

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-X-RL830-UNV-NP**

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-X-RL830-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture READING Light w/ Nature Pattern Lens
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

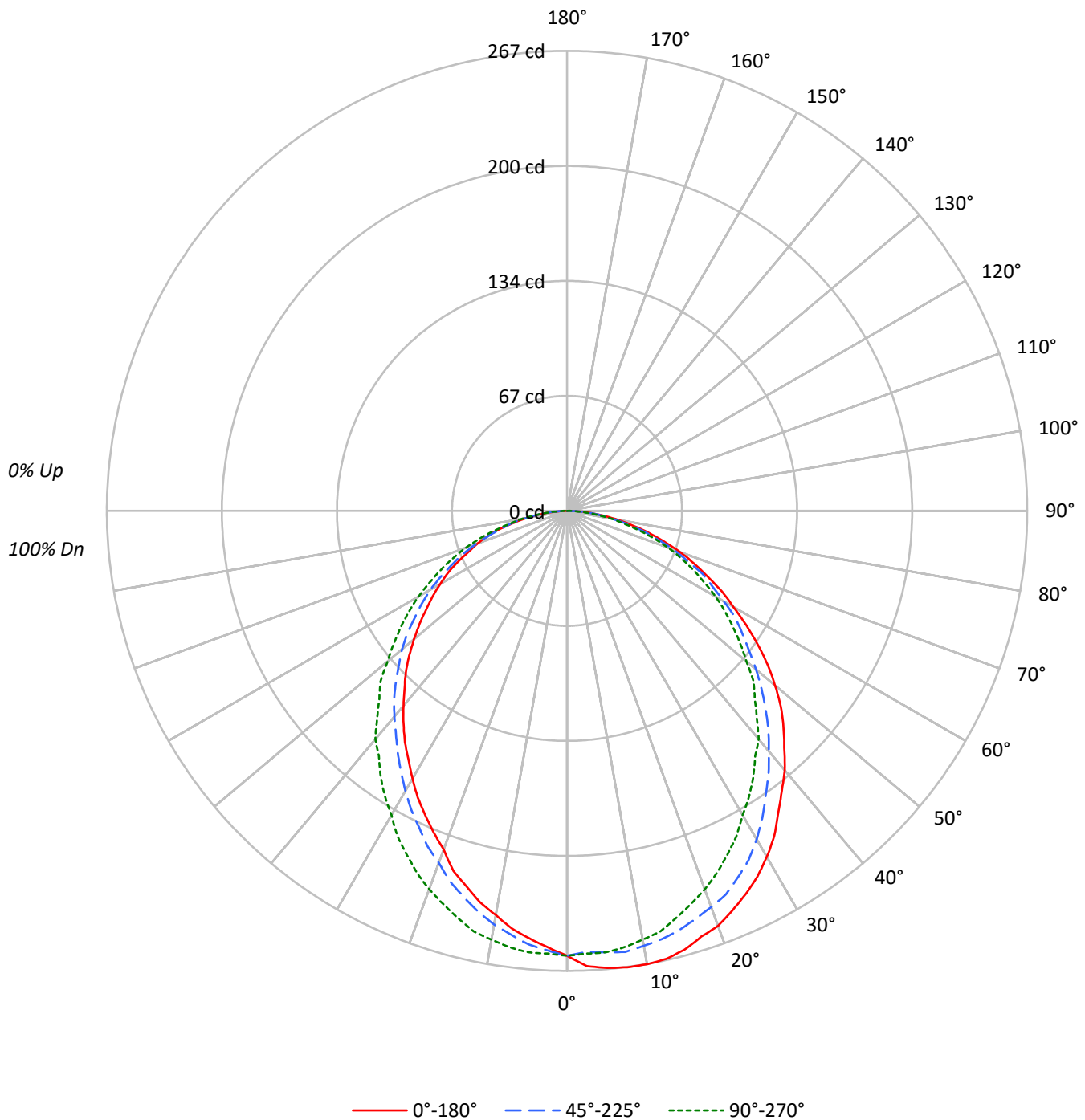
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 672.7 lumens
Efficiency: N/A
Efficacy: 44.5 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				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	109	104	100	96	106	102	98	94	98	94	91	94	91	89	90	88	86
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	75	72
3	90	80	72	65	88	78	71	65	75	69	64	73	67	62	70	65	61
4	83	71	62	56	81	70	61	55	67	60	54	65	59	54	63	57	53
5	76	63	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46
6	71	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36
8	61	48	39	33	59	47	39	33	45	38	33	44	38	33	43	37	33
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	1390	1390	1390
5°	1439	1390	1346
10°	1460	1381	1302
15°	1469	1363	1256
20°	1468	1338	1198
25°	1457	1307	1156
30°	1441	1267	1114
35°	1404	1238	1077
40°	1381	1215	1037
45°	1352	1172	1006
50°	1320	1138	970
55°	1267	1104	936
60°	1199	1073	916
65°	1142	1026	888
70°	1097	983	869
75°	1019	886	828
80°	927	815	756
85°	840	673	618



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.3	3.6
10°-20°	68.6	10.2
20°-30°	101.0	15.0
30°-40°	117.4	17.4
40°-50°	118.2	17.6
50°-60°	104.9	15.6
60°-70°	79.3	11.8
70°-80°	45.8	6.8
80°-90°	13.3	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°	193.9	28.8
0°-40°	311.2	46.3
0°-60°	534.3	79.4
0°-90°	672.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	672.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	258	258	258	258	258	
5°	266	257	257	253	249	25
15°	264	252	245	232	226	74
25°	245	235	220	203	195	113
35°	214	201	188	171	164	134
45°	178	163	154	140	132	137
55°	135	124	118	108	100	121
65°	90	87	81	73	70	89
75°	49	46	43	39	40	52
85°	14	13	11	11	10	16
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°	258.2	258.2	258.2	258.2	258.2	258.2	258.2	258.2	258.2
2.5°	264.5	261.8	256.3	255.4	257.2	260.0	255.4	256.3	253.6
5°	266.3	262.7	257.2	254.6	257.2	257.2	252.7	251.8	249.1
7.5°	267.2	263.6	258.2	253.6	255.4	254.6	248.2	247.3	244.6
10°	267.2	263.6	256.3	251.8	252.7	250.9	243.7	241.8	238.2
12.5°	266.3	261.8	254.6	249.1	250.0	246.4	238.2	235.5	232.8
15°	263.6	258.2	251.8	246.4	244.6	240.9	231.9	229.2	225.5
17.5°	259.1	255.4	248.2	241.8	239.2	234.6	225.5	221.9	219.2
20°	256.3	250.9	244.6	237.3	233.7	227.4	217.4	213.7	209.2
22.5°	250.9	246.4	240.9	230.0	227.4	220.1	211.0	205.6	202.0
25°	245.4	240.0	234.6	224.6	220.1	213.7	202.9	198.3	194.7
27.5°	239.2	233.7	228.3	217.4	212.9	205.6	195.6	190.2	187.5
30°	231.9	226.4	220.1	211.0	203.8	197.5	187.5	182.9	179.3
32.5°	223.8	217.4	211.0	202.0	196.6	189.3	179.3	174.8	171.2
35°	213.7	207.5	201.1	193.8	188.4	181.2	171.2	167.5	163.9
37.5°	204.7	198.3	192.1	185.7	179.3	174.8	163.0	159.4	155.8
40°	196.6	188.4	182.1	176.7	173.0	163.9	155.8	151.3	147.6
42.5°	186.6	179.3	173.0	168.4	163.0	157.6	148.5	144.0	139.5
45°	177.6	169.4	163.0	159.4	154.0	147.6	140.4	135.9	132.2
47.5°	168.4	159.4	153.1	149.5	146.8	138.6	132.2	128.6	124.1
50°	157.6	149.5	143.1	140.4	135.9	129.5	125.0	120.5	115.9
52.5°	146.8	140.4	133.1	131.3	126.8	122.3	116.8	113.2	107.8
55°	135.0	129.5	124.1	122.3	117.7	114.1	107.8	105.1	99.7
57.5°	123.2	119.6	115.9	113.2	108.7	104.2	99.7	96.9	92.4
60°	111.4	109.6	105.1	105.9	99.7	95.2	91.5	88.8	85.1
62.5°	101.4	99.7	95.2	92.4	89.7	85.1	82.4	80.6	77.9
65°	89.7	88.8	86.9	83.3	80.6	76.1	73.4	71.5	69.7
67.5°	79.8	78.8	75.1	73.4	71.5	67.0	65.2	63.4	61.6
70°	69.7	68.0	66.1	65.2	62.5	58.0	56.1	54.3	55.2
72.5°	58.9	58.0	55.2	56.1	52.6	49.0	47.1	49.0	48.0
75°	49.0	48.0	46.2	44.3	42.6	39.8	38.9	40.8	39.8
77.5°	38.9	38.1	36.2	35.3	33.5	30.8	32.6	31.7	30.8
80°	29.9	29.0	27.2	27.2	26.3	23.5	24.4	24.4	24.4
82.5°	20.8	20.8	19.9	19.0	17.2	16.3	17.2	17.2	16.3
85°	13.6	13.6	12.7	11.8	10.9	10.0	10.9	10.9	10.0
87.5°	8.1	7.3	6.4	6.4	5.4	5.4	5.4	5.4	3.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)