

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-NL850-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-NL850-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture NIGHT Light w/
ASYMMETRIC Lens
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

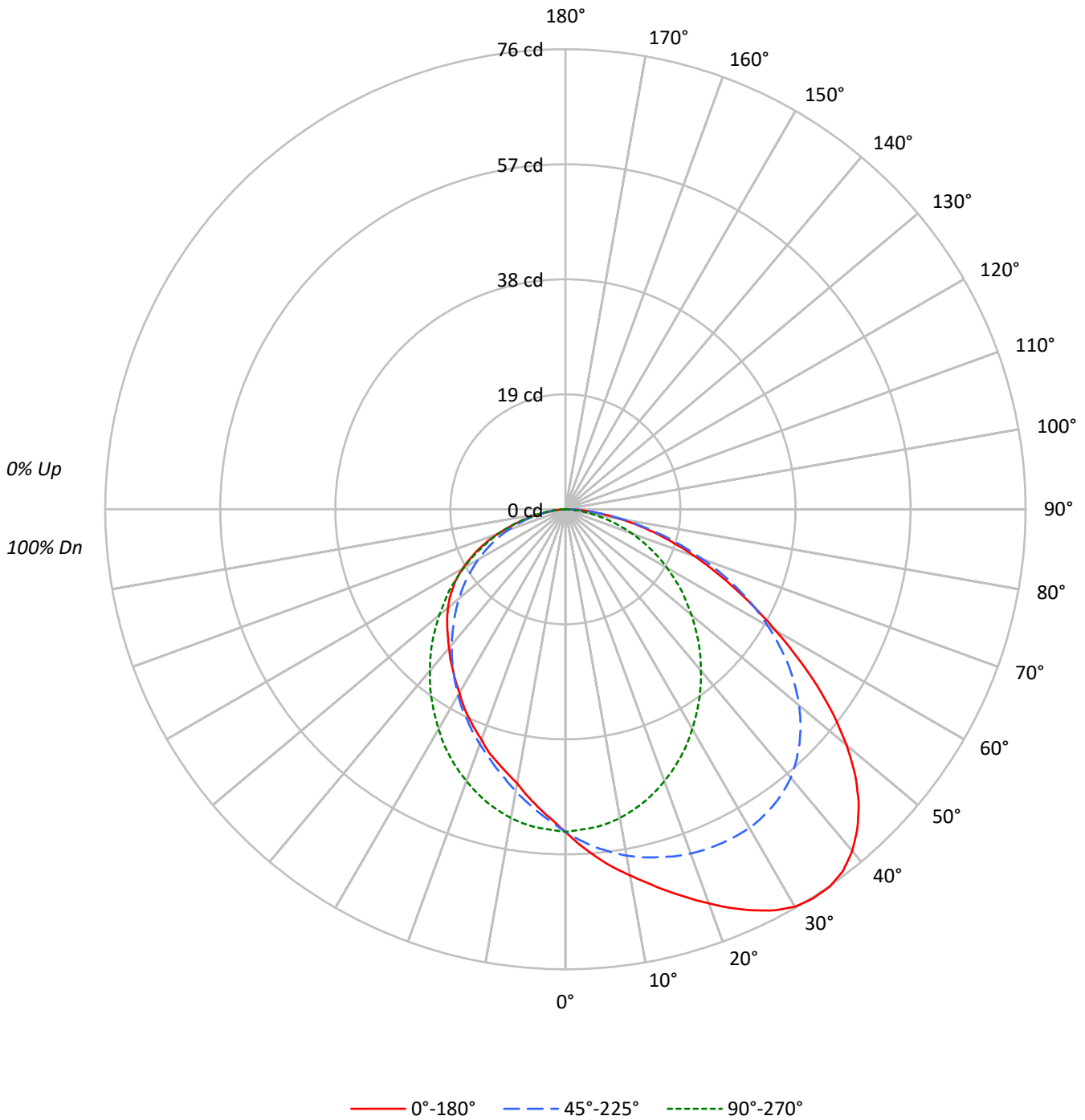
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 165.2 lumens
Efficiency: N/A
Efficacy: 47.2 lumens/watt
Spacing Criteria (0/90/45): 1.53 / 1.18 / 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				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°	513	513	513
5°	557	510	479
10°	600	506	450
15°	651	499	432
20°	710	490	415
25°	777	479	403
30°	843	466	389
35°	894	452	381
40°	926	437	376
45°	933	423	376
50°	908	407	379
55°	851	393	381
60°	772	374	377
65°	702	353	364
70°	642	329	335
75°	580	294	286
80°	510	244	222
85°	431	177	166



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.1	3.1
10°-20°	14.7	8.9
20°-30°	23.1	14.0
30°-40°	28.9	17.5
40°-50°	30.8	18.6
50°-60°	27.8	16.8
60°-70°	20.6	12.5
70°-80°	11.3	6.8
80°-90°	2.9	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°	42.9	26.0
0°-40°	71.8	43.5
0°-60°	130.4	78.9
0°-90°	165.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	165.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	53	53	53	53	53	
5°	58	56	53	50	50	6
15°	65	60	50	44	43	19
25°	73	61	45	38	38	34
35°	76	60	38	32	32	47
45°	68	55	31	26	28	53
55°	51	45	23	20	23	45
65°	31	32	16	13	16	31
75°	16	17	8	7	8	17
85°	4	4	2	2	2	5
90°	0	0	0	0	0	



TEST NUMBER: P
 CATALOG NUMBER: 4APN-X-X-NL850-UNV-ASY

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3
2.5°	55.5	55.4	55.2	55.2	55.0	54.7	54.5	54.5	54.2	53.5	53.0
5°	57.6	57.5	57.1	56.9	56.5	56.0	55.4	55.1	54.5	53.4	52.8
7.5°	59.6	59.4	59.0	58.5	57.8	57.1	56.2	55.6	54.5	53.2	52.4
10°	61.4	61.2	60.7	60.1	59.1	58.1	56.8	55.8	54.4	52.7	51.8
12.5°	63.3	63.1	62.4	61.6	60.3	58.9	57.2	55.9	54.2	52.1	51.0
15°	65.3	65.0	64.3	63.1	61.4	59.5	57.5	55.8	53.7	51.3	50.1
17.5°	67.3	67.0	66.0	64.6	62.4	60.1	57.6	55.4	53.0	50.4	49.0
20°	69.3	69.0	67.8	66.0	63.3	60.5	57.6	55.0	52.2	49.3	47.8
22.5°	71.3	71.0	69.5	67.3	64.1	60.8	57.4	54.4	51.3	48.1	46.5
25°	73.1	72.8	71.1	68.5	64.8	60.9	56.9	53.5	50.2	46.7	45.1
27.5°	74.7	74.3	72.6	69.7	65.5	60.9	56.4	52.5	48.9	45.3	43.6
30°	75.8	75.4	73.6	70.5	65.9	60.8	55.7	51.3	47.4	43.7	41.9
32.5°	76.2	76.0	74.1	70.9	66.0	60.4	54.8	50.0	45.9	42.0	40.2
35°	76.1	75.8	74.1	70.9	65.8	59.8	53.8	48.6	44.2	40.3	38.5
37.5°	75.3	75.0	73.4	70.3	65.2	59.0	52.5	47.0	42.5	38.5	36.7
40°	73.7	73.4	72.0	69.2	64.3	57.9	51.1	45.3	40.7	36.6	34.8
42.5°	71.4	71.1	70.0	67.4	62.9	56.4	49.5	43.4	38.7	34.8	33.0
45°	68.5	68.2	67.4	65.2	61.1	54.7	47.7	41.5	36.7	32.8	31.1
47.5°	64.9	64.6	64.2	62.5	58.9	52.7	45.7	39.4	34.6	30.9	29.1
50°	60.6	60.3	60.4	59.3	56.3	50.4	43.4	37.1	32.4	28.8	27.2
52.5°	55.8	55.6	56.1	55.6	53.3	47.8	41.0	34.9	30.2	26.8	25.2
55°	50.7	50.4	51.4	51.6	50.0	45.0	38.3	32.5	28.0	24.8	23.4
57.5°	45.3	45.1	46.4	47.1	46.4	41.9	35.6	30.1	25.7	22.7	21.3
60°	40.1	40.0	41.3	42.5	42.4	38.7	32.7	27.4	23.4	20.6	19.4
62.5°	35.3	35.1	36.4	37.8	38.3	35.3	29.9	24.9	21.1	18.6	17.5
65°	30.8	30.6	31.7	33.2	34.1	31.7	26.9	22.2	18.8	16.5	15.5
67.5°	26.6	26.6	27.4	28.7	29.8	28.0	23.8	19.6	16.4	14.5	13.6
70°	22.8	22.8	23.3	24.2	25.5	24.1	20.6	17.0	14.1	12.5	11.7
72.5°	19.1	19.3	19.5	20.2	21.6	20.3	17.5	14.3	11.9	10.5	9.8
75°	15.6	15.6	15.9	16.5	17.5	16.6	14.3	11.8	9.7	8.5	7.9
77.5°	12.3	12.3	12.5	12.9	13.7	13.0	11.3	9.4	7.6	6.6	6.2
80°	9.2	9.2	9.4	9.6	10.2	9.6	8.4	7.0	5.5	4.8	4.4
82.5°	6.4	6.5	6.4	6.7	7.0	6.5	5.8	4.8	3.7	3.2	2.9
85°	3.9	4.0	3.9	4.1	4.3	3.8	3.4	2.9	2.1	1.8	1.6
87.5°	2.0	2.0	2.0	2.1	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°	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3
2.5°	52.8	52.9	52.7	52.0	51.7	51.4	51.2	51.1	51.3	51.3
5°	52.3	52.2	51.7	50.7	50.3	49.7	49.5	49.4	49.7	49.6
7.5°	51.7	51.3	50.5	49.4	48.8	48.1	47.8	47.6	47.8	47.8
10°	51.0	50.3	49.3	48.0	47.3	46.5	46.2	45.9	46.0	46.0
12.5°	50.0	49.1	48.0	46.5	45.7	44.9	44.6	44.4	44.6	44.6
15°	49.0	47.8	46.5	45.0	44.2	43.5	43.3	43.1	43.3	43.3
17.5°	47.8	46.5	45.1	43.5	42.7	42.2	41.9	41.8	41.9	42.1
20°	46.5	45.0	43.5	42.0	41.3	40.8	40.5	40.4	40.6	40.5
22.5°	45.1	43.5	41.9	40.5	39.9	39.3	39.1	39.1	39.3	39.2
25°	43.6	41.9	40.3	39.0	38.4	37.9	37.7	37.7	37.8	37.9
27.5°	42.2	40.2	38.7	37.5	37.0	36.5	36.4	36.2	36.3	36.5
30°	40.4	38.6	37.0	36.0	35.5	35.0	34.9	34.8	34.9	35.0
32.5°	38.8	36.9	35.4	34.3	33.9	33.5	33.5	33.4	33.6	33.7
35°	37.1	35.2	33.7	32.7	32.3	32.0	32.0	32.1	32.3	32.4
37.5°	35.3	33.5	32.1	31.2	30.8	30.5	30.7	30.8	31.0	31.2
40°	33.5	31.7	30.4	29.6	29.2	29.0	29.3	29.5	29.8	29.9
42.5°	31.6	30.0	28.7	27.9	27.6	27.6	28.0	28.3	28.6	28.7
45°	29.8	28.2	26.9	26.3	26.0	26.2	26.6	27.0	27.4	27.6
47.5°	27.9	26.4	25.2	24.6	24.5	24.7	25.3	25.8	26.3	26.5
50°	26.1	24.7	23.5	22.9	22.9	23.3	24.0	24.6	25.2	25.3
52.5°	24.2	22.9	21.7	21.3	21.4	21.8	22.6	23.3	23.9	24.1
55°	22.3	21.0	20.0	19.6	19.8	20.4	21.2	22.0	22.6	22.7
57.5°	20.5	19.2	18.3	18.0	18.2	18.8	19.8	20.5	21.1	21.3
60°	18.6	17.3	16.6	16.3	16.6	17.3	18.3	18.9	19.5	19.6
62.5°	16.7	15.5	14.9	14.7	15.0	15.7	16.7	17.2	17.7	17.8
65°	14.8	13.8	13.2	13.0	13.4	14.1	15.0	15.5	15.8	16.0
67.5°	13.0	12.1	11.5	11.4	11.8	12.4	13.2	13.5	13.8	14.0
70°	11.1	10.3	9.8	9.8	10.1	10.7	11.4	11.5	11.7	11.9
72.5°	9.3	8.7	8.2	8.2	8.5	9.0	9.6	9.6	9.6	9.8
75°	7.6	7.0	6.6	6.7	6.9	7.3	7.7	7.6	7.6	7.7
77.5°	5.9	5.4	5.2	5.2	5.3	5.6	5.9	5.8	5.7	5.8
80°	4.2	3.8	3.7	3.7	3.8	4.0	4.2	4.1	3.9	4.0
82.5°	2.8	2.5	2.5	2.5	2.6	2.7	2.7	2.5	2.5	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	0.4	0.4	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)