

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-RL950-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-RL950-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture READING Light w/
ASYMMETRIC Lens
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

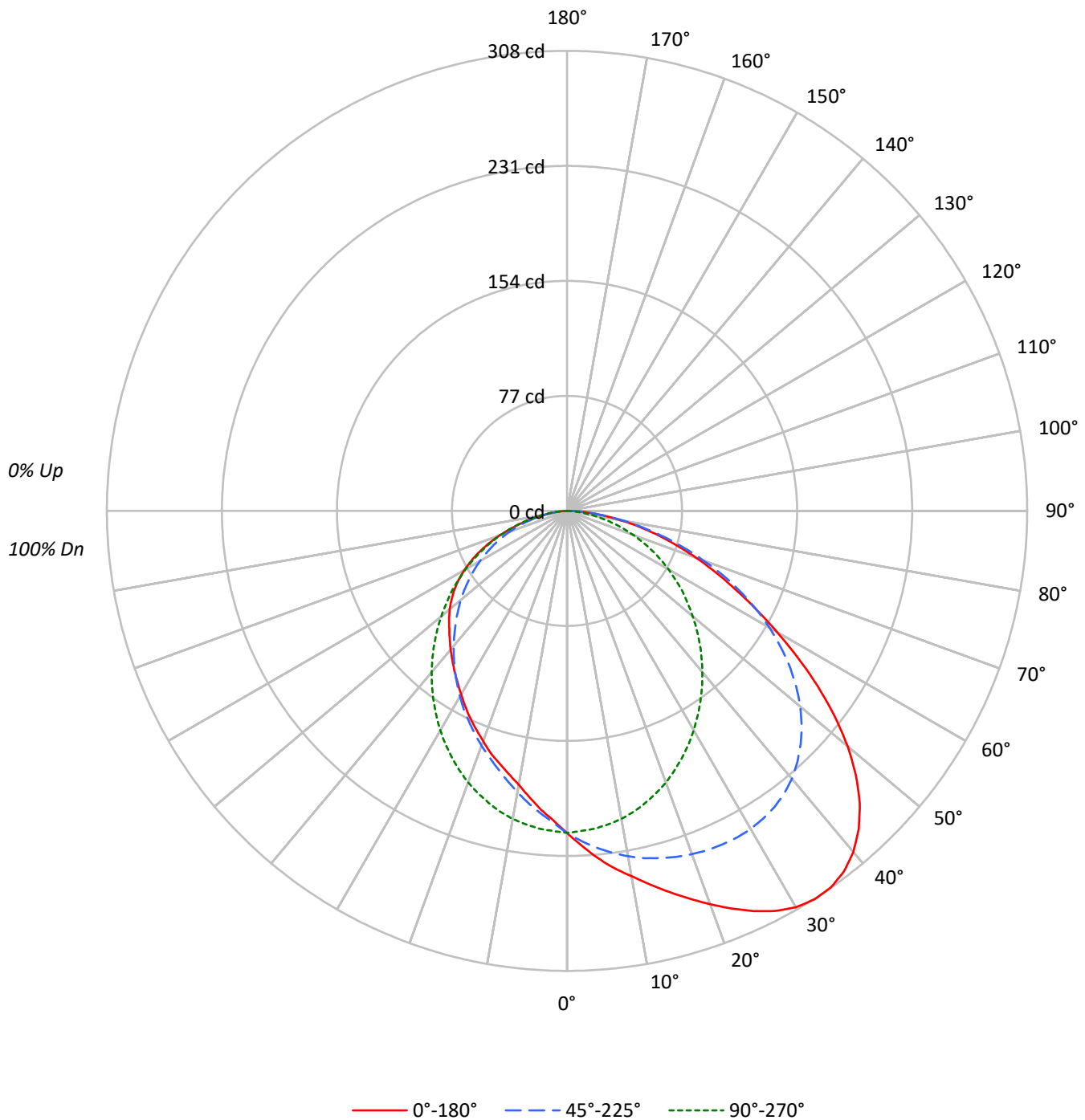
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 667.9 lumens
Efficiency: N/A
Efficacy: 44.2 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): 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°	2076	2076	2076
5°	2253	2063	1940
10°	2427	2047	1819
15°	2632	2017	1744
20°	2871	1982	1680
25°	3140	1935	1627
30°	3406	1885	1575
35°	3618	1829	1542
40°	3746	1771	1522
45°	3773	1710	1518
50°	3672	1645	1535
55°	3439	1586	1544
60°	3127	1513	1529
65°	2834	1431	1469
70°	2595	1329	1348
75°	2355	1194	1161
80°	2057	998	893
85°	1734	729	663



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	20.5	3.1
10°-20°	59.6	8.9
20°-30°	93.3	14.0
30°-40°	117.0	17.5
40°-50°	124.5	18.6
50°-60°	112.4	16.8
60°-70°	83.2	12.5
70°-80°	45.7	6.8
80°-90°	11.7	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°	173.4	26.0
0°-40°	290.3	43.5
0°-60°	527.3	78.9
0°-90°	667.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	667.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	216	216	216	216	216	
5°	233	226	214	203	201	23
15°	264	241	202	179	175	75
25°	296	246	182	155	153	137
35°	308	242	156	131	131	192
45°	277	221	126	105	112	212
55°	205	182	94	80	92	183
65°	124	128	63	54	64	124
75°	63	67	32	28	31	67
85°	16	15	7	6	6	19
90°	0	0	0	0	0	

TEST NUMBER: P

CATALOG NUMBER: 4APN-X-X-RL950-UNV-ASY

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	215.6	215.6	215.6	215.6	215.6	215.6	215.6	215.6	215.6	215.6	215.6
2.5°	224.3	223.9	223.3	223.2	222.4	221.3	220.3	220.3	219.2	216.4	214.5
5°	233.1	232.4	231.1	230.0	228.3	226.3	224.2	223.0	220.2	216.1	213.5
7.5°	241.2	240.3	238.6	236.6	233.8	230.8	227.4	224.8	220.6	215.0	211.7
10°	248.3	247.5	245.4	242.9	239.0	234.8	229.8	225.8	220.2	213.2	209.4
12.5°	256.1	255.3	252.4	249.1	243.7	238.1	231.5	226.0	219.0	210.7	206.3
15°	264.1	263.1	259.9	255.3	248.3	240.6	232.6	225.5	217.1	207.6	202.4
17.5°	272.1	271.0	267.0	261.3	252.4	242.9	233.0	224.2	214.5	203.8	198.2
20°	280.2	279.1	274.0	266.8	256.1	244.6	232.9	222.4	211.3	199.4	193.5
22.5°	288.2	287.0	280.9	272.0	259.1	245.8	231.9	219.8	207.3	194.5	188.1
25°	295.6	294.3	287.6	277.1	262.3	246.3	230.3	216.3	202.9	189.0	182.2
27.5°	302.0	300.5	293.5	281.9	265.0	246.5	228.0	212.3	197.7	183.0	176.2
30°	306.4	305.1	297.6	285.3	266.6	245.9	225.2	207.6	191.8	176.6	169.6
32.5°	308.3	307.2	299.8	286.9	266.9	244.3	221.8	202.3	185.6	169.9	162.7
35°	307.8	306.7	299.7	286.6	266.1	242.0	217.4	196.4	178.9	162.9	155.6
37.5°	304.4	303.1	296.7	284.2	263.8	238.6	212.4	189.9	171.8	155.7	148.4
40°	298.1	296.7	291.2	279.7	259.9	234.1	206.8	183.0	164.4	148.2	140.9
42.5°	288.9	287.5	283.2	272.6	254.3	228.1	200.3	175.7	156.6	140.9	133.3
45°	277.1	275.6	272.7	263.8	247.0	221.1	192.9	167.7	148.5	132.7	125.6
47.5°	262.3	261.1	259.7	252.8	238.1	213.1	184.7	159.2	139.9	125.0	117.7
50°	245.2	244.0	244.4	239.7	227.7	203.8	175.7	150.2	131.2	116.4	109.8
52.5°	225.8	224.9	227.0	224.9	215.6	193.4	166.0	141.0	122.2	108.2	101.9
55°	204.9	203.9	207.9	208.5	202.2	182.0	155.0	131.4	113.2	100.2	94.5
57.5°	183.4	182.5	187.7	190.6	187.5	169.6	143.9	121.6	103.9	91.9	86.1
60°	162.4	161.7	167.2	171.9	171.6	156.6	132.4	111.0	94.6	83.5	78.6
62.5°	142.6	141.8	147.3	153.0	155.0	142.7	121.0	100.5	85.3	75.1	70.7
65°	124.4	123.6	128.3	134.2	137.9	128.2	108.7	89.7	75.9	66.6	62.8
67.5°	107.8	107.8	110.7	116.1	120.6	113.3	96.1	79.4	66.2	58.7	55.0
70°	92.2	92.1	94.2	98.0	103.3	97.3	83.3	68.6	57.1	50.4	47.2
72.5°	77.4	78.0	78.8	81.7	87.2	82.1	70.6	58.0	48.1	42.3	39.5
75°	63.3	63.2	64.3	66.9	70.9	67.1	58.0	47.6	39.3	34.5	32.1
77.5°	49.8	49.7	50.7	52.2	55.6	52.6	45.7	38.0	30.6	26.6	24.9
80°	37.1	37.1	38.0	38.8	41.3	38.9	34.1	28.5	22.4	19.3	18.0
82.5°	25.8	26.3	26.0	27.0	28.5	26.4	23.4	19.5	14.9	12.8	11.9
85°	15.7	16.1	15.7	16.6	17.2	15.4	13.9	11.6	8.6	7.2	6.6
87.5°	8.1	8.0	7.9	8.3	8.5	7.4	6.6	5.6	3.8	2.9	2.5
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°	215.6	215.6	215.6	215.6	215.6	215.6	215.6	215.6	215.6	215.6
2.5°	213.3	213.9	213.1	210.1	209.0	207.8	207.2	206.7	207.7	207.4
5°	211.6	210.9	208.9	205.2	203.2	201.2	200.2	199.6	200.9	200.7
7.5°	209.2	207.4	204.4	199.9	197.4	194.6	193.3	192.5	193.4	193.2
10°	206.2	203.2	199.5	194.1	191.2	188.2	186.7	185.5	186.2	186.1
12.5°	202.3	198.5	194.0	187.9	184.9	181.8	180.5	179.7	180.5	180.3
15°	198.1	193.5	188.3	182.0	178.8	175.9	175.0	174.3	175.0	175.0
17.5°	193.4	188.0	182.2	175.9	172.8	170.6	169.6	169.2	169.6	170.1
20°	188.2	182.1	175.9	169.8	167.2	164.9	164.0	163.5	164.3	164.0
22.5°	182.4	176.0	169.6	163.8	161.4	159.1	158.2	157.9	158.8	158.5
25°	176.3	169.4	163.0	157.8	155.4	153.4	152.6	152.4	152.8	153.2
27.5°	170.5	162.7	156.4	151.7	149.6	147.7	147.0	146.6	146.9	147.5
30°	163.5	156.0	149.8	145.4	143.4	141.6	141.1	140.7	141.3	141.7
32.5°	157.0	149.3	143.1	138.9	137.1	135.4	135.3	135.2	135.8	136.3
35°	149.9	142.4	136.4	132.4	130.7	129.3	129.6	129.8	130.6	131.2
37.5°	142.7	135.4	129.7	126.0	124.4	123.3	124.1	124.4	125.4	126.0
40°	135.4	128.2	122.8	119.6	118.0	117.4	118.6	119.4	120.5	121.1
42.5°	128.0	121.2	115.9	112.9	111.6	111.6	113.1	114.3	115.7	116.2
45°	120.5	114.0	108.9	106.2	105.2	105.9	107.7	109.3	111.0	111.5
47.5°	113.0	106.6	102.0	99.5	99.0	100.1	102.3	104.4	106.4	107.1
50°	105.5	99.7	95.1	92.8	92.8	94.1	97.0	99.6	101.7	102.5
52.5°	97.9	92.4	87.7	86.1	86.4	88.3	91.6	94.3	96.7	97.4
55°	90.3	84.9	80.8	79.4	80.0	82.3	85.7	88.9	91.2	92.0
57.5°	82.8	77.6	73.9	72.8	73.7	76.2	80.1	82.9	85.3	86.0
60°	75.2	69.9	67.0	66.1	67.3	69.9	73.9	76.5	78.7	79.4
62.5°	67.6	62.8	60.2	59.4	60.7	63.5	67.4	69.8	71.4	72.1
65°	60.0	55.7	53.3	52.7	54.2	56.9	60.6	62.6	63.8	64.5
67.5°	52.5	48.7	46.5	46.1	47.6	50.1	53.5	54.6	55.7	56.5
70°	45.0	41.7	39.8	39.5	40.9	43.3	46.2	46.7	47.3	47.9
72.5°	37.7	35.0	33.1	33.1	34.3	36.2	38.6	38.7	38.9	39.5
75°	30.6	28.2	26.8	27.0	27.7	29.3	31.2	30.7	30.8	31.2
77.5°	23.8	21.8	20.8	21.0	21.5	22.7	23.9	23.3	23.0	23.4
80°	17.1	15.4	15.1	15.2	15.5	16.3	17.0	16.5	15.8	16.1
82.5°	11.3	10.2	10.0	10.1	10.4	10.8	11.0	10.2	10.0	10.3
85°	6.2	5.8	5.8	6.0	6.1	6.2	6.2	5.8	5.8	6.0
87.5°	2.5	2.5	2.7	3.0	2.8	2.5	2.1	1.4	1.4	1.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)