

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-30L940-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-30L940-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/
ASYMMETRIC Lens
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

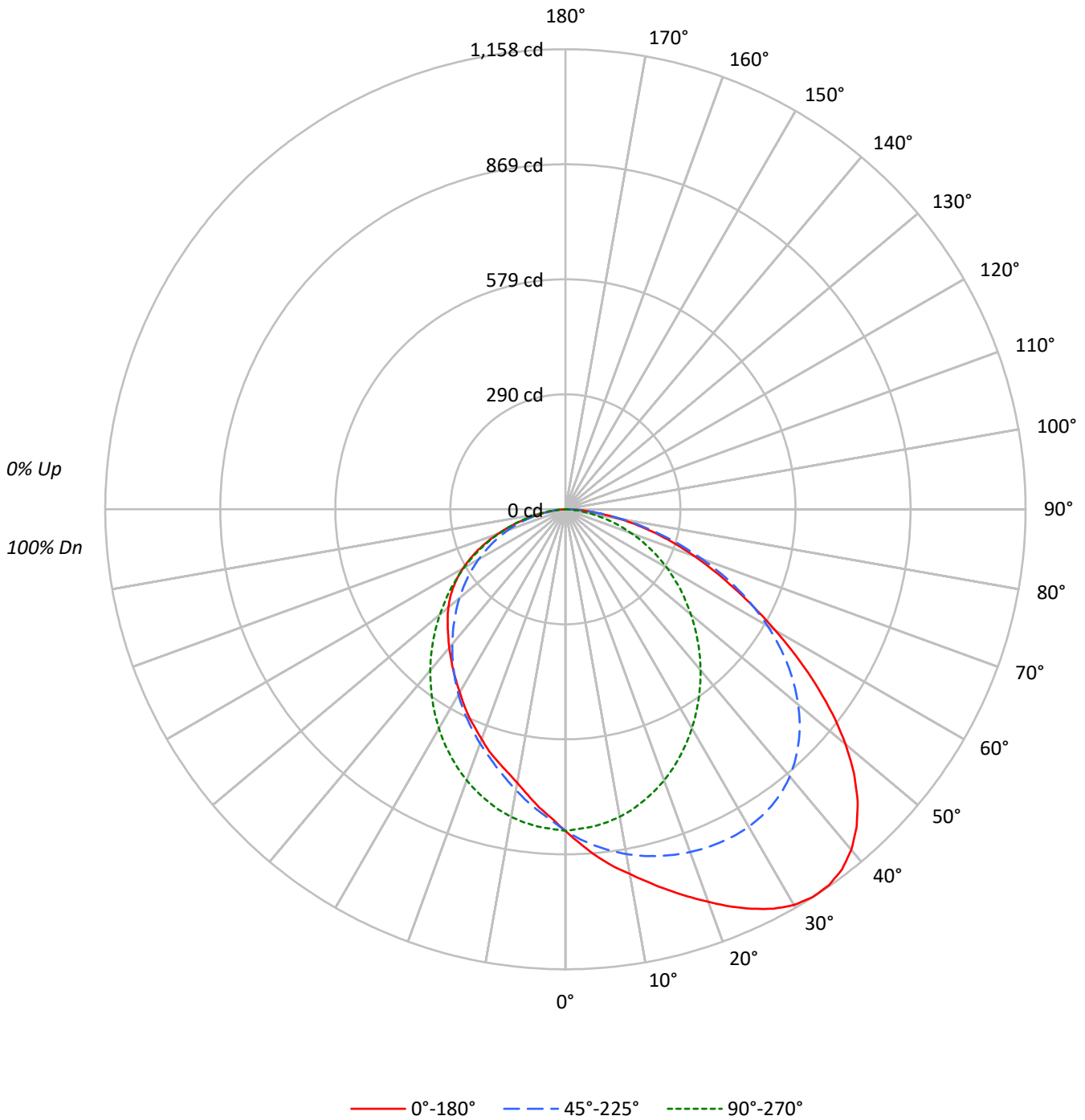
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2507.4 lumens
Efficiency: N/A
Efficacy: 77.2 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): 32.5
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				
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	100	100	100	100
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84	84	84	84
2	99	90	83	78	96	88	82	77	85	80	75	82	77	73	79	75	72	69	69	69	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58	58	58	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	49	49	49	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43	43	43	43
6	69	56	47	40	68	55	46	40	53	46	40	51	45	39	50	44	39	37	37	37	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33	33	33	33
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29	29	29	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26	26	26	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23	23	23	23

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	7793	7793	7793
5°	8457	7746	7280
10°	9111	7686	6830
15°	9882	7574	6549
20°	10775	7441	6306
25°	11787	7267	6111
30°	12786	7076	5914
35°	13580	6867	5787
40°	14062	6648	5712
45°	14161	6420	5699
50°	13788	6174	5760
55°	12913	5954	5797
60°	11736	5682	5740
65°	10641	5374	5517
70°	9739	4982	5067
75°	8838	4479	4356
80°	7729	3742	3360
85°	6506	2717	2496



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.9	3.1
10°-20°	223.6	8.9
20°-30°	350.3	14.0
30°-40°	439.2	17.5
40°-50°	467.5	18.6
50°-60°	422.1	16.8
60°-70°	312.4	12.5
70°-80°	171.4	6.8
80°-90°	44.0	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°	650.8	26.0
0°-40°	1089.9	43.5
0°-60°	1979.5	78.9
0°-90°	2507.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2507.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	810	810	810	810	810	
5°	875	849	802	763	753	85
15°	992	903	760	671	657	283
25°	1110	925	684	583	575	514
35°	1156	908	584	491	492	721
45°	1040	830	472	395	419	797
55°	769	683	355	300	345	686
65°	467	481	236	203	242	466
75°	238	252	120	104	117	253
85°	59	58	25	23	23	70
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°	809.5	809.5	809.5	809.5	809.5	809.5	809.5	809.5	809.5	809.5	809.5
2.5°	842.1	840.5	838.5	837.8	834.8	830.8	827.2	827.2	822.8	812.5	805.2
5°	875.1	872.4	867.4	863.4	857.1	849.4	841.8	837.1	826.8	811.2	801.5
7.5°	905.3	902.0	895.7	888.0	877.7	866.4	853.8	843.8	828.1	807.2	794.9
10°	932.0	929.0	921.3	912.0	897.4	881.4	862.8	847.8	826.5	800.5	786.2
12.5°	961.2	958.2	947.6	935.0	915.0	893.7	869.1	848.4	822.2	790.9	774.6
15°	991.5	987.5	975.5	958.6	932.0	903.3	873.1	846.4	815.2	779.2	759.9
17.5°	1021.5	1017.5	1002.5	980.9	947.6	912.0	874.7	841.8	805.2	764.9	744.0
20°	1051.7	1047.7	1028.8	1001.5	961.2	918.3	874.4	834.8	793.2	748.6	726.3
22.5°	1082.0	1077.4	1054.4	1021.1	972.6	922.6	870.7	825.2	778.2	730.0	706.0
25°	1109.6	1105.0	1079.7	1040.4	984.5	924.6	864.4	811.8	761.6	709.4	684.1
27.5°	1133.6	1127.9	1101.6	1058.4	994.8	925.3	856.1	796.9	742.3	687.1	661.5
30°	1150.2	1145.2	1117.3	1071.0	1000.8	923.0	845.5	779.2	720.0	663.1	636.5
32.5°	1157.5	1153.2	1125.6	1077.0	1001.8	917.0	832.5	759.6	696.7	637.8	610.9
35°	1155.5	1151.2	1124.9	1076.0	998.8	908.3	816.2	737.3	671.8	611.5	584.3
37.5°	1142.9	1137.9	1114.0	1067.0	990.2	895.7	797.5	713.0	644.8	584.6	557.0
40°	1118.9	1114.0	1093.3	1050.1	975.5	878.7	776.2	687.1	617.2	556.3	529.0
42.5°	1084.7	1079.4	1063.1	1023.5	954.6	856.4	752.0	659.5	587.9	529.0	500.4
45°	1040.1	1034.8	1023.8	990.2	927.3	830.1	724.3	629.5	557.3	498.1	471.5
47.5°	984.9	980.2	974.9	948.9	893.7	799.9	693.4	597.6	525.4	469.1	441.9
50°	920.6	916.0	917.7	900.0	854.8	764.9	659.5	564.0	492.4	436.9	412.2
52.5°	847.8	844.1	852.1	844.5	809.5	726.0	623.2	529.4	458.8	406.3	382.6
55°	769.3	765.3	780.6	782.9	758.9	683.1	581.9	493.4	424.9	376.3	354.7
57.5°	688.4	685.1	704.7	715.7	703.7	636.8	540.3	456.5	390.0	345.0	323.4
60°	609.5	606.9	627.5	645.5	644.2	587.9	497.1	416.6	355.0	313.4	295.1
62.5°	535.4	532.4	553.0	574.3	581.9	535.7	454.2	377.3	320.1	281.8	265.5
65°	467.1	464.1	481.8	503.7	517.7	481.1	407.9	336.7	284.8	249.9	235.9
67.5°	404.6	404.6	415.6	435.9	452.8	425.2	360.7	298.1	248.5	220.3	206.3
70°	346.0	345.7	353.7	368.0	387.6	365.3	312.8	257.5	214.3	189.3	177.0
72.5°	290.5	292.8	295.8	306.8	327.4	308.1	265.2	217.6	180.7	158.7	148.4
75°	237.6	237.2	241.6	251.2	266.2	251.9	217.6	178.7	147.4	129.4	120.4
77.5°	187.0	186.7	190.3	196.0	208.6	197.3	171.7	142.7	114.8	99.8	93.5
80°	139.4	139.4	142.7	145.7	155.0	146.1	128.1	106.8	84.2	72.5	67.5
82.5°	96.8	98.8	97.5	101.5	106.8	99.2	87.8	73.2	55.9	47.9	44.6
85°	58.9	60.6	58.9	62.2	64.5	57.9	52.2	43.6	32.3	27.0	24.6
87.5°	30.3	29.9	29.6	31.3	31.9	27.9	24.6	21.0	14.3	11.0	9.3
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°	809.5	809.5	809.5	809.5	809.5	809.5	809.5	809.5	809.5	809.5
2.5°	800.9	802.9	799.9	788.9	784.6	779.9	777.9	775.9	779.6	778.6
5°	794.2	791.9	784.2	770.3	762.9	755.3	751.6	749.3	754.3	753.3
7.5°	785.2	778.6	767.3	750.3	741.0	730.7	725.7	722.7	726.0	725.3
10°	773.9	762.9	749.0	728.7	717.7	706.4	700.7	696.4	699.1	698.7
12.5°	759.6	745.3	728.3	705.4	694.1	682.4	677.4	674.4	677.8	676.8
15°	743.6	726.3	706.7	683.4	671.1	660.5	656.8	654.5	657.1	657.1
17.5°	726.0	705.7	684.1	660.5	648.8	640.5	636.8	635.2	636.5	638.5
20°	706.4	683.7	660.5	637.5	627.5	618.9	615.5	613.9	616.9	615.5
22.5°	684.7	660.8	636.5	614.9	605.9	597.2	593.9	592.9	596.2	594.9
25°	661.8	635.8	611.9	592.2	583.3	575.9	572.9	572.0	573.6	575.3
27.5°	640.2	610.9	587.3	569.6	561.6	554.7	552.0	550.3	551.7	553.7
30°	613.9	585.6	562.3	546.0	538.3	531.7	529.7	528.4	530.4	532.0
32.5°	589.3	560.6	537.3	521.4	514.7	508.4	508.1	507.4	509.7	511.7
35°	562.6	534.7	512.1	497.1	490.8	485.4	486.4	487.4	490.1	492.4
37.5°	535.7	508.4	486.8	473.1	467.1	462.8	465.8	467.1	470.8	473.1
40°	508.4	481.1	461.2	448.8	442.9	440.9	445.2	448.2	452.5	454.5
42.5°	480.5	455.2	435.2	423.9	418.9	418.9	424.6	429.2	434.2	436.2
45°	452.5	427.9	408.9	398.6	394.9	397.6	404.3	410.2	416.6	418.6
47.5°	424.2	400.3	383.0	373.6	371.7	375.6	384.0	391.9	399.3	401.9
50°	395.9	374.3	357.0	348.4	348.4	353.4	364.0	374.0	382.0	384.6
52.5°	367.7	347.0	329.4	323.1	324.4	331.4	343.7	354.0	363.0	365.7
55°	339.0	318.7	303.4	298.1	300.4	309.1	321.7	333.7	342.4	345.4
57.5°	310.8	291.5	277.5	273.2	276.5	286.1	300.8	311.1	320.1	322.7
60°	282.1	262.5	251.5	248.2	252.5	262.5	277.5	287.1	295.5	298.1
62.5°	253.9	235.6	225.9	222.9	227.9	238.6	253.2	261.9	268.2	270.8
65°	225.3	209.0	200.0	198.0	203.3	213.6	227.6	234.9	239.6	242.2
67.5°	197.0	183.0	174.7	173.0	178.7	188.0	201.0	205.0	209.3	211.9
70°	169.0	156.4	149.4	148.4	153.4	162.4	173.3	175.3	177.7	180.0
72.5°	141.4	131.4	124.4	124.1	128.8	136.1	145.1	145.4	146.1	148.4
75°	114.8	105.8	100.5	101.5	104.1	110.1	117.1	115.1	115.5	117.1
77.5°	89.2	81.8	78.2	78.9	80.9	85.2	89.8	87.5	86.2	87.8
80°	64.2	57.9	56.6	56.9	58.2	61.2	63.9	61.9	59.2	60.6
82.5°	42.3	38.3	37.6	37.9	38.9	40.6	41.3	38.3	37.6	38.6
85°	23.3	21.6	21.6	22.6	23.0	23.3	23.3	21.6	22.0	22.6
87.5°	9.3	9.3	10.3	11.3	10.6	9.3	8.0	5.3	5.3	6.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)