

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-RL930-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-RL930-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture READING Light w/
ASYMMETRIC Lens
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

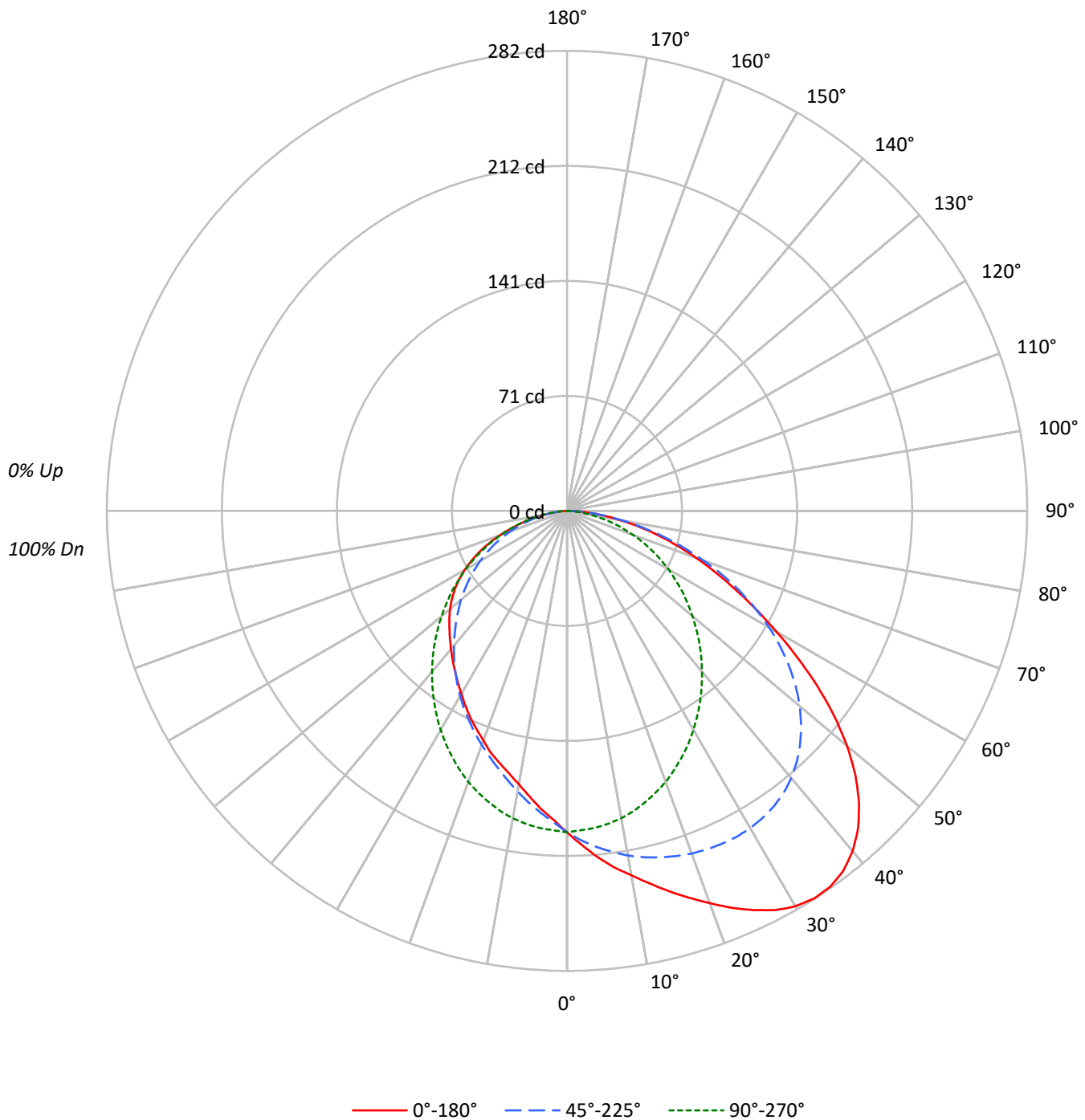
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 610.2 lumens
Efficiency: N/A
Efficacy: 40.4 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): 15.1
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





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84		
2	99	90	83	78	96	88	82	77	85	80	75	82	77	73	79	75	72	69		
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58		
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	49		
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43		
6	69	56	47	40	68	55	46	40	53	46	40	51	45	39	50	44	39	37		
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33		
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29		
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26		
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	1897	1897	1897
5°	2057	1885	1771
10°	2217	1870	1662
15°	2405	1843	1594
20°	2622	1811	1535
25°	2868	1769	1487
30°	3112	1722	1440
35°	3305	1671	1408
40°	3422	1617	1390
45°	3446	1562	1387
50°	3355	1502	1402
55°	3142	1449	1410
60°	2855	1382	1396
65°	2590	1308	1342
70°	2370	1213	1233
75°	2150	1090	1060
80°	1879	909	815
85°	1580	663	608



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	18.7	3.1
10°-20°	54.4	8.9
20°-30°	85.2	14.0
30°-40°	106.9	17.5
40°-50°	113.8	18.6
50°-60°	102.7	16.8
60°-70°	76.0	12.5
70°-80°	41.7	6.8
80°-90°	10.7	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°	158.4	26.0
0°-40°	265.2	43.5
0°-60°	481.7	78.9
0°-90°	610.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	610.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	197	197	197	197	197	
5°	213	207	195	186	183	21
15°	241	220	185	163	160	69
25°	270	225	166	142	140	125
35°	281	221	142	119	120	175
45°	253	202	115	96	102	194
55°	187	166	86	73	84	167
65°	114	117	57	50	59	113
75°	58	61	29	25	28	61
85°	14	14	6	6	6	17
90°	0	0	0	0	0	

TEST NUMBER: P

CATALOG NUMBER: 4APN-X-X-RL930-UNV-ASY

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	197.0	197.0	197.0	197.0	197.0	197.0	197.0	197.0	197.0	197.0	197.0
2.5°	204.9	204.5	204.0	203.9	203.2	202.2	201.3	201.3	200.2	197.7	195.9
5°	212.9	212.3	211.1	210.1	208.6	206.7	204.9	203.7	201.2	197.4	195.1
7.5°	220.3	219.5	218.0	216.1	213.6	210.8	207.8	205.3	201.5	196.4	193.4
10°	226.8	226.1	224.2	221.9	218.4	214.5	210.0	206.3	201.1	194.8	191.3
12.5°	233.9	233.2	230.6	227.5	222.7	217.5	211.5	206.5	200.1	192.5	188.5
15°	241.3	240.3	237.4	233.3	226.8	219.8	212.5	206.0	198.4	189.6	184.9
17.5°	248.6	247.6	244.0	238.7	230.6	221.9	212.9	204.9	195.9	186.1	181.0
20°	255.9	255.0	250.4	243.7	233.9	223.5	212.8	203.2	193.0	182.2	176.8
22.5°	263.3	262.2	256.6	248.5	236.7	224.5	211.9	200.8	189.4	177.6	171.8
25°	270.0	268.9	262.7	253.2	239.6	225.0	210.4	197.6	185.3	172.6	166.5
27.5°	275.9	274.5	268.1	257.6	242.1	225.2	208.3	193.9	180.6	167.2	161.0
30°	279.9	278.7	271.9	260.6	243.6	224.6	205.7	189.6	175.2	161.4	154.9
32.5°	281.7	280.6	273.9	262.1	243.8	223.1	202.6	184.9	169.5	155.2	148.7
35°	281.2	280.2	273.8	261.9	243.1	221.0	198.6	179.4	163.5	148.8	142.2
37.5°	278.1	276.9	271.1	259.7	241.0	218.0	194.1	173.5	156.9	142.3	135.5
40°	272.3	271.1	266.1	255.5	237.4	213.8	188.9	167.2	150.2	135.4	128.7
42.5°	264.0	262.7	258.7	249.1	232.3	208.4	183.0	160.5	143.1	128.7	121.8
45°	253.1	251.8	249.1	241.0	225.7	202.0	176.3	153.2	135.6	121.2	114.7
47.5°	239.7	238.5	237.2	230.9	217.5	194.6	168.7	145.4	127.8	114.2	107.5
50°	224.0	222.9	223.3	219.0	208.0	186.1	160.5	137.2	119.8	106.3	100.3
52.5°	206.3	205.4	207.4	205.5	197.0	176.7	151.7	128.8	111.7	98.9	93.1
55°	187.2	186.2	190.0	190.5	184.7	166.2	141.6	120.1	103.4	91.6	86.3
57.5°	167.5	166.7	171.5	174.2	171.2	155.0	131.5	111.1	94.9	84.0	78.7
60°	148.3	147.7	152.7	157.1	156.8	143.1	121.0	101.4	86.4	76.3	71.8
62.5°	130.3	129.6	134.6	139.8	141.6	130.4	110.5	91.8	77.9	68.6	64.6
65°	113.7	113.0	117.2	122.6	126.0	117.1	99.3	81.9	69.3	60.8	57.4
67.5°	98.5	98.5	101.1	106.1	110.2	103.5	87.8	72.5	60.5	53.6	50.2
70°	84.2	84.1	86.1	89.6	94.3	88.9	76.1	62.7	52.1	46.1	43.1
72.5°	70.7	71.3	72.0	74.7	79.7	75.0	64.5	53.0	44.0	38.6	36.1
75°	57.8	57.7	58.8	61.1	64.8	61.3	53.0	43.5	35.9	31.5	29.3
77.5°	45.5	45.4	46.3	47.7	50.8	48.0	41.8	34.7	27.9	24.3	22.8
80°	33.9	33.9	34.7	35.5	37.7	35.5	31.2	26.0	20.5	17.7	16.4
82.5°	23.6	24.0	23.7	24.7	26.0	24.1	21.4	17.8	13.6	11.7	10.8
85°	14.3	14.7	14.3	15.1	15.7	14.1	12.7	10.6	7.9	6.6	6.0
87.5°	7.4	7.3	7.2	7.6	7.8	6.8	6.0	5.1	3.5	2.7	2.3
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°	197.0	197.0	197.0	197.0	197.0	197.0	197.0	197.0	197.0	197.0
2.5°	194.9	195.4	194.6	192.0	190.9	189.8	189.3	188.8	189.7	189.5
5°	193.3	192.7	190.8	187.4	185.7	183.8	182.9	182.3	183.6	183.3
7.5°	191.1	189.5	186.7	182.6	180.3	177.8	176.6	175.9	176.7	176.5
10°	188.3	185.7	182.3	177.3	174.6	171.9	170.5	169.5	170.1	170.0
12.5°	184.9	181.4	177.2	171.7	168.9	166.1	164.9	164.1	164.9	164.7
15°	181.0	176.8	172.0	166.3	163.3	160.7	159.8	159.3	159.9	159.9
17.5°	176.7	171.7	166.5	160.7	157.9	155.9	155.0	154.6	154.9	155.4
20°	171.9	166.4	160.7	155.1	152.7	150.6	149.8	149.4	150.1	149.8
22.5°	166.6	160.8	154.9	149.6	147.4	145.3	144.5	144.3	145.1	144.8
25°	161.0	154.7	148.9	144.1	141.9	140.2	139.4	139.2	139.6	140.0
27.5°	155.8	148.7	142.9	138.6	136.7	135.0	134.3	133.9	134.2	134.7
30°	149.4	142.5	136.8	132.9	131.0	129.4	128.9	128.6	129.1	129.5
32.5°	143.4	136.4	130.8	126.9	125.3	123.7	123.6	123.5	124.0	124.5
35°	136.9	130.1	124.6	121.0	119.4	118.1	118.4	118.6	119.3	119.8
37.5°	130.4	123.7	118.5	115.1	113.7	112.6	113.4	113.7	114.6	115.1
40°	123.7	117.1	112.2	109.2	107.8	107.3	108.3	109.1	110.1	110.6
42.5°	116.9	110.8	105.9	103.2	101.9	101.9	103.3	104.4	105.7	106.2
45°	110.1	104.1	99.5	97.0	96.1	96.8	98.4	99.8	101.4	101.9
47.5°	103.2	97.4	93.2	90.9	90.4	91.4	93.4	95.4	97.2	97.8
50°	96.4	91.1	86.9	84.8	84.8	86.0	88.6	91.0	93.0	93.6
52.5°	89.5	84.5	80.2	78.6	78.9	80.6	83.6	86.2	88.3	89.0
55°	82.5	77.6	73.8	72.5	73.1	75.2	78.3	81.2	83.3	84.0
57.5°	75.6	70.9	67.5	66.5	67.3	69.6	73.2	75.7	77.9	78.5
60°	68.7	63.9	61.2	60.4	61.5	63.9	67.5	69.9	71.9	72.5
62.5°	61.8	57.3	55.0	54.2	55.5	58.1	61.6	63.7	65.3	65.9
65°	54.8	50.8	48.7	48.2	49.5	52.0	55.4	57.2	58.3	58.9
67.5°	47.9	44.5	42.5	42.1	43.5	45.7	48.9	49.9	50.9	51.6
70°	41.1	38.1	36.4	36.1	37.3	39.5	42.2	42.7	43.2	43.8
72.5°	34.4	32.0	30.3	30.2	31.3	33.1	35.3	35.4	35.5	36.1
75°	27.9	25.7	24.5	24.7	25.3	26.8	28.5	28.0	28.1	28.5
77.5°	21.7	19.9	19.0	19.2	19.7	20.7	21.9	21.3	21.0	21.4
80°	15.6	14.1	13.8	13.8	14.2	14.9	15.5	15.1	14.4	14.7
82.5°	10.3	9.3	9.1	9.2	9.5	9.9	10.0	9.3	9.1	9.4
85°	5.7	5.3	5.3	5.5	5.6	5.7	5.7	5.3	5.3	5.5
87.5°	2.3	2.3	2.5	2.8	2.6	2.3	1.9	1.3	1.3	1.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)