

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-22L950-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-22L950-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/
ASYMMETRIC Lens
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

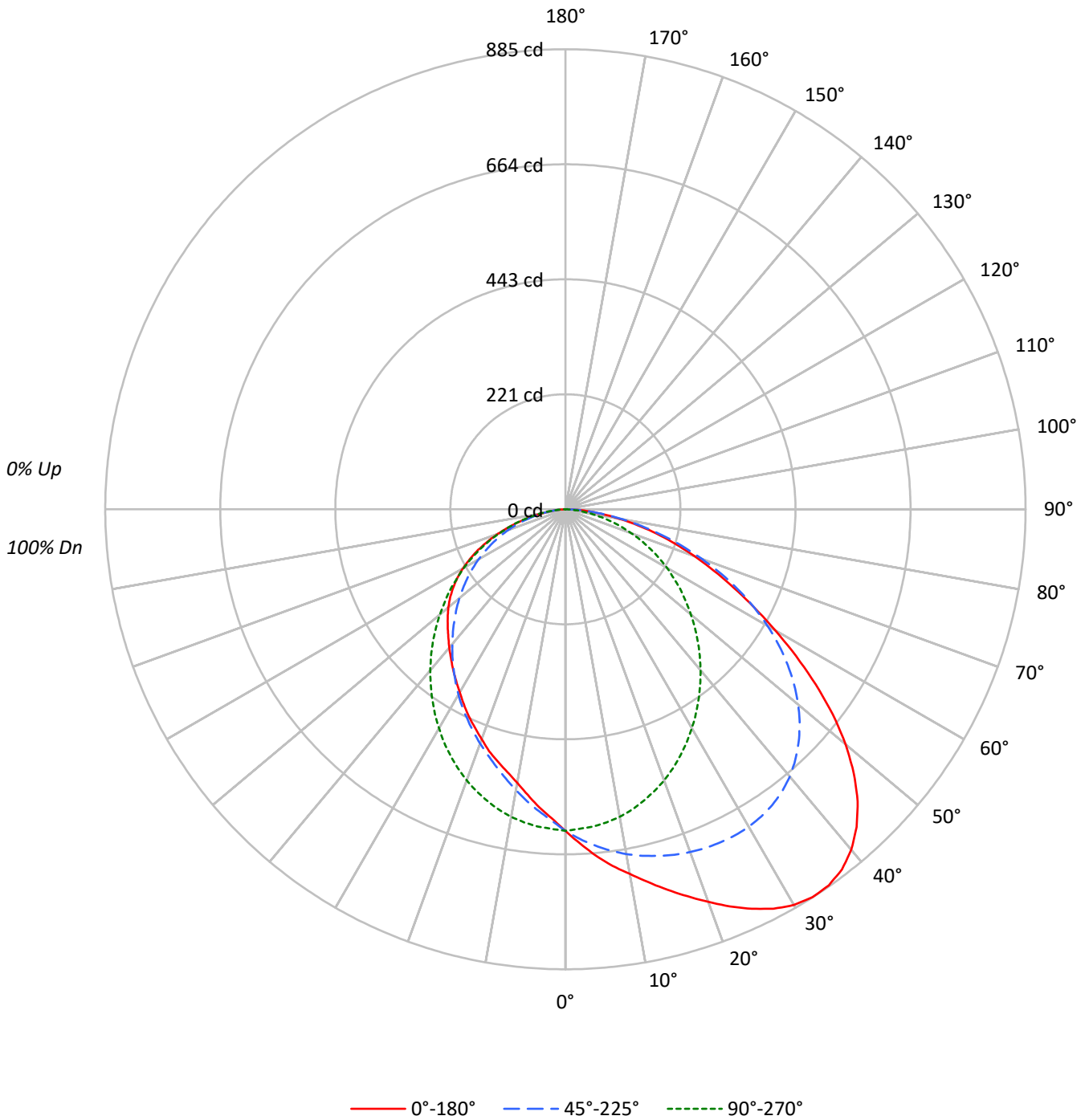
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1916.1 lumens
Efficiency: N/A
Efficacy: 79.8 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): 24
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°	5955	5955	5955
5°	6462	5919	5563
10°	6962	5873	5219
15°	7552	5788	5005
20°	8234	5686	4819
25°	9008	5553	4670
30°	9772	5407	4520
35°	10378	5248	4423
40°	10747	5081	4365
45°	10821	4906	4355
50°	10537	4718	4402
55°	9866	4549	4429
60°	8969	4342	4386
65°	8133	4107	4217
70°	7442	3808	3873
75°	6751	3422	3329
80°	5905	2861	2567
85°	4971	2077	1911



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.8	3.1
10°-20°	170.9	8.9
20°-30°	267.7	14.0
30°-40°	335.6	17.5
40°-50°	357.3	18.6
50°-60°	322.5	16.8
60°-70°	238.8	12.5
70°-80°	131.0	6.8
80°-90°	33.6	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°	497.3	26.0
0°-40°	832.9	43.5
0°-60°	1512.7	78.9
0°-90°	1916.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1916.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	619	619	619	619	619	
5°	669	649	612	583	576	65
15°	758	690	581	513	502	216
25°	848	707	523	446	440	392
35°	883	694	446	375	376	551
45°	795	634	360	302	320	609
55°	588	522	271	230	264	524
65°	357	368	180	155	185	356
75°	182	192	92	80	90	193
85°	45	44	19	18	17	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	618.6	618.6	618.6	618.6	618.6	618.6	618.6	618.6	618.6	618.6	618.6
2.5°	643.5	642.3	640.7	640.2	637.9	634.9	632.1	632.1	628.8	620.9	615.3
5°	668.7	666.7	662.9	659.8	655.0	649.1	643.3	639.7	631.8	619.9	612.5
7.5°	691.8	689.3	684.5	678.6	670.7	662.1	652.4	644.8	632.9	616.8	607.4
10°	712.2	709.9	704.0	696.9	685.7	673.5	659.3	647.9	631.6	611.7	600.8
12.5°	734.6	732.3	724.1	714.5	699.2	682.9	664.1	648.4	628.3	604.4	591.9
15°	757.7	754.6	745.5	732.5	712.2	690.3	667.2	646.8	622.9	595.5	580.7
17.5°	780.6	777.5	766.1	749.6	724.1	696.9	668.4	643.3	615.3	584.5	568.5
20°	803.7	800.7	786.2	765.3	734.6	701.8	668.2	637.9	606.2	572.1	555.0
22.5°	826.9	823.3	805.7	780.3	743.2	705.1	665.4	630.6	594.7	557.8	539.5
25°	848.0	844.4	825.1	795.1	752.4	706.6	660.6	620.4	582.0	542.1	522.8
27.5°	866.3	861.9	841.9	808.8	760.2	707.1	654.2	609.0	567.3	525.0	505.5
30°	879.0	875.2	853.8	818.5	764.8	705.3	646.1	595.5	550.2	506.7	486.4
32.5°	884.6	881.3	860.2	823.0	765.6	700.7	636.2	580.5	532.4	487.4	466.8
35°	883.0	879.7	859.7	822.3	763.3	694.1	623.7	563.4	513.4	467.3	446.5
37.5°	873.4	869.6	851.3	815.4	756.7	684.5	609.5	544.9	492.8	446.7	425.6
40°	855.1	851.3	835.5	802.4	745.5	671.5	593.2	525.0	471.7	425.1	404.3
42.5°	828.9	824.8	812.4	782.1	729.5	654.5	574.6	503.9	449.3	404.3	382.4
45°	794.8	790.7	782.4	756.7	708.6	634.4	553.5	481.1	425.9	380.6	360.3
47.5°	752.6	749.0	745.0	725.1	682.9	611.2	529.9	456.7	401.5	358.5	337.7
50°	703.5	700.0	701.2	687.8	653.2	584.5	503.9	431.0	376.3	333.8	315.0
52.5°	647.9	645.1	651.2	645.3	618.6	554.8	476.2	404.5	350.6	310.5	292.4
55°	587.8	584.8	596.5	598.3	580.0	522.0	444.7	377.1	324.7	287.6	271.0
57.5°	526.1	523.5	538.5	546.9	537.8	486.7	412.9	348.8	298.0	263.7	247.1
60°	465.8	463.8	479.5	493.3	492.2	449.3	379.9	318.3	271.3	239.5	225.5
62.5°	409.1	406.8	422.6	438.9	444.7	409.4	347.1	288.3	244.6	215.4	202.9
65°	357.0	354.7	368.2	384.9	395.6	367.7	311.7	257.3	217.6	190.9	180.3
67.5°	309.2	309.2	317.6	333.1	346.0	324.9	275.6	227.8	189.9	168.3	157.6
70°	264.4	264.2	270.3	281.2	296.2	279.2	239.0	196.8	163.7	144.7	135.3
72.5°	222.0	223.7	226.0	234.4	250.2	235.4	202.6	166.3	138.1	121.3	113.4
75°	181.5	181.3	184.6	192.0	203.4	192.5	166.3	136.5	112.6	98.9	92.0
77.5°	142.9	142.6	145.4	149.8	159.4	150.8	131.2	109.1	87.7	76.3	71.4
80°	106.5	106.5	109.1	111.4	118.5	111.6	97.9	81.6	64.3	55.4	51.6
82.5°	74.0	75.5	74.5	77.5	81.6	75.8	67.1	55.9	42.7	36.6	34.1
85°	45.0	46.3	45.0	47.5	49.3	44.2	39.9	33.3	24.7	20.6	18.8
87.5°	23.1	22.9	22.6	23.9	24.4	21.4	18.8	16.0	10.9	8.4	7.1
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°	618.6	618.6	618.6	618.6	618.6	618.6	618.6	618.6	618.6	618.6
2.5°	612.0	613.5	611.2	602.9	599.5	596.0	594.5	592.9	595.7	595.0
5°	606.9	605.1	599.3	588.6	583.0	577.2	574.4	572.6	576.4	575.6
7.5°	600.1	595.0	586.3	573.4	566.2	558.4	554.5	552.3	554.8	554.3
10°	591.4	583.0	572.3	556.8	548.4	539.8	535.5	532.2	534.2	533.9
12.5°	580.5	569.5	556.6	539.0	530.4	521.5	517.7	515.4	517.9	517.2
15°	568.3	555.0	540.0	522.2	512.8	504.7	501.9	500.1	502.2	502.2
17.5°	554.8	539.3	522.8	504.7	495.8	489.5	486.7	485.4	486.4	487.9
20°	539.8	522.5	504.7	487.2	479.5	472.9	470.4	469.1	471.4	470.4
22.5°	523.3	505.0	486.4	469.9	463.0	456.4	453.9	453.1	455.6	454.6
25°	505.7	485.9	467.6	452.6	445.7	440.1	437.8	437.1	438.3	439.6
27.5°	489.2	466.8	448.8	435.3	429.2	423.9	421.8	420.5	421.6	423.1
30°	469.1	447.5	429.7	417.2	411.4	406.3	404.8	403.8	405.3	406.6
32.5°	450.3	428.4	410.6	398.4	393.3	388.5	388.3	387.7	389.5	391.1
35°	430.0	408.6	391.3	379.9	375.0	371.0	371.7	372.5	374.5	376.3
37.5°	409.4	388.5	372.0	361.6	357.0	353.7	356.0	357.0	359.8	361.6
40°	388.5	367.7	352.4	343.0	338.4	336.9	340.2	342.5	345.8	347.3
42.5°	367.2	347.8	332.6	323.9	320.1	320.1	324.4	328.0	331.8	333.3
45°	345.8	327.0	312.5	304.6	301.8	303.8	308.9	313.5	318.3	319.9
47.5°	324.2	305.9	292.7	285.5	284.0	287.1	293.4	299.5	305.1	307.1
50°	302.6	286.0	272.8	266.2	266.2	270.0	278.2	285.8	291.9	293.9
52.5°	281.0	265.2	251.7	246.9	247.9	253.2	262.7	270.5	277.4	279.4
55°	259.1	243.6	231.9	227.8	229.6	236.2	245.9	255.0	261.6	263.9
57.5°	237.5	222.7	212.1	208.7	211.3	218.7	229.9	237.7	244.6	246.6
60°	215.6	200.6	192.2	189.7	193.0	200.6	212.1	219.4	225.8	227.8
62.5°	194.0	180.0	172.6	170.4	174.2	182.3	193.5	200.1	204.9	207.0
65°	172.1	159.7	152.8	151.3	155.4	163.2	173.9	179.5	183.1	185.1
67.5°	150.5	139.8	133.5	132.2	136.5	143.7	153.6	156.6	159.9	162.0
70°	129.2	119.5	114.2	113.4	117.2	124.1	132.5	134.0	135.8	137.6
72.5°	108.1	100.4	95.1	94.8	98.4	104.0	110.9	111.1	111.6	113.4
75°	87.7	80.9	76.8	77.5	79.6	84.2	89.5	88.0	88.2	89.5
77.5°	68.1	62.5	59.8	60.3	61.8	65.1	68.7	66.9	65.9	67.1
80°	49.1	44.2	43.2	43.5	44.5	46.8	48.8	47.3	45.3	46.3
82.5°	32.3	29.2	28.7	29.0	29.7	31.0	31.5	29.2	28.7	29.5
85°	17.8	16.5	16.5	17.3	17.5	17.8	17.8	16.5	16.8	17.3
87.5°	7.1	7.1	7.9	8.6	8.1	7.1	6.1	4.1	4.1	4.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)