

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-RL850-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-RL850-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture READING Light w/
ASYMMETRIC Lens
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

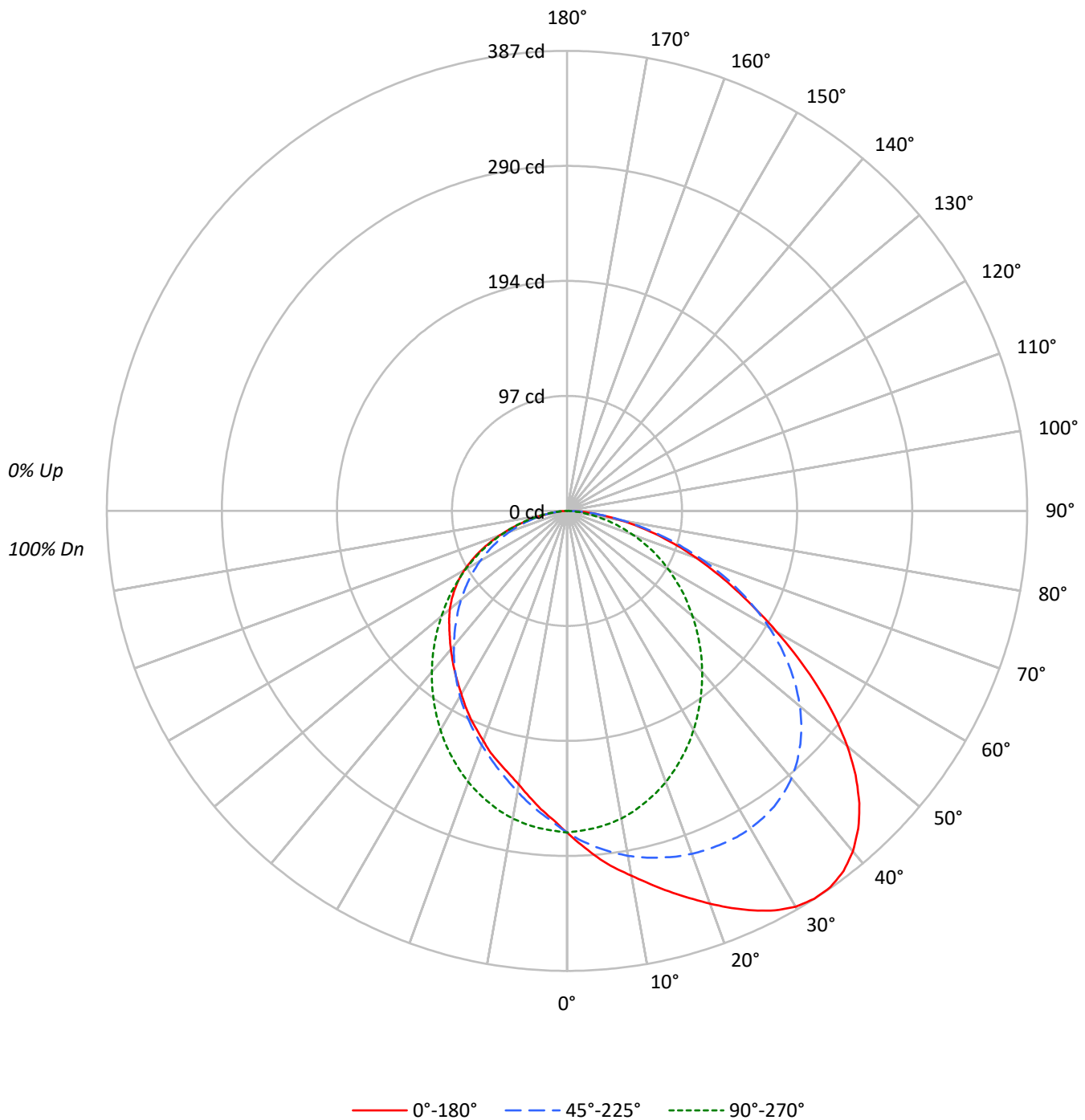
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 838.2 lumens
Efficiency: N/A
Efficacy: 55.5 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-RL850-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°	2605	2605	2605
5°	2827	2589	2433
10°	3045	2569	2284
15°	3303	2532	2190
20°	3602	2488	2108
25°	3940	2429	2043
30°	4274	2366	1977
35°	4540	2295	1935
40°	4700	2222	1909
45°	4734	2146	1905
50°	4609	2064	1926
55°	4315	1991	1937
60°	3924	1900	1920
65°	3558	1797	1845
70°	3257	1666	1695
75°	2953	1499	1454
80°	2584	1253	1120
85°	2176	906	840



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.7	3.1
10°-20°	74.7	8.9
20°-30°	117.1	14.0
30°-40°	146.8	17.5
40°-50°	156.3	18.6
50°-60°	141.1	16.8
60°-70°	104.4	12.5
70°-80°	57.3	6.8
80°-90°	14.7	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°	217.5	26.0
0°-40°	364.3	43.5
0°-60°	661.7	78.9
0°-90°	838.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	838.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	271	271	271	271	271	
5°	292	284	268	255	252	28
15°	331	302	254	224	220	95
25°	371	309	229	195	192	172
35°	386	304	195	164	165	241
45°	348	278	158	132	140	267
55°	257	228	119	100	115	229
65°	156	161	79	68	81	156
75°	79	84	40	35	39	84
85°	20	19	8	8	8	23
90°	0	0	0	0	0	

TEST NUMBER: P

CATALOG NUMBER: 4APN-X-X-RL850-UNV-ASY

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	270.6	270.6	270.6	270.6	270.6	270.6	270.6	270.6	270.6	270.6	270.6
2.5°	281.5	280.9	280.3	280.1	279.1	277.7	276.5	276.5	275.0	271.6	269.2
5°	292.5	291.6	290.0	288.6	286.5	283.9	281.4	279.8	276.4	271.2	267.9
7.5°	302.6	301.5	299.4	296.8	293.4	289.6	285.4	282.1	276.8	269.8	265.7
10°	311.5	310.5	308.0	304.9	300.0	294.6	288.4	283.4	276.3	267.6	262.8
12.5°	321.3	320.3	316.8	312.5	305.9	298.7	290.5	283.6	274.8	264.4	258.9
15°	331.4	330.1	326.1	320.4	311.5	302.0	291.8	282.9	272.5	260.5	254.0
17.5°	341.4	340.1	335.1	327.9	316.8	304.9	292.4	281.4	269.2	255.7	248.7
20°	351.6	350.2	343.9	334.8	321.3	307.0	292.3	279.1	265.1	250.2	242.8
22.5°	361.7	360.1	352.5	341.3	325.1	308.4	291.1	275.8	260.1	244.0	236.0
25°	370.9	369.4	360.9	347.8	329.1	309.1	289.0	271.4	254.6	237.1	228.7
27.5°	378.9	377.0	368.3	353.8	332.5	309.3	286.2	266.4	248.1	229.7	221.1
30°	384.5	382.8	373.5	358.0	334.6	308.5	282.6	260.5	240.7	221.7	212.8
32.5°	386.9	385.5	376.3	360.0	334.9	306.5	278.3	253.9	232.9	213.2	204.2
35°	386.3	384.8	376.0	359.7	333.9	303.6	272.8	246.5	224.6	204.4	195.3
37.5°	382.0	380.4	372.4	356.7	331.0	299.4	266.6	238.3	215.5	195.4	186.2
40°	374.0	372.4	365.5	351.0	326.1	293.7	259.5	229.7	206.3	186.0	176.8
42.5°	362.6	360.8	355.3	342.1	319.1	286.3	251.4	220.4	196.5	176.8	167.3
45°	347.7	345.9	342.2	331.0	310.0	277.5	242.1	210.4	186.3	166.5	157.6
47.5°	329.2	327.7	325.9	317.2	298.7	267.4	231.8	199.8	175.6	156.8	147.7
50°	307.7	306.2	306.7	300.9	285.7	255.7	220.4	188.5	164.6	146.0	137.8
52.5°	283.4	282.2	284.8	282.3	270.6	242.7	208.3	177.0	153.4	135.8	127.9
55°	257.1	255.8	260.9	261.7	253.7	228.3	194.5	164.9	142.0	125.8	118.6
57.5°	230.1	229.0	235.6	239.2	235.2	212.9	180.6	152.6	130.4	115.3	108.1
60°	203.8	202.9	209.8	215.8	215.3	196.5	166.2	139.2	118.7	104.8	98.7
62.5°	179.0	178.0	184.8	192.0	194.5	179.1	151.8	126.1	107.0	94.2	88.8
65°	156.2	155.2	161.0	168.4	173.1	160.8	136.4	112.6	95.2	83.5	78.9
67.5°	135.2	135.2	138.9	145.7	151.4	142.1	120.6	99.7	83.1	73.6	69.0
70°	115.7	115.6	118.2	123.0	129.6	122.1	104.5	86.1	71.6	63.3	59.2
72.5°	97.1	97.9	98.9	102.5	109.4	103.0	88.6	72.7	60.4	53.1	49.6
75°	79.4	79.3	80.7	84.0	89.0	84.2	72.7	59.7	49.3	43.3	40.3
77.5°	62.5	62.4	63.6	65.5	69.7	66.0	57.4	47.7	38.4	33.4	31.3
80°	46.6	46.6	47.7	48.7	51.8	48.8	42.8	35.7	28.1	24.2	22.6
82.5°	32.4	33.0	32.6	33.9	35.7	33.1	29.4	24.5	18.7	16.0	14.9
85°	19.7	20.2	19.7	20.8	21.6	19.4	17.5	14.6	10.8	9.0	8.2
87.5°	10.1	10.0	9.9	10.5	10.7	9.3	8.2	7.0	4.8	3.7	3.1
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-RL850-UNV-ASY

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	270.6	270.6	270.6	270.6	270.6	270.6	270.6	270.6	270.6	270.6
2.5°	267.7	268.4	267.4	263.7	262.3	260.7	260.0	259.4	260.6	260.3
5°	265.5	264.7	262.1	257.5	255.0	252.5	251.2	250.5	252.1	251.8
7.5°	262.5	260.3	256.5	250.8	247.7	244.2	242.6	241.6	242.7	242.5
10°	258.7	255.0	250.4	243.6	239.9	236.1	234.2	232.8	233.7	233.6
12.5°	253.9	249.1	243.5	235.8	232.0	228.1	226.4	225.4	226.6	226.2
15°	248.6	242.8	236.2	228.4	224.3	220.8	219.5	218.8	219.7	219.7
17.5°	242.7	235.9	228.7	220.8	216.9	214.1	212.9	212.3	212.8	213.4
20°	236.1	228.6	220.8	213.1	209.8	206.9	205.8	205.2	206.2	205.8
22.5°	228.9	220.9	212.8	205.5	202.5	199.6	198.5	198.2	199.3	198.9
25°	221.2	212.5	204.5	198.0	195.0	192.5	191.5	191.2	191.7	192.3
27.5°	214.0	204.2	196.3	190.4	187.7	185.4	184.5	184.0	184.4	185.1
30°	205.2	195.7	188.0	182.5	180.0	177.7	177.1	176.6	177.3	177.8
32.5°	197.0	187.4	179.6	174.3	172.1	169.9	169.8	169.6	170.4	171.1
35°	188.1	178.7	171.2	166.2	164.1	162.3	162.6	162.9	163.8	164.6
37.5°	179.1	169.9	162.7	158.2	156.2	154.7	155.7	156.2	157.4	158.2
40°	169.9	160.8	154.2	150.0	148.0	147.4	148.8	149.8	151.3	151.9
42.5°	160.6	152.1	145.5	141.7	140.0	140.0	141.9	143.5	145.1	145.8
45°	151.3	143.0	136.7	133.2	132.0	132.9	135.1	137.1	139.2	139.9
47.5°	141.8	133.8	128.0	124.9	124.2	125.6	128.3	131.0	133.5	134.4
50°	132.4	125.1	119.3	116.4	116.4	118.1	121.7	125.0	127.7	128.6
52.5°	122.9	116.0	110.1	108.0	108.4	110.8	114.9	118.3	121.3	122.2
55°	113.3	106.5	101.4	99.7	100.4	103.3	107.6	111.6	114.4	115.4
57.5°	103.9	97.4	92.8	91.3	92.4	95.6	100.5	104.0	107.0	107.9
60°	94.3	87.8	84.1	83.0	84.4	87.8	92.8	96.0	98.8	99.7
62.5°	84.9	78.7	75.5	74.5	76.2	79.7	84.6	87.5	89.6	90.5
65°	75.3	69.8	66.8	66.2	68.0	71.4	76.1	78.5	80.1	81.0
67.5°	65.8	61.2	58.4	57.8	59.7	62.8	67.2	68.5	70.0	70.8
70°	56.5	52.3	49.9	49.6	51.3	54.3	57.9	58.6	59.4	60.2
72.5°	47.3	43.9	41.6	41.5	43.0	45.5	48.5	48.6	48.8	49.6
75°	38.4	35.4	33.6	33.9	34.8	36.8	39.1	38.5	38.6	39.1
77.5°	29.8	27.4	26.1	26.4	27.0	28.5	30.0	29.3	28.8	29.4
80°	21.5	19.4	18.9	19.0	19.5	20.5	21.4	20.7	19.8	20.2
82.5°	14.1	12.8	12.6	12.7	13.0	13.6	13.8	12.8	12.6	12.9
85°	7.8	7.2	7.2	7.6	7.7	7.8	7.8	7.2	7.3	7.6
87.5°	3.1	3.1	3.4	3.8	3.6	3.1	2.7	1.8	1.8	2.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)