

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: P709052

Luminaire Tested: **4APN-X-X-RL830-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P709052
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN-X-X-RL830-UNV
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture READING Light
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

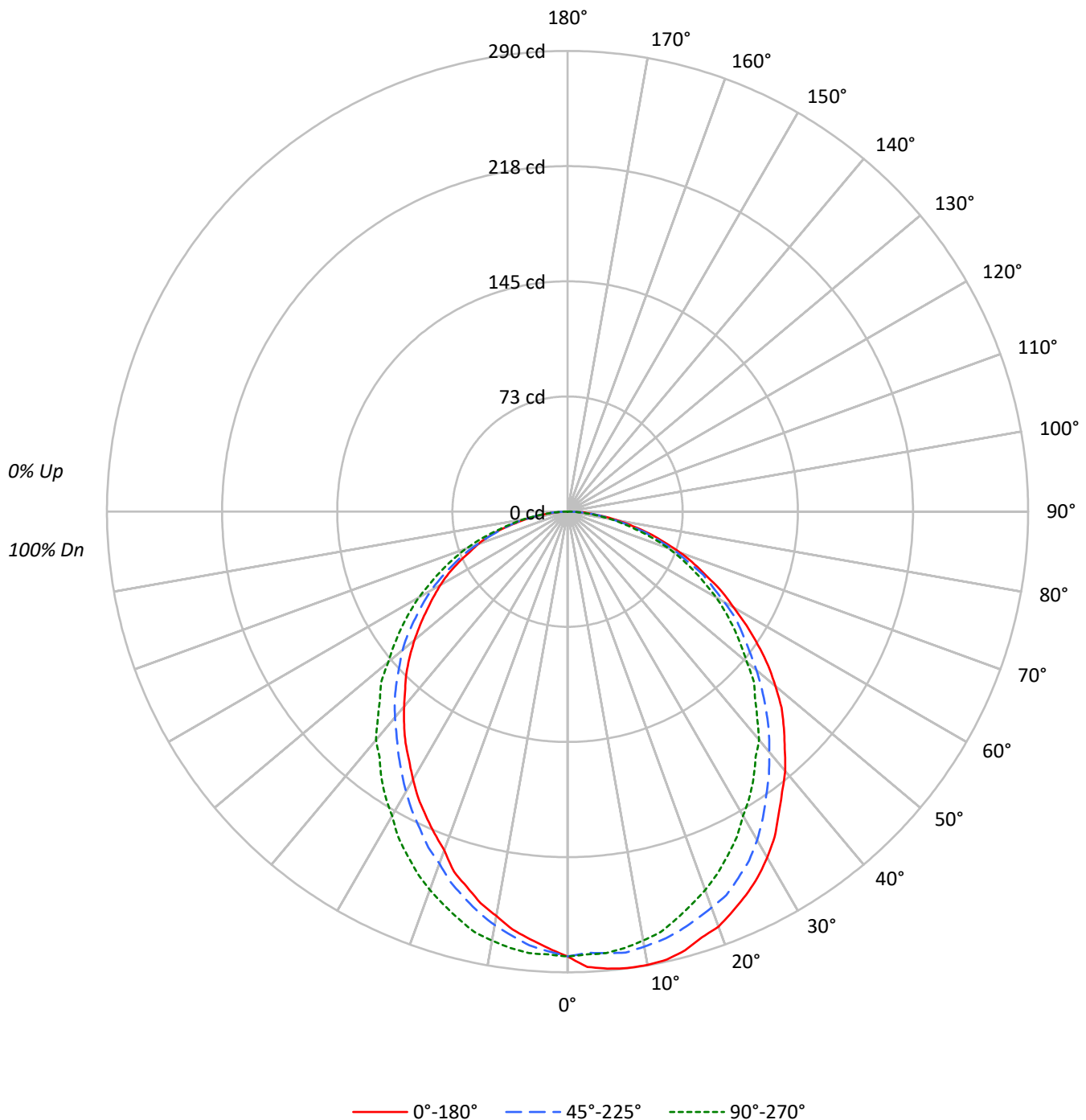
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 729.6 lumens
Efficiency: N/A
Efficacy: 48.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.3
Luminous Opening: Rectangular (W 0.5' x L: 4' 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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	109	104	100	96	106	102	98	94	98	94	91		94	91	89		90
2	99	91	84	78	96	89	83	77	85	80	76		82	78	74		79
3	90	80	72	65	88	78	71	65	75	69	64		73	67	62		70
4	83	71	62	56	81	70	61	55	67	60	54		65	59	54		63
5	76	63	55	48	74	62	54	48	60	53	47		58	52	47		56
6	71	57	48	42	69	56	48	42	54	47	41		53	46	41		51
7	65	52	43	37	64	51	43	37	50	42	37		48	41	36		47
8	61	48	39	33	59	47	39	33	45	38	33		44	38	33		43
9	57	44	35	30	56	43	35	30	42	35	30		41	34	30		40
10	53	40	32	27	52	40	32	27	39	32	27		38	31	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	1507	1507	1507
5°	1560	1507	1460
10°	1584	1498	1412
15°	1593	1478	1363
20°	1592	1452	1300
25°	1581	1417	1254
30°	1563	1373	1209
35°	1523	1342	1168
40°	1498	1318	1125
45°	1466	1271	1091
50°	1431	1234	1052
55°	1374	1198	1014
60°	1300	1164	994
65°	1239	1113	963
70°	1190	1067	943
75°	1104	961	898
80°	1004	883	821
85°	908	729	667



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.4	3.6
10°-20°	74.4	10.2
20°-30°	109.5	15.0
30°-40°	127.3	17.4
40°-50°	128.2	17.6
50°-60°	113.8	15.6
60°-70°	86.0	11.8
70°-80°	49.7	6.8
80°-90°	14.4	2.0
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°	210.3	28.8
0°-40°	337.6	46.3
0°-60°	579.5	79.4
0°-90°	729.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	729.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	280	280	280	280	280	
5°	289	279	279	274	270	28
15°	286	273	265	252	245	81
25°	266	254	239	220	211	123
35°	232	218	204	186	178	145
45°	193	177	167	152	143	149
55°	146	135	128	117	108	131
65°	97	94	87	80	76	97
75°	53	50	46	42	43	56
85°	15	14	12	12	11	17
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	280.0	280.0	280.0	280.0	280.0	280.0	280.0	280.0	280.0
2.5°	286.9	283.9	278.0	277.0	279.0	282.0	277.0	278.0	275.1
5°	288.8	284.9	279.0	276.1	279.0	279.0	274.1	273.1	270.2
7.5°	289.8	285.9	280.0	275.1	277.0	276.1	269.2	268.2	265.3
10°	289.8	285.9	278.0	273.1	274.1	272.1	264.3	262.3	258.4
12.5°	288.8	283.9	276.1	270.2	271.1	267.2	258.4	255.4	252.5
15°	285.9	280.0	273.1	267.2	265.3	261.3	251.5	248.6	244.6
17.5°	281.0	277.0	269.2	262.3	259.4	254.4	244.6	240.7	237.7
20°	278.0	272.1	265.3	257.4	253.5	246.6	235.8	231.8	226.9
22.5°	272.1	267.2	261.3	249.5	246.6	238.7	228.9	223.0	219.1
25°	266.2	260.3	254.4	243.6	238.7	231.8	220.1	215.1	211.2
27.5°	259.4	253.5	247.6	235.8	230.9	223.0	212.2	206.3	203.4
30°	251.5	245.6	238.7	228.9	221.0	214.2	203.4	198.4	194.5
32.5°	242.7	235.8	228.9	219.1	213.2	205.3	194.5	189.6	185.7
35°	231.8	225.0	218.1	210.2	204.3	196.5	185.7	181.7	177.8
37.5°	222.0	215.1	208.3	201.4	194.5	189.6	176.8	172.9	169.0
40°	213.2	204.3	197.5	191.6	187.6	177.8	169.0	164.1	160.1
42.5°	202.4	194.5	187.6	182.7	176.8	170.9	161.1	156.2	151.3
45°	192.6	183.7	176.8	172.9	167.0	160.1	152.3	147.4	143.4
47.5°	182.7	172.9	166.0	162.1	159.2	150.3	143.4	139.5	134.6
50°	170.9	162.1	155.2	152.3	147.4	140.5	135.6	130.7	125.7
52.5°	159.2	152.3	144.4	142.4	137.5	132.6	126.7	122.8	116.9
55°	146.4	140.5	134.6	132.6	127.7	123.8	116.9	114.0	108.1
57.5°	133.6	129.7	125.7	122.8	117.9	113.0	108.1	105.1	100.2
60°	120.8	118.9	114.0	114.9	108.1	103.2	99.2	96.3	92.3
62.5°	110.0	108.1	103.2	100.2	97.3	92.3	89.4	87.4	84.5
65°	97.3	96.3	94.3	90.4	87.4	82.5	79.6	77.6	75.6
67.5°	86.5	85.5	81.5	79.6	77.6	72.7	70.7	68.8	66.8
70°	75.6	73.7	71.7	70.7	67.8	62.9	60.9	58.9	59.9
72.5°	63.9	62.9	59.9	60.9	57.0	53.1	51.1	53.1	52.1
75°	53.1	52.1	50.1	48.1	46.2	43.2	42.2	44.2	43.2
77.5°	42.2	41.3	39.3	38.3	36.3	33.4	35.4	34.4	33.4
80°	32.4	31.4	29.5	29.5	28.5	25.5	26.5	26.5	26.5
82.5°	22.6	22.6	21.6	20.6	18.7	17.7	18.7	18.7	17.7
85°	14.7	14.7	13.8	12.8	11.8	10.8	11.8	11.8	10.8
87.5°	8.8	7.9	6.9	6.9	5.9	5.9	5.9	5.9	3.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)