

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-32L930-X-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-32L930-X-UNV-ASY  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/  
ASYMMETRIC Lens  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

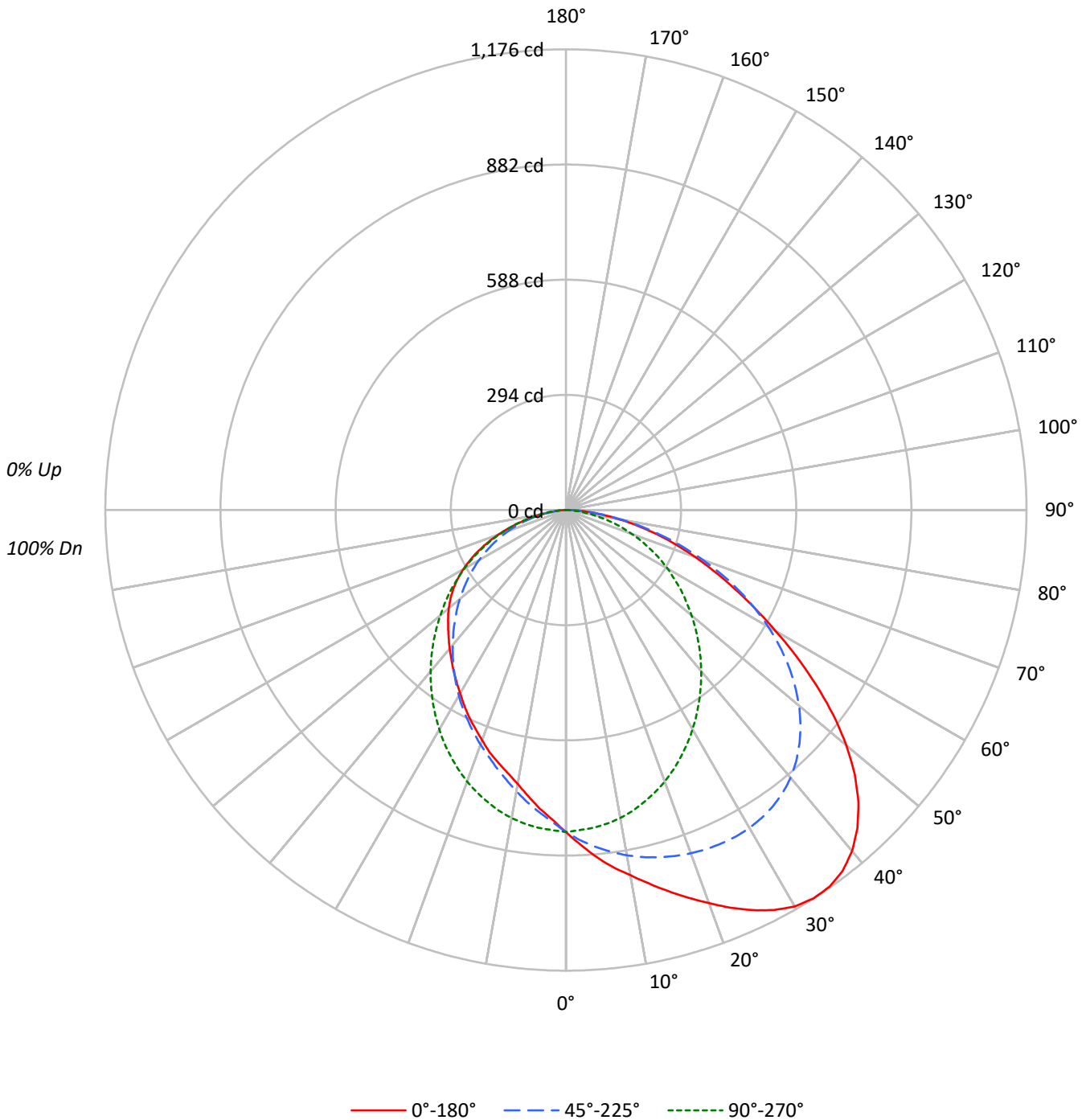
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2546.5 lumens  
Efficiency: N/A  
Efficacy: 70.0 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): 36.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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°	7915	7915	7915
5°	8589	7867	7393
10°	9253	7806	6937
15°	10037	7692	6652
20°	10943	7558	6404
25°	11971	7380	6206
30°	12987	7186	6006
35°	13793	6974	5878
40°	14282	6753	5801
45°	14382	6519	5788
50°	14004	6271	5850
55°	13112	6046	5888
60°	11921	5771	5830
65°	10807	5458	5604
70°	9891	5061	5146
75°	8976	4549	4423
80°	7851	3803	3410
85°	6606	2762	2541



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.1	3.1
10°-20°	227.1	8.9
20°-30°	355.8	14.0
30°-40°	446.0	17.5
40°-50°	474.8	18.6
50°-60°	428.6	16.8
60°-70°	317.3	12.5
70°-80°	174.1	6.8
80°-90°	44.7	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°	660.9	26.0
0°-40°	1106.9	43.5
0°-60°	2010.4	78.9
0°-90°	2546.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2546.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	822	822	822	822	822	
5°	889	863	814	775	765	87
15°	1007	917	772	682	667	287
25°	1127	939	695	592	584	522
35°	1174	922	593	498	500	732
45°	1056	843	479	401	425	810
55°	781	694	360	305	351	697
65°	474	489	240	206	246	473
75°	241	256	122	106	119	256
85°	60	59	25	23	23	71
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°	822.1	822.1	822.1	822.1	822.1	822.1	822.1	822.1	822.1	822.1	822.1
2.5°	855.2	853.6	851.5	850.9	847.8	843.8	840.0	840.0	835.7	825.2	817.7
5°	888.7	886.0	880.9	876.9	870.5	862.7	854.9	850.2	839.7	823.8	814.0
7.5°	919.5	916.1	909.7	901.9	891.4	879.9	867.1	856.9	841.1	819.8	807.3
10°	946.5	943.4	935.7	926.2	911.3	895.1	876.2	861.0	839.4	813.0	798.5
12.5°	976.2	973.2	962.4	949.5	929.3	907.6	882.6	861.7	835.0	803.2	786.7
15°	1007.0	1002.9	990.8	973.5	946.5	917.4	886.7	859.6	827.9	791.4	771.8
17.5°	1037.4	1033.3	1018.1	996.2	962.4	926.2	888.4	854.9	817.7	776.9	755.6
20°	1068.1	1064.1	1044.8	1017.1	976.2	932.6	888.0	847.8	805.6	760.3	737.7
22.5°	1098.9	1094.2	1070.8	1037.0	987.7	937.0	884.3	838.0	790.4	741.4	717.0
25°	1126.9	1122.2	1096.5	1056.6	999.9	939.1	877.9	824.5	773.5	720.4	694.7
27.5°	1151.3	1145.5	1118.8	1074.9	1010.3	939.7	869.4	809.3	753.9	697.8	671.8
30°	1168.2	1163.1	1134.7	1087.7	1016.4	937.4	858.6	791.4	731.2	673.5	646.4
32.5°	1175.6	1171.2	1143.1	1093.8	1017.4	931.3	845.4	771.4	707.6	647.8	620.4
35°	1173.6	1169.2	1142.5	1092.8	1014.4	922.5	828.9	748.8	682.2	621.1	593.4
37.5°	1160.7	1155.7	1131.3	1083.7	1005.6	909.7	810.0	724.1	654.9	593.7	565.7
40°	1136.4	1131.3	1110.4	1066.4	990.8	892.4	788.3	697.8	626.8	565.0	537.3
42.5°	1101.6	1096.2	1079.6	1039.4	969.5	869.8	763.7	669.7	597.1	537.3	508.2
45°	1056.3	1050.9	1039.7	1005.6	941.8	843.1	735.6	639.3	566.0	505.9	478.8
47.5°	1000.2	995.5	990.1	963.7	907.6	812.3	704.2	606.9	533.6	476.5	448.7
50°	935.0	930.3	932.0	914.0	868.1	776.9	669.7	572.8	500.1	443.7	418.7
52.5°	861.0	857.3	865.4	857.6	822.1	737.3	632.9	537.6	466.0	412.6	388.6
55°	781.2	777.2	792.7	795.1	770.8	693.7	591.0	501.1	431.5	382.2	360.2
57.5°	699.1	695.8	715.7	726.8	714.7	646.8	548.8	463.6	396.0	350.4	328.4
60°	619.1	616.3	637.3	655.5	654.2	597.1	504.8	423.1	360.5	318.3	299.7
62.5°	543.7	540.7	561.6	583.2	591.0	544.0	461.2	383.2	325.1	286.2	269.7
65°	474.4	471.4	489.3	511.6	525.8	488.6	414.3	342.0	289.3	253.8	239.6
67.5°	410.9	410.9	422.0	442.7	459.9	431.8	366.3	302.8	252.4	223.7	209.5
70°	351.4	351.1	359.2	373.7	393.7	371.0	317.6	261.5	217.6	192.3	179.8
72.5°	295.0	297.4	300.4	311.6	332.5	312.9	269.3	221.0	183.5	161.2	150.7
75°	241.3	240.9	245.3	255.1	270.3	255.8	221.0	181.5	149.7	131.4	122.3
77.5°	189.9	189.6	193.3	199.0	211.9	200.4	174.4	145.0	116.6	101.4	95.0
80°	141.6	141.6	145.0	148.0	157.5	148.3	130.1	108.5	85.5	73.7	68.6
82.5°	98.3	100.4	99.0	103.1	108.5	100.7	89.2	74.3	56.8	48.7	45.3
85°	59.8	61.5	59.8	63.2	65.6	58.8	53.1	44.3	32.8	27.4	25.0
87.5°	30.7	30.4	30.1	31.8	32.4	28.4	25.0	21.3	14.5	11.2	9.5
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°	822.1	822.1	822.1	822.1	822.1	822.1	822.1	822.1	822.1	822.1
2.5°	813.3	815.4	812.3	801.2	796.8	792.1	790.0	788.0	791.7	790.7
5°	806.6	804.2	796.5	782.3	774.8	767.1	763.3	761.0	766.0	765.0
7.5°	797.5	790.7	779.2	762.0	752.5	742.0	737.0	733.9	737.3	736.6
10°	786.0	774.8	760.6	740.0	728.9	717.4	711.6	707.2	709.9	709.6
12.5°	771.4	756.9	739.7	716.4	704.9	693.1	688.0	684.9	688.3	687.3
15°	755.2	737.7	717.7	694.1	681.6	670.8	667.0	664.7	667.4	667.4
17.5°	737.3	716.7	694.7	670.8	658.9	650.5	646.8	645.1	646.4	648.4
20°	717.4	694.4	670.8	647.4	637.3	628.5	625.1	623.4	626.5	625.1
22.5°	695.4	671.1	646.4	624.5	615.3	606.5	603.2	602.2	605.5	604.2
25°	672.1	645.7	621.4	601.5	592.4	584.9	581.9	580.9	582.6	584.2
27.5°	650.1	620.4	596.4	578.5	570.4	563.3	560.6	558.9	560.3	562.3
30°	623.4	594.7	571.1	554.5	546.7	540.0	538.0	536.6	538.6	540.3
32.5°	598.4	569.4	545.7	529.5	522.7	516.3	516.0	515.3	517.7	519.7
35°	571.4	543.0	520.0	504.8	498.4	493.0	494.0	495.0	497.7	500.1
37.5°	544.0	516.3	494.4	480.5	474.4	470.0	473.1	474.4	478.1	480.5
40°	516.3	488.6	468.3	455.8	449.8	447.7	452.1	455.2	459.6	461.6
42.5°	487.9	462.3	442.0	430.5	425.4	425.4	431.2	435.9	441.0	443.0
45°	459.6	434.6	415.3	404.8	401.1	403.8	410.6	416.6	423.1	425.1
47.5°	430.8	406.5	388.9	379.5	377.4	381.5	389.9	398.1	405.5	408.2
50°	402.1	380.1	362.6	353.8	353.8	358.9	369.7	379.8	387.9	390.6
52.5°	373.4	352.4	334.5	328.1	329.5	336.6	349.1	359.5	368.7	371.4
55°	344.3	323.7	308.2	302.8	305.1	313.9	326.8	338.9	347.7	350.8
57.5°	315.6	296.0	281.8	277.4	280.8	290.6	305.5	315.9	325.1	327.8
60°	286.5	266.6	255.5	252.1	256.5	266.6	281.8	291.6	300.1	302.8
62.5°	257.8	239.2	229.4	226.4	231.5	242.3	257.1	265.9	272.4	275.1
65°	228.8	212.2	203.1	201.1	206.5	216.9	231.1	238.6	243.3	246.0
67.5°	200.0	185.9	177.4	175.7	181.5	190.9	204.1	208.2	212.5	215.2
70°	171.7	158.8	151.7	150.7	155.8	164.9	176.1	178.1	180.4	182.8
72.5°	143.6	133.5	126.4	126.0	130.8	138.2	147.3	147.7	148.3	150.7
75°	116.6	107.5	102.0	103.1	105.8	111.8	118.9	116.9	117.3	118.9
77.5°	90.6	83.1	79.4	80.1	82.1	86.5	91.2	88.9	87.5	89.2
80°	65.2	58.8	57.4	57.8	59.1	62.2	64.9	62.9	60.1	61.5
82.5°	42.9	38.9	38.2	38.5	39.5	41.2	41.9	38.9	38.2	39.2
85°	23.7	22.0	22.0	23.0	23.3	23.7	23.7	22.0	22.3	23.0
87.5°	9.5	9.5	10.5	11.5	10.8	9.5	8.1	5.4	5.4	6.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)