

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-RL935-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-RL935-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture READING Light w/
ASYMMETRIC Lens
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

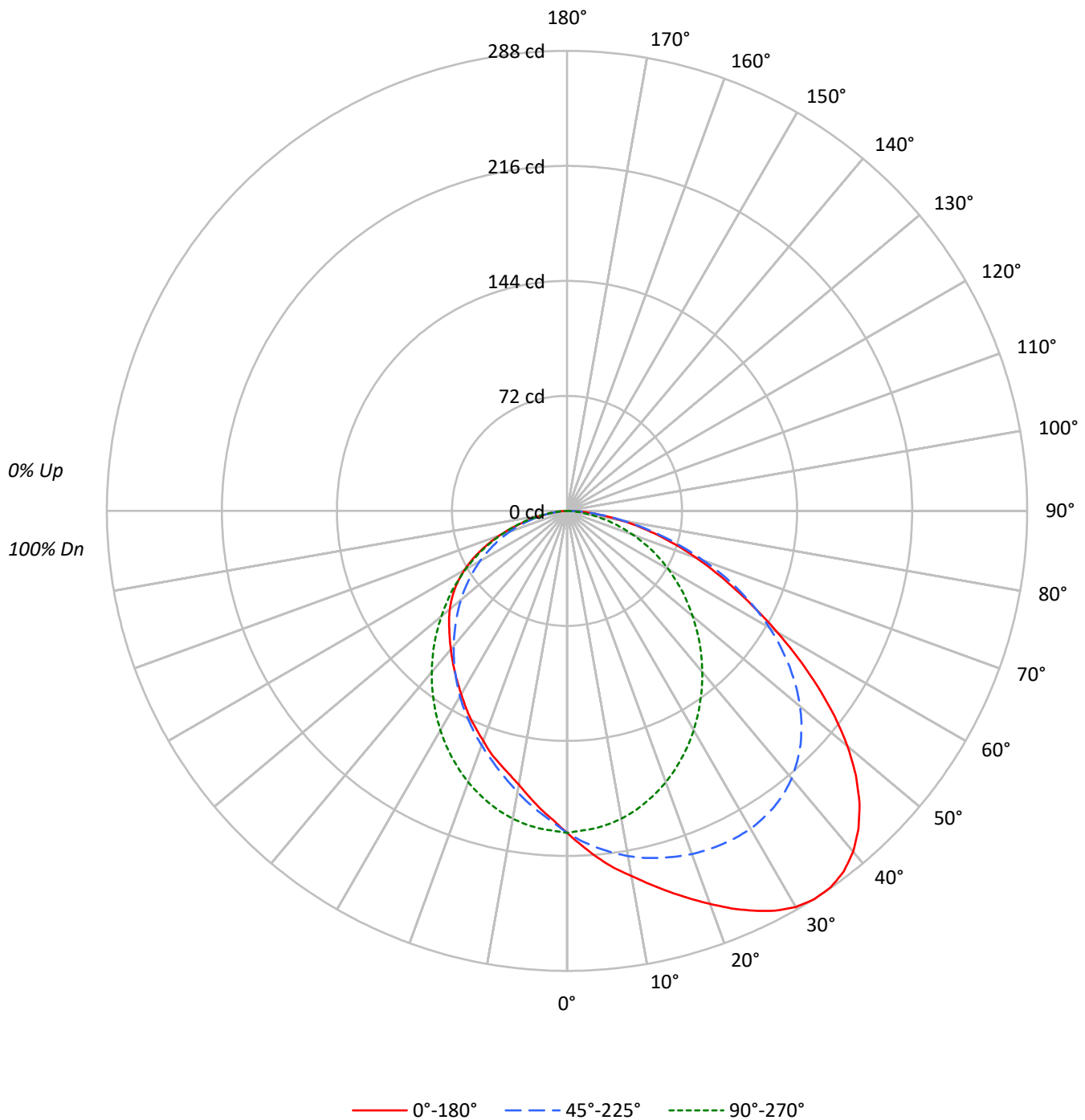
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 624.2 lumens
Efficiency: N/A
Efficacy: 41.3 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

TEST NUMBER: P
CATALOG NUMBER: 4APN-X-X-RL935-UNV-ASY

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	1940	1940	1940
5°	2105	1928	1812
10°	2268	1913	1700
15°	2460	1886	1631
20°	2682	1852	1570
25°	2934	1809	1521
30°	3183	1762	1472
35°	3381	1709	1441
40°	3501	1655	1421
45°	3525	1598	1419
50°	3433	1537	1435
55°	3214	1482	1443
60°	2921	1415	1429
65°	2649	1337	1374
70°	2424	1241	1261
75°	2198	1116	1086
80°	1924	931	837
85°	1624	674	619

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	19.1	3.1
10°-20°	55.7	8.9
20°-30°	87.2	14.0
30°-40°	109.3	17.5
40°-50°	116.4	18.6
50°-60°	105.1	16.8
60°-70°	77.8	12.5
70°-80°	42.7	6.8
80°-90°	11.0	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°	162.0	26.0
0°-40°	271.3	43.5
0°-60°	492.8	78.9
0°-90°	624.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	624.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	202	202	202	202	202	
5°	218	212	200	190	188	21
15°	247	225	189	167	164	70
25°	276	230	170	145	143	128
35°	288	226	145	122	123	179
45°	259	207	117	98	104	199
55°	192	170	88	75	86	171
65°	116	120	59	51	60	116
75°	59	63	30	26	29	63
85°	15	14	6	6	6	17
90°	0	0	0	0	0	

TEST NUMBER: P

CATALOG NUMBER: 4APN-X-X-RL935-UNV-ASY

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	201.5	201.5	201.5	201.5	201.5	201.5	201.5	201.5	201.5	201.5	201.5
2.5°	209.6	209.2	208.7	208.6	207.8	206.8	205.9	205.9	204.8	202.3	200.4
5°	217.8	217.2	215.9	214.9	213.4	211.5	209.6	208.4	205.8	201.9	199.5
7.5°	225.4	224.6	223.0	221.1	218.5	215.7	212.5	210.1	206.2	200.9	197.9
10°	232.0	231.3	229.4	227.0	223.4	219.4	214.8	211.0	205.7	199.3	195.7
12.5°	239.3	238.5	235.9	232.8	227.8	222.5	216.4	211.2	204.7	196.9	192.8
15°	246.8	245.8	242.9	238.6	232.0	224.9	217.3	210.7	202.9	194.0	189.2
17.5°	254.3	253.3	249.6	244.2	235.9	227.0	217.8	209.6	200.4	190.4	185.2
20°	261.8	260.8	256.1	249.3	239.3	228.6	217.7	207.8	197.5	186.4	180.8
22.5°	269.4	268.2	262.5	254.2	242.1	229.7	216.8	205.4	193.7	181.7	175.8
25°	276.2	275.1	268.8	259.0	245.1	230.2	215.2	202.1	189.6	176.6	170.3
27.5°	282.2	280.8	274.2	263.5	247.7	230.3	213.1	198.4	184.8	171.0	164.7
30°	286.3	285.1	278.1	266.6	249.2	229.8	210.5	194.0	179.2	165.1	158.5
32.5°	288.2	287.1	280.2	268.1	249.4	228.3	207.2	189.1	173.4	158.8	152.1
35°	287.7	286.6	280.0	267.9	248.7	226.1	203.2	183.5	167.2	152.2	145.4
37.5°	284.5	283.3	277.3	265.6	246.5	223.0	198.5	177.5	160.5	145.5	138.7
40°	278.6	277.3	272.2	261.4	242.9	218.8	193.2	171.0	153.6	138.5	131.7
42.5°	270.0	268.7	264.6	254.8	237.6	213.2	187.2	164.2	146.4	131.7	124.6
45°	258.9	257.6	254.9	246.5	230.8	206.7	180.3	156.7	138.7	124.0	117.4
47.5°	245.2	244.0	242.7	236.2	222.5	199.1	172.6	148.8	130.8	116.8	110.0
50°	229.2	228.0	228.4	224.1	212.8	190.4	164.2	140.4	122.6	108.8	102.6
52.5°	211.0	210.1	212.1	210.2	201.5	180.7	155.1	131.8	114.2	101.1	95.3
55°	191.5	190.5	194.3	194.9	188.9	170.0	144.9	122.8	105.8	93.7	88.3
57.5°	171.4	170.5	175.4	178.2	175.2	158.5	134.5	113.6	97.1	85.9	80.5
60°	151.7	151.1	156.2	160.7	160.4	146.4	123.7	103.7	88.4	78.0	73.5
62.5°	133.3	132.5	137.7	143.0	144.9	133.4	113.1	93.9	79.7	70.2	66.1
65°	116.3	115.5	119.9	125.4	128.9	119.8	101.5	83.8	70.9	62.2	58.7
67.5°	100.7	100.7	103.5	108.5	112.7	105.9	89.8	74.2	61.9	54.8	51.4
70°	86.1	86.1	88.0	91.6	96.5	90.9	77.9	64.1	53.3	47.1	44.1
72.5°	72.3	72.9	73.6	76.4	81.5	76.7	66.0	54.2	45.0	39.5	36.9
75°	59.1	59.1	60.1	62.5	66.3	62.7	54.2	44.5	36.7	32.2	30.0
77.5°	46.6	46.5	47.4	48.8	51.9	49.1	42.7	35.5	28.6	24.8	23.3
80°	34.7	34.7	35.5	36.3	38.6	36.4	31.9	26.6	21.0	18.1	16.8
82.5°	24.1	24.6	24.3	25.3	26.6	24.7	21.9	18.2	13.9	11.9	11.1
85°	14.7	15.1	14.7	15.5	16.1	14.4	13.0	10.9	8.0	6.7	6.1
87.5°	7.5	7.5	7.4	7.8	8.0	7.0	6.1	5.2	3.6	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



TEST NUMBER: P

CATALOG NUMBER: 4APN-X-X-RL935-UNV-ASY

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	201.5	201.5	201.5	201.5	201.5	201.5	201.5	201.5	201.5	201.5
2.5°	199.4	199.9	199.1	196.4	195.3	194.2	193.7	193.2	194.1	193.8
5°	197.7	197.1	195.2	191.7	189.9	188.0	187.1	186.5	187.8	187.5
7.5°	195.5	193.8	191.0	186.8	184.5	181.9	180.7	179.9	180.7	180.6
10°	192.7	189.9	186.4	181.4	178.7	175.8	174.4	173.4	174.0	173.9
12.5°	189.1	185.5	181.3	175.6	172.8	169.9	168.6	167.9	168.7	168.5
15°	185.1	180.8	175.9	170.1	167.1	164.4	163.5	162.9	163.6	163.6
17.5°	180.7	175.7	170.3	164.4	161.5	159.4	158.5	158.1	158.5	158.9
20°	175.8	170.2	164.4	158.7	156.2	154.1	153.2	152.8	153.6	153.2
22.5°	170.5	164.5	158.5	153.1	150.8	148.7	147.9	147.6	148.4	148.1
25°	164.7	158.3	152.3	147.4	145.2	143.4	142.6	142.4	142.8	143.2
27.5°	159.4	152.1	146.2	141.8	139.8	138.1	137.4	137.0	137.3	137.8
30°	152.8	145.8	140.0	135.9	134.0	132.4	131.9	131.5	132.0	132.4
32.5°	146.7	139.6	133.8	129.8	128.1	126.6	126.5	126.3	126.9	127.4
35°	140.1	133.1	127.5	123.7	122.2	120.8	121.1	121.3	122.0	122.6
37.5°	133.4	126.6	121.2	117.8	116.3	115.2	116.0	116.3	117.2	117.8
40°	126.6	119.8	114.8	111.7	110.2	109.7	110.8	111.6	112.6	113.1
42.5°	119.6	113.3	108.3	105.5	104.3	104.3	105.7	106.8	108.1	108.6
45°	112.6	106.5	101.8	99.2	98.3	99.0	100.6	102.1	103.7	104.2
47.5°	105.6	99.6	95.3	93.0	92.5	93.5	95.6	97.6	99.4	100.1
50°	98.6	93.2	88.9	86.7	86.7	88.0	90.6	93.1	95.1	95.8
52.5°	91.5	86.4	82.0	80.4	80.8	82.5	85.6	88.1	90.4	91.0
55°	84.4	79.4	75.5	74.2	74.8	76.9	80.1	83.1	85.2	86.0
57.5°	77.4	72.6	69.1	68.0	68.8	71.2	74.9	77.4	79.7	80.3
60°	70.2	65.4	62.6	61.8	62.9	65.4	69.1	71.5	73.6	74.2
62.5°	63.2	58.6	56.2	55.5	56.7	59.4	63.0	65.2	66.8	67.4
65°	56.1	52.0	49.8	49.3	50.6	53.2	56.7	58.5	59.6	60.3
67.5°	49.0	45.6	43.5	43.1	44.5	46.8	50.0	51.0	52.1	52.8
70°	42.1	38.9	37.2	36.9	38.2	40.4	43.2	43.7	44.2	44.8
72.5°	35.2	32.7	31.0	30.9	32.1	33.9	36.1	36.2	36.4	36.9
75°	28.6	26.3	25.0	25.3	25.9	27.4	29.2	28.7	28.7	29.2
77.5°	22.2	20.4	19.5	19.6	20.1	21.2	22.4	21.8	21.5	21.9
80°	16.0	14.4	14.1	14.2	14.5	15.2	15.9	15.4	14.7	15.1
82.5°	10.5	9.5	9.4	9.4	9.7	10.1	10.3	9.5	9.4	9.6
85°	5.8	5.4	5.4	5.6	5.7	5.8	5.8	5.4	5.5	5.6
87.5°	2.3	2.3	2.6	2.8	2.7	2.3	2.0	1.3	1.3	1.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)