

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: P

Luminaire Tested: **4APN-X-X-NL835-UNV-ASY**

Issue Date: 06/06/2024



Test Information

Test Method: LM-79-08
Report Number: P
Test Lab: INNOVATION CENTER(G2)
Issue Date: 06/06/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN-X-X-NL835-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture NIGHT Light w/
ASYMMETRIC Lens
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

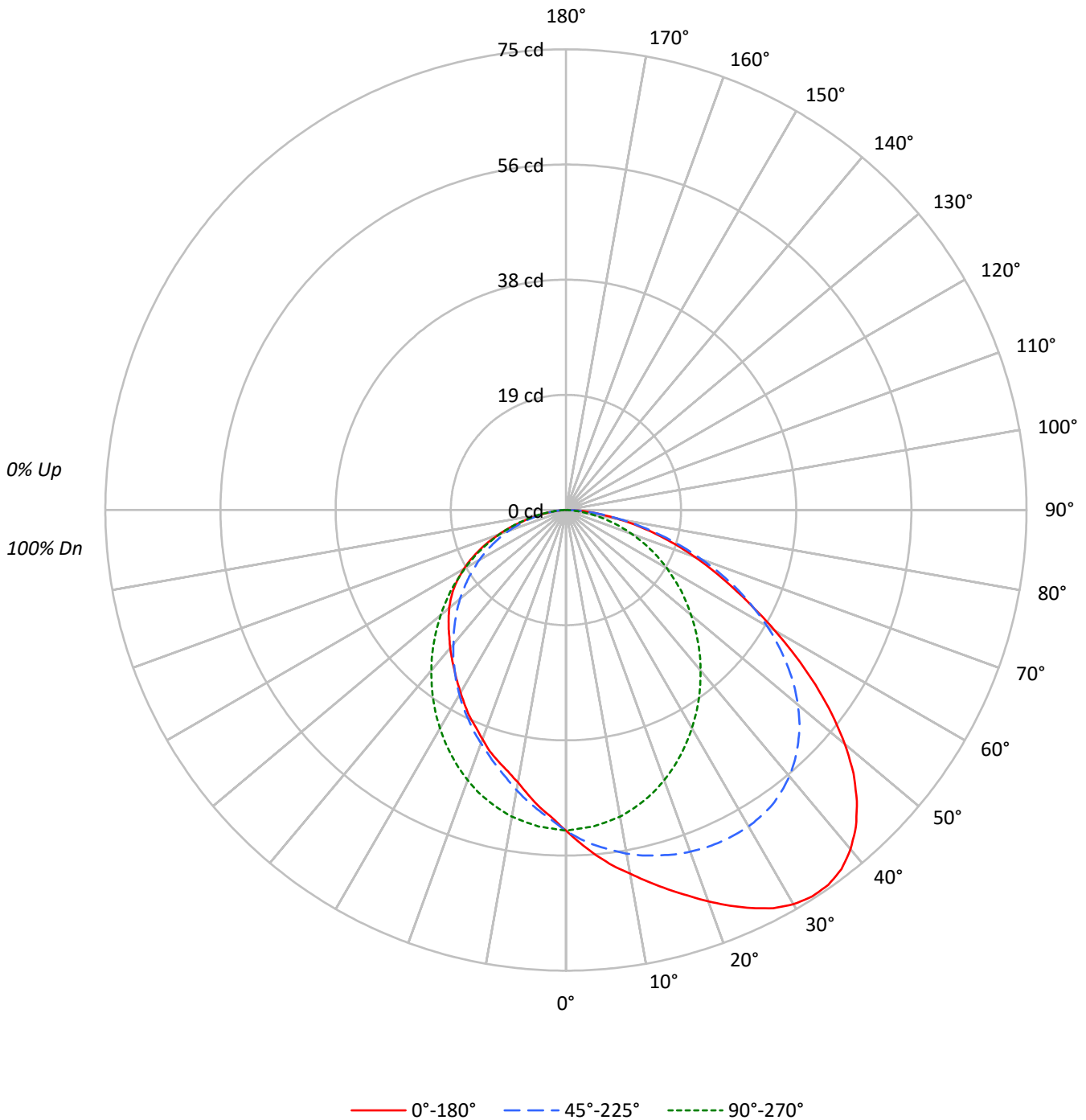
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 161.6 lumens
Efficiency: N/A
Efficacy: 46.2 lumens/watt
Spacing Criteria (0/90/45): 1.53 / 1.17 / 1.46
Luminous Opening: Rectangular (W 0.29' x L: 3.83' x H: 0')
CIE Type: Direct

Input Watts (W): 3.5
Input Voltage (V): 120
Input Current (A_{in}): 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				
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	97	94	91	93	91	88	90	88	86	86	86	86	84
2	99	90	83	78	96	88	82	77	85	80	75	82	77	73	79	75	72	72	72	72	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	60	60	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	52	52	52	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	45	45	45	43
6	69	56	47	40	68	55	46	40	53	46	40	51	45	39	50	44	39	39	39	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	35	35	35	33
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	31	31	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	28	28	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	25	25	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	503	503	503
5°	545	500	470
10°	588	496	440
15°	637	488	423
20°	695	479	407
25°	760	468	394
30°	824	456	381
35°	876	443	373
40°	906	429	368
45°	912	414	368
50°	888	398	371
55°	833	384	374
60°	757	366	370
65°	686	346	355
70°	628	321	327
75°	569	290	279
80°	499	244	216
85°	420	177	166



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.0	3.1
10°-20°	14.4	8.9
20°-30°	22.6	14.0
30°-40°	28.3	17.5
40°-50°	30.1	18.6
50°-60°	27.2	16.8
60°-70°	20.1	12.5
70°-80°	11.0	6.8
80°-90°	2.8	1.8
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°	42.0	26.0
0°-40°	70.3	43.5
0°-60°	127.6	78.9
0°-90°	161.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	161.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	52	52	52	52	52	
5°	56	55	52	49	49	5
15°	64	58	49	43	42	18
25°	72	60	44	38	37	33
35°	74	59	38	32	32	46
45°	67	54	30	26	27	51
55°	50	44	23	19	22	44
65°	30	31	15	13	16	30
75°	15	16	8	7	8	16
85°	4	4	2	2	2	4
90°	0	0	0	0	0	



TEST NUMBER: P
 CATALOG NUMBER: 4APN-X-X-NL835-UNV-ASY

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	52.2	52.2	52.2	52.2	52.2	52.2	52.2	52.2	52.2	52.2	52.2
2.5°	54.3	54.2	54.0	54.0	53.8	53.6	53.3	53.3	53.0	52.4	51.9
5°	56.4	56.2	55.9	55.7	55.2	54.8	54.3	54.0	53.3	52.3	51.7
7.5°	58.4	58.1	57.7	57.2	56.6	55.8	55.0	54.4	53.4	52.0	51.2
10°	60.1	59.9	59.4	58.8	57.8	56.8	55.6	54.6	53.3	51.6	50.7
12.5°	62.0	61.8	61.1	60.3	59.0	57.6	56.0	54.7	53.0	51.0	49.9
15°	63.9	63.7	62.9	61.8	60.1	58.2	56.3	54.6	52.5	50.2	49.0
17.5°	65.8	65.6	64.6	63.2	61.1	58.8	56.4	54.3	51.9	49.3	48.0
20°	67.8	67.5	66.3	64.6	62.0	59.2	56.4	53.8	51.1	48.3	46.8
22.5°	69.7	69.4	68.0	65.8	62.7	59.5	56.1	53.2	50.2	47.1	45.5
25°	71.5	71.2	69.6	67.1	63.5	59.6	55.7	52.3	49.1	45.7	44.1
27.5°	73.1	72.7	71.0	68.2	64.1	59.6	55.2	51.4	47.8	44.3	42.6
30°	74.1	73.8	72.0	69.0	64.5	59.5	54.5	50.2	46.4	42.7	41.0
32.5°	74.6	74.3	72.6	69.4	64.6	59.1	53.7	49.0	44.9	41.1	39.4
35°	74.5	74.2	72.5	69.4	64.4	58.6	52.6	47.5	43.3	39.4	37.7
37.5°	73.7	73.3	71.8	68.8	63.8	57.7	51.4	46.0	41.6	37.7	35.9
40°	72.1	71.8	70.5	67.7	62.9	56.6	50.0	44.3	39.8	35.9	34.1
42.5°	69.9	69.6	68.5	66.0	61.5	55.2	48.5	42.5	37.9	34.1	32.3
45°	67.0	66.7	66.0	63.8	59.8	53.5	46.7	40.6	35.9	32.1	30.4
47.5°	63.5	63.2	62.8	61.2	57.6	51.6	44.7	38.5	33.9	30.2	28.5
50°	59.3	59.0	59.2	58.0	55.1	49.3	42.5	36.4	31.7	28.2	26.6
52.5°	54.6	54.4	54.9	54.4	52.2	46.8	40.2	34.1	29.6	26.2	24.7
55°	49.6	49.3	50.3	50.5	48.9	44.0	37.5	31.8	27.4	24.3	22.9
57.5°	44.4	44.2	45.4	46.1	45.4	41.0	34.8	29.4	25.1	22.2	20.8
60°	39.3	39.1	40.4	41.6	41.5	37.9	32.0	26.9	22.9	20.2	19.0
62.5°	34.5	34.3	35.6	37.0	37.5	34.5	29.3	24.3	20.6	18.2	17.1
65°	30.1	29.9	31.1	32.5	33.4	31.0	26.3	21.7	18.4	16.1	15.2
67.5°	26.1	26.1	26.8	28.1	29.2	27.4	23.2	19.2	16.0	14.2	13.3
70°	22.3	22.3	22.8	23.7	25.0	23.5	20.2	16.6	13.8	12.2	11.4
72.5°	18.7	18.9	19.1	19.8	21.1	19.9	17.1	14.0	11.6	10.2	9.6
75°	15.3	15.3	15.6	16.2	17.2	16.2	14.0	11.5	9.5	8.3	7.8
77.5°	12.1	12.0	12.3	12.6	13.4	12.7	11.1	9.2	7.4	6.4	6.0
80°	9.0	9.0	9.2	9.4	10.0	9.4	8.3	6.9	5.4	4.7	4.4
82.5°	6.2	6.4	6.3	6.5	6.9	6.4	5.7	4.7	3.6	3.1	2.9
85°	3.8	3.9	3.8	4.0	4.2	3.7	3.4	2.8	2.1	1.7	1.6
87.5°	2.0	1.9	1.9	2.0	2.1	1.8	1.6	1.4	0.9	0.7	0.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	52.2	52.2	52.2	52.2	52.2	52.2	52.2	52.2	52.2	52.2
2.5°	51.6	51.8	51.6	50.9	50.6	50.3	50.1	50.0	50.3	50.2
5°	51.2	51.0	50.6	49.7	49.2	48.7	48.4	48.3	48.6	48.6
7.5°	50.6	50.2	49.5	48.4	47.8	47.1	46.8	46.6	46.8	46.8
10°	49.9	49.2	48.3	47.0	46.3	45.5	45.2	44.9	45.1	45.0
12.5°	49.0	48.0	46.9	45.5	44.7	44.0	43.7	43.5	43.7	43.6
15°	47.9	46.8	45.6	44.1	43.3	42.6	42.3	42.2	42.4	42.4
17.5°	46.8	45.5	44.1	42.6	41.8	41.3	41.0	40.9	41.0	41.2
20°	45.5	44.1	42.6	41.1	40.4	39.9	39.7	39.6	39.8	39.7
22.5°	44.1	42.6	41.0	39.6	39.1	38.5	38.3	38.2	38.4	38.3
25°	42.7	41.0	39.4	38.2	37.6	37.1	36.9	36.9	37.0	37.1
27.5°	41.3	39.4	37.9	36.7	36.2	35.8	35.6	35.5	35.6	35.7
30°	39.6	37.7	36.2	35.2	34.7	34.3	34.1	34.1	34.2	34.3
32.5°	38.0	36.1	34.6	33.6	33.2	32.8	32.7	32.7	32.9	33.0
35°	36.3	34.5	33.0	32.0	31.6	31.3	31.4	31.4	31.6	31.7
37.5°	34.5	32.8	31.4	30.5	30.1	29.8	30.0	30.1	30.3	30.5
40°	32.8	31.0	29.7	28.9	28.5	28.4	28.7	28.9	29.2	29.3
42.5°	31.0	29.3	28.1	27.3	27.0	27.0	27.4	27.7	28.0	28.1
45°	29.2	27.6	26.4	25.7	25.5	25.6	26.1	26.4	26.9	27.0
47.5°	27.3	25.8	24.7	24.1	24.0	24.2	24.7	25.3	25.7	25.9
50°	25.5	24.1	23.0	22.5	22.5	22.8	23.5	24.1	24.6	24.8
52.5°	23.7	22.4	21.2	20.8	20.9	21.4	22.2	22.8	23.4	23.6
55°	21.9	20.5	19.6	19.2	19.4	19.9	20.7	21.5	22.1	22.3
57.5°	20.0	18.8	17.9	17.6	17.8	18.4	19.4	20.1	20.6	20.8
60°	18.2	16.9	16.2	16.0	16.3	16.9	17.9	18.5	19.0	19.2
62.5°	16.4	15.2	14.6	14.4	14.7	15.4	16.3	16.9	17.3	17.5
65°	14.5	13.5	12.9	12.8	13.1	13.8	14.7	15.1	15.4	15.6
67.5°	12.7	11.8	11.3	11.2	11.5	12.1	13.0	13.2	13.5	13.7
70°	10.9	10.1	9.6	9.6	9.9	10.5	11.2	11.3	11.5	11.6
72.5°	9.1	8.5	8.0	8.0	8.3	8.8	9.4	9.4	9.4	9.6
75°	7.4	6.8	6.5	6.5	6.7	7.1	7.5	7.4	7.4	7.5
77.5°	5.7	5.3	5.0	5.1	5.2	5.5	5.8	5.6	5.6	5.7
80°	4.1	3.7	3.6	3.7	3.8	3.9	4.1	4.0	3.8	3.9
82.5°	2.7	2.5	2.4	2.4	2.5	2.6	2.7	2.5	2.4	2.5
85°	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.4	1.4	1.5
87.5°	0.6	0.6	0.7	0.7	0.7	0.6	0.5	0.3	0.3	0.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)