOG NUMBER: 24APR-X-160L940-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	94	98	94	91	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	72	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	50
5	76	63	54	48	74	62	54	47	60	53	47	58	51	46	56	50	46	46	46	46	44
6	70	57	48	42	68	56	48	41	54	47	41	53	46	41	51	45	40	40	40	40	38
7	65	52	43	37	63	51	43	37	49	42	36	48	41	36	47	40	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	39	33	29	29	29	29	27
10	53	40	32	27	52	39	32	27	39	32	27	38	31	27	37	31	26	26	26	26	25

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

	0°	45°	90°
0°	6052	6052	6052
5°	6059	6043	6049
10°	6028	6015	6031
15°	5971	5967	5990
20°	5900	5896	5922
25°	5807	5808	5828
30°	5705	5701	5733
35°	5597	5584	5635
40°	5479	5475	5537
45°	5365	5362	5426
50°	5241	5231	5301
55°	5098	5091	5162
60°	4931	4927	5022
65°	4707	4714	4769
70°	4462	4426	4518
75°	4079	4047	4124
80°	3528	3484	3556
85°	2776	2746	2824



TEST NUMBER: P708956  
 CATALOG NUMBER: 24APR-X-160L940-UNV

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	425.2	3.5
10°-20°	1209.0	9.9
20°-30°	1803.1	14.8
30°-40°	2133.6	17.5
40°-50°	2180.1	17.9
50°-60°	1948.3	16.0
60°-70°	1468.5	12.0
70°-80°	826.6	6.8
80°-90°	212.3	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°	3437.3	28.2
0°-40°	5570.9	45.6
0°-60°	9699.3	79.5
0°-90°	12206.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12206.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4498	4498	4498	4498	4498	
5°	4486	4480	4474	4478	4478	426
15°	4287	4281	4284	4292	4300	1209
25°	3911	3906	3912	3925	3925	1802
35°	3408	3400	3400	3422	3431	2131
45°	2820	2817	2818	2839	2852	2175
55°	2173	2173	2170	2189	2200	1941
65°	1478	1472	1481	1495	1498	1468
75°	785	770	778	775	793	830
85°	180	172	178	180	183	214
90°	0	0	0	0	0	



TEST NUMBER: P708956

CATALOG NUMBER: 24APR-X-160L940-UNV

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4498.1	4498.1	4498.1	4498.1	4498.1
2.5°	4503.0	4496.2	4491.3	4493.8	4495.6
5°	4485.7	4479.5	4474.0	4478.3	4478.3
7.5°	4453.0	4449.9	4445.6	4449.3	4450.5
10°	4412.2	4405.4	4402.3	4411.0	4414.1
12.5°	4354.8	4346.7	4349.2	4360.3	4365.3
15°	4286.8	4281.2	4283.7	4292.4	4300.4
17.5°	4209.6	4203.4	4209.0	4216.4	4223.8
20°	4120.6	4114.4	4117.5	4128.0	4136.1
22.5°	4021.8	4015.6	4019.3	4028.6	4037.2
25°	3911.2	3905.6	3912.4	3924.8	3925.4
27.5°	3795.7	3789.5	3791.3	3804.3	3816.0
30°	3672.1	3664.1	3669.6	3682.6	3690.0
32.5°	3542.4	3535.0	3539.3	3554.1	3562.8
35°	3407.7	3400.3	3399.7	3422.5	3430.6
37.5°	3265.0	3260.7	3264.4	3282.9	3292.8
40°	3119.2	3113.0	3117.3	3140.8	3152.5
42.5°	2971.5	2967.8	2968.5	2991.9	3001.2
45°	2819.6	2817.1	2817.7	2839.3	2851.7
47.5°	2662.6	2657.1	2659.6	2681.8	2694.8
50°	2503.9	2502.6	2498.9	2521.2	2532.3
52.5°	2340.8	2338.3	2338.3	2358.1	2374.1
55°	2173.4	2173.4	2170.3	2189.4	2200.5
57.5°	1997.9	1999.1	2004.1	2021.4	2032.5
60°	1832.3	1826.2	1831.1	1846.6	1866.3
62.5°	1667.4	1648.9	1653.8	1668.0	1676.0
65°	1478.4	1471.6	1480.8	1495.0	1498.1
67.5°	1304.8	1298.0	1302.9	1312.8	1326.4
70°	1134.3	1116.3	1125.0	1135.5	1148.5
72.5°	955.1	939.6	952.0	960.7	969.9
75°	784.6	769.8	778.4	774.7	793.2
77.5°	613.5	603.0	610.4	617.8	632.0
80°	455.3	443.6	449.7	452.8	459.0
82.5°	310.1	301.5	303.3	315.7	312.0
85°	179.8	172.4	177.9	180.4	182.9
87.5°	71.0	64.2	69.8	71.7	72.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)