

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-26L830-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-26L830-UNV-ASY  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/  
ASYMMETRIC Lens  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

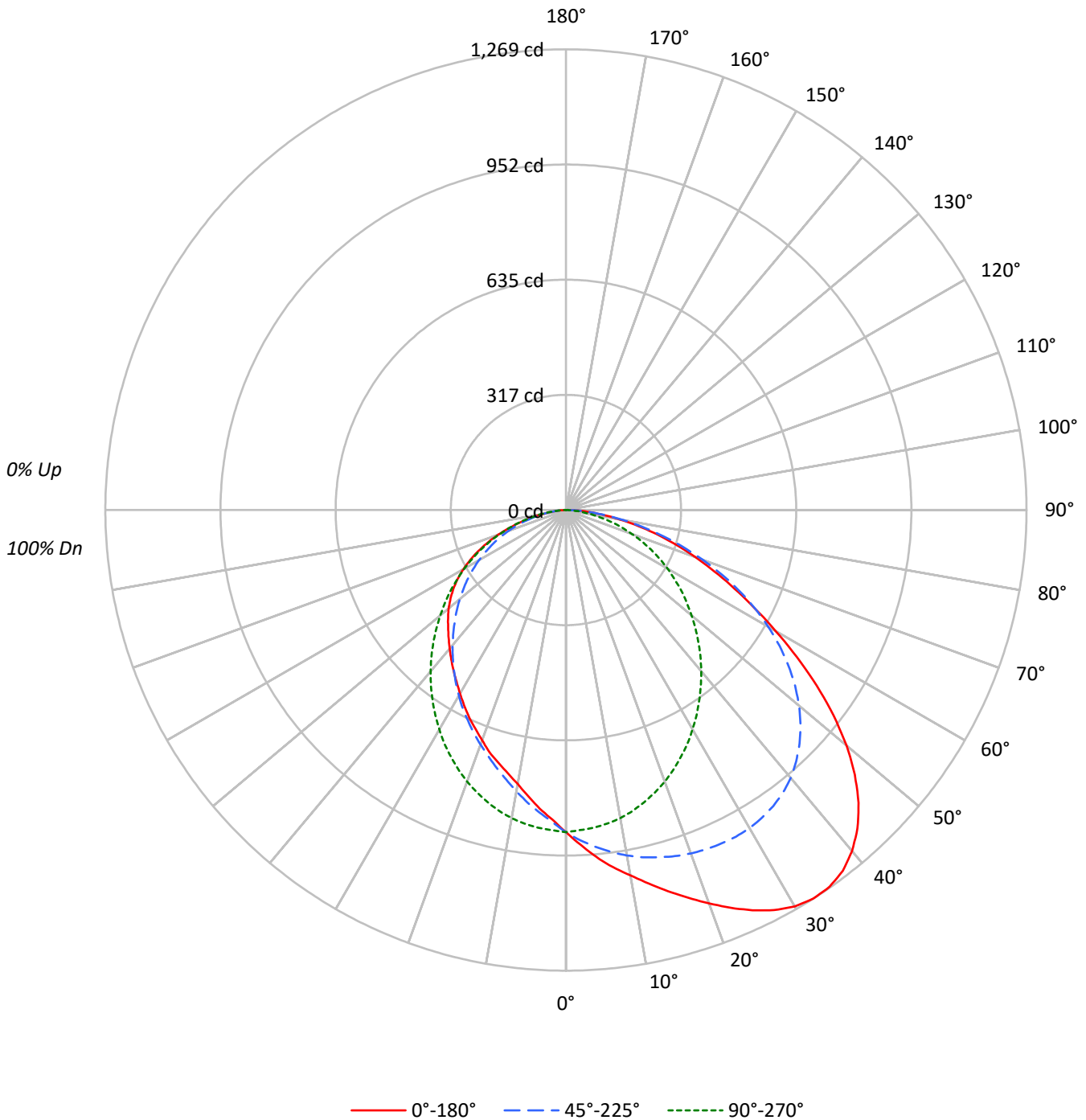
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2748.6 lumens  
Efficiency: N/A  
Efficacy: 97.5 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): 28.2  
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			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°	8543	8543	8543
5°	9270	8491	7981
10°	9987	8426	7487
15°	10833	8303	7179
20°	11812	8157	6913
25°	12921	7966	6699
30°	14017	7756	6483
35°	14887	7528	6344
40°	15415	7288	6261
45°	15524	7036	6247
50°	15115	6768	6315
55°	14155	6526	6355
60°	12866	6229	6292
65°	11666	5891	6048
70°	10677	5461	5554
75°	9686	4910	4776
80°	8471	4103	3681
85°	7136	2982	2739



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.3	3.1
10°-20°	245.1	8.9
20°-30°	384.0	14.0
30°-40°	481.4	17.5
40°-50°	512.5	18.6
50°-60°	462.7	16.8
60°-70°	342.5	12.5
70°-80°	187.9	6.8
80°-90°	48.2	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°	713.4	26.0
0°-40°	1194.8	43.5
0°-60°	2170.0	78.9
0°-90°	2748.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2748.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	887	887	887	887	887	
5°	959	931	879	836	826	93
15°	1087	990	833	736	720	310
25°	1216	1014	750	639	631	563
35°	1267	996	640	538	540	790
45°	1140	910	517	433	459	874
55°	843	749	389	329	379	752
65°	512	527	259	223	266	511
75°	260	276	132	114	128	277
85°	65	64	27	25	25	76
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°	887.4	887.4	887.4	887.4	887.4	887.4	887.4	887.4	887.4	887.4	887.4
2.5°	923.1	921.3	919.1	918.4	915.1	910.7	906.7	906.7	902.0	890.7	882.7
5°	959.2	956.3	950.9	946.5	939.6	931.2	922.8	917.7	906.4	889.2	878.6
7.5°	992.4	988.8	981.9	973.5	962.2	949.8	935.9	925.0	907.8	884.8	871.3
10°	1021.6	1018.3	1009.9	999.7	983.7	966.2	945.8	929.3	906.0	877.5	861.9
12.5°	1053.7	1050.4	1038.8	1024.9	1003.0	979.7	952.7	930.1	901.3	867.0	849.1
15°	1086.9	1082.5	1069.4	1050.8	1021.6	990.3	957.1	927.9	893.6	854.2	833.1
17.5°	1119.7	1115.4	1098.9	1075.2	1038.8	999.7	958.9	922.8	882.7	838.5	815.5
20°	1152.9	1148.5	1127.8	1097.8	1053.7	1006.7	958.5	915.1	869.5	820.6	796.2
22.5°	1186.1	1181.0	1155.8	1119.4	1066.1	1011.4	954.5	904.5	853.1	800.2	774.0
25°	1216.4	1211.3	1183.6	1140.5	1079.2	1013.6	947.6	889.9	834.9	777.6	749.9
27.5°	1242.6	1236.4	1207.6	1160.2	1090.6	1014.3	938.5	873.5	813.7	753.2	725.1
30°	1260.9	1255.4	1224.8	1174.1	1097.1	1011.8	926.8	854.2	789.3	726.9	697.7
32.5°	1268.9	1264.2	1233.9	1180.6	1098.2	1005.2	912.6	832.7	763.8	699.2	669.7
35°	1266.7	1262.0	1233.2	1179.5	1094.9	995.7	894.7	808.2	736.4	670.4	640.5
37.5°	1252.9	1247.4	1221.1	1169.7	1085.4	981.9	874.3	781.6	706.9	640.8	610.6
40°	1226.6	1221.1	1198.5	1151.1	1069.4	963.3	850.9	753.2	676.6	609.8	579.9
42.5°	1189.0	1183.2	1165.3	1121.9	1046.4	938.8	824.3	722.9	644.5	579.9	548.6
45°	1140.2	1134.3	1122.3	1085.4	1016.5	910.0	794.0	690.1	610.9	546.0	516.8
47.5°	1079.6	1074.5	1068.7	1040.2	979.7	876.8	760.1	655.1	575.9	514.3	484.4
50°	1009.2	1004.1	1005.9	986.6	937.0	838.5	722.9	618.2	539.8	478.9	451.9
52.5°	929.3	925.3	934.1	925.7	887.4	795.8	683.1	580.3	503.0	445.3	419.4
55°	843.3	838.9	855.7	858.2	832.0	748.8	637.9	540.9	465.8	412.5	388.8
57.5°	754.6	751.0	772.5	784.5	771.4	698.1	592.3	500.4	427.5	378.2	354.5
60°	668.2	665.3	687.9	707.6	706.1	644.5	544.9	456.6	389.2	343.6	323.5
62.5°	586.9	583.6	606.2	629.5	637.9	587.2	497.9	413.6	350.9	308.9	291.1
65°	512.1	508.8	528.1	552.2	567.5	527.4	447.2	369.1	312.2	273.9	258.6
67.5°	443.5	443.5	455.6	477.8	496.4	466.1	395.4	326.8	272.5	241.5	226.1
70°	379.3	379.0	387.7	403.4	424.9	400.5	342.8	282.3	234.9	207.5	194.0
72.5°	318.4	321.0	324.2	336.3	358.9	337.7	290.7	238.5	198.1	174.0	162.7
75°	260.4	260.1	264.8	275.4	291.8	276.1	238.5	195.9	161.6	141.9	132.0
77.5°	205.0	204.6	208.6	214.8	228.7	216.3	188.2	156.5	125.8	109.4	102.5
80°	152.8	152.8	156.5	159.8	170.0	160.1	140.4	117.1	92.3	79.5	74.0
82.5°	106.1	108.3	106.9	111.2	117.1	108.7	96.3	80.2	61.3	52.5	48.9
85°	64.6	66.4	64.6	68.2	70.8	63.5	57.3	47.8	35.4	29.5	27.0
87.5°	33.2	32.8	32.5	34.3	35.0	30.6	27.0	23.0	15.7	12.0	10.2
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°	887.4	887.4	887.4	887.4	887.4	887.4	887.4	887.4	887.4	887.4
2.5°	877.9	880.1	876.8	864.8	860.0	854.9	852.7	850.6	854.6	853.5
5°	870.6	868.1	859.7	844.4	836.3	827.9	823.9	821.4	826.8	825.8
7.5°	860.8	853.5	841.1	822.5	812.3	801.0	795.5	792.2	795.8	795.1
10°	848.4	836.3	821.0	798.8	786.7	774.3	768.1	763.4	766.3	765.9
12.5°	832.7	817.0	798.4	773.2	760.8	748.1	742.6	739.3	743.0	741.9
15°	815.2	796.2	774.7	749.2	735.7	724.0	720.0	717.4	720.3	720.3
17.5°	795.8	773.6	749.9	724.0	711.2	702.1	698.1	696.3	697.7	699.9
20°	774.3	749.5	724.0	698.8	687.9	678.4	674.8	672.9	676.2	674.8
22.5°	750.6	724.4	697.7	674.0	664.2	654.7	651.0	650.0	653.6	652.1
25°	725.5	697.0	670.7	649.2	639.4	631.4	628.1	627.0	628.8	630.6
27.5°	701.7	669.7	643.8	624.4	615.7	608.0	605.1	603.3	604.7	606.9
30°	672.9	641.9	616.4	598.5	590.1	582.8	580.7	579.2	581.4	583.2
32.5°	645.9	614.6	589.0	571.5	564.2	557.3	556.9	556.2	558.8	561.0
35°	616.8	586.1	561.3	544.9	538.0	532.1	533.2	534.3	537.3	539.8
37.5°	587.2	557.3	533.6	518.7	512.1	507.3	510.6	512.1	516.1	518.7
40°	557.3	527.4	505.5	492.0	485.5	483.3	488.0	491.3	496.0	498.2
42.5°	526.7	499.0	477.1	464.7	459.2	459.2	465.4	470.5	476.0	478.2
45°	496.0	469.0	448.3	437.0	432.9	435.9	443.2	449.7	456.6	458.8
47.5°	465.0	438.8	419.8	409.6	407.4	411.8	420.9	429.7	437.7	440.6
50°	434.0	410.3	391.4	381.9	381.9	387.3	399.0	410.0	418.7	421.6
52.5°	403.0	380.4	361.1	354.2	355.6	363.3	376.8	388.1	397.9	400.8
55°	371.7	349.4	332.6	326.8	329.4	338.8	352.7	365.8	375.3	378.6
57.5°	340.7	319.5	304.2	299.4	303.1	313.7	329.7	341.0	350.9	353.8
60°	309.3	287.8	275.7	272.1	276.8	287.8	304.2	314.8	323.9	326.8
62.5°	278.3	258.2	247.7	244.4	249.8	261.5	277.6	287.0	294.0	296.9
65°	246.9	229.1	219.2	217.0	222.9	234.2	249.5	257.5	262.6	265.5
67.5°	215.9	200.6	191.5	189.7	195.9	206.1	220.3	224.7	229.4	232.3
70°	185.3	171.4	163.8	162.7	168.1	178.0	190.0	192.2	194.8	197.3
72.5°	155.0	144.1	136.4	136.0	141.2	149.2	159.0	159.4	160.1	162.7
75°	125.8	116.0	110.1	111.2	114.2	120.7	128.4	126.2	126.6	128.4
77.5°	97.7	89.7	85.7	86.4	88.6	93.4	98.5	95.9	94.5	96.3
80°	70.4	63.5	62.0	62.4	63.8	67.1	70.0	67.8	64.9	66.4
82.5°	46.3	41.9	41.2	41.6	42.7	44.5	45.2	41.9	41.2	42.3
85°	25.5	23.7	23.7	24.8	25.2	25.5	25.5	23.7	24.1	24.8
87.5°	10.2	10.2	11.3	12.4	11.7	10.2	8.8	5.8	5.8	6.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)