

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: P709056

Luminaire Tested: **4APN-X-X-RL930-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P709056
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-RL930-UNV
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture READING Light
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

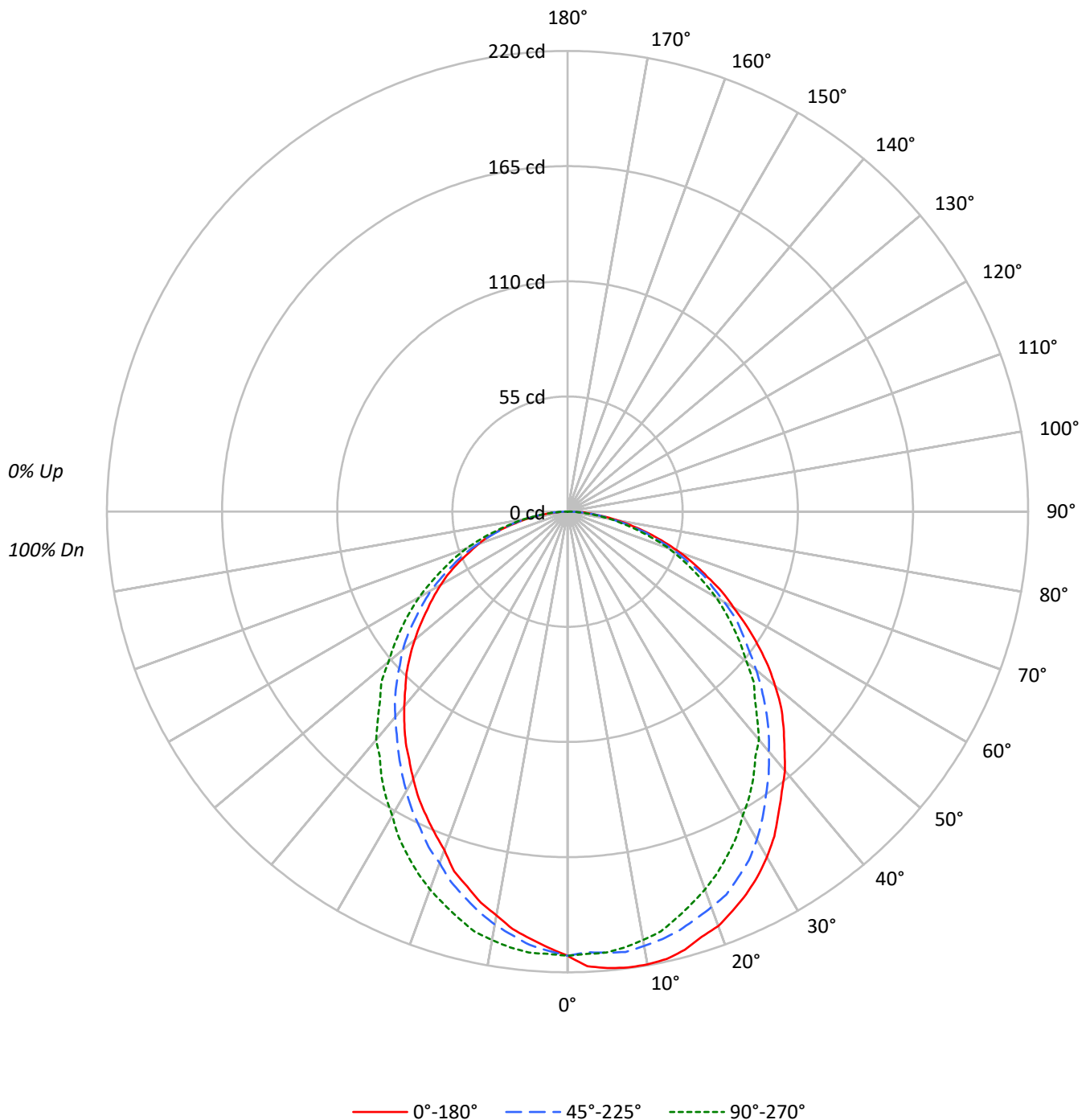
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 552.7 lumens
Efficiency: N/A
Efficacy: 36.6 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	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	109	104	100	96	106	102	98	94	98	94	91	94	91	89	90	88	86	84		
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	75	72	70		
3	90	80	72	65	88	78	71	65	75	69	64	73	67	62	70	65	61	59		
4	83	71	62	56	81	70	61	55	67	60	54	65	59	54	63	57	53	51		
5	76	63	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44		
6	71	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39		
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34		
8	61	48	39	33	59	47	39	33	45	38	33	44	38	33	43	37	33	31		
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	28		
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	1142	1142	1142
5°	1182	1142	1106
10°	1200	1135	1069
15°	1207	1120	1032
20°	1206	1100	985
25°	1198	1074	950
30°	1184	1041	916
35°	1154	1017	885
40°	1135	999	852
45°	1110	963	827
50°	1084	934	798
55°	1041	908	768
60°	985	882	753
65°	939	843	730
70°	902	809	714
75°	836	728	680
80°	762	669	623
85°	692	550	506



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	20.0	3.6
10°-20°	56.4	10.2
20°-30°	83.0	15.0
30°-40°	96.4	17.4
40°-50°	97.1	17.6
50°-60°	86.2	15.6
60°-70°	65.2	11.8
70°-80°	37.6	6.8
80°-90°	10.9	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°	159.3	28.8
0°-40°	255.7	46.3
0°-60°	439.0	79.4
0°-90°	552.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	552.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	212	212	212	212	212	
5°	219	211	211	208	205	21
15°	217	207	201	190	185	61
25°	202	193	181	167	160	93
35°	176	165	155	141	135	110
45°	146	134	126	115	109	113
55°	111	102	97	89	82	99
65°	74	72	66	60	57	73
75°	40	38	35	32	33	43
85°	11	10	9	9	8	13
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°	212.1	212.1	212.1	212.1	212.1	212.1	212.1	212.1	212.1
2.5°	217.3	215.1	210.6	209.9	211.4	213.6	209.9	210.6	208.4
5°	218.8	215.8	211.4	209.1	211.4	211.4	207.7	206.9	204.7
7.5°	219.6	216.6	212.1	208.4	209.9	209.1	203.9	203.2	201.0
10°	219.6	216.6	210.6	206.9	207.7	206.2	200.2	198.7	195.7
12.5°	218.8	215.1	209.1	204.7	205.4	202.4	195.7	193.5	191.3
15°	216.6	212.1	206.9	202.4	201.0	198.0	190.5	188.3	185.3
17.5°	212.9	209.9	203.9	198.7	196.5	192.8	185.3	182.4	180.1
20°	210.6	206.2	201.0	195.0	192.0	186.8	178.6	175.7	171.9
22.5°	206.2	202.4	198.0	189.1	186.8	180.9	173.4	169.0	166.0
25°	201.7	197.2	192.8	184.6	180.9	175.7	166.7	163.0	160.0
27.5°	196.5	192.0	187.6	178.6	174.9	169.0	160.8	156.3	154.1
30°	190.5	186.1	180.9	173.4	167.5	162.3	154.1	150.3	147.4
32.5°	183.8	178.6	173.4	166.0	161.5	155.6	147.4	143.6	140.7
35°	175.7	170.4	165.2	159.3	154.8	148.9	140.7	137.7	134.7
37.5°	168.2	163.0	157.8	152.6	147.4	143.6	134.0	131.0	128.0
40°	161.5	154.8	149.6	145.1	142.2	134.7	128.0	124.3	121.3
42.5°	153.3	147.4	142.2	138.4	134.0	129.5	122.1	118.3	114.6
45°	145.9	139.2	134.0	131.0	126.5	121.3	115.4	111.6	108.7
47.5°	138.4	131.0	125.8	122.8	120.6	113.9	108.7	105.7	102.0
50°	129.5	122.8	117.6	115.4	111.6	106.4	102.7	99.0	95.3
52.5°	120.6	115.4	109.4	107.9	104.2	100.5	96.0	93.0	88.6
55°	110.9	106.4	102.0	100.5	96.8	93.8	88.6	86.3	81.9
57.5°	101.2	98.2	95.3	93.0	89.3	85.6	81.9	79.6	75.9
60°	91.5	90.1	86.3	87.1	81.9	78.2	75.2	72.9	70.0
62.5°	83.4	81.9	78.2	75.9	73.7	70.0	67.7	66.2	64.0
65°	73.7	72.9	71.5	68.5	66.2	62.5	60.3	58.8	57.3
67.5°	65.5	64.8	61.8	60.3	58.8	55.1	53.6	52.1	50.6
70°	57.3	55.8	54.3	53.6	51.4	47.6	46.1	44.7	45.4
72.5°	48.4	47.6	45.4	46.1	43.2	40.2	38.7	40.2	39.4
75°	40.2	39.4	38.0	36.5	35.0	32.7	32.0	33.5	32.7
77.5°	32.0	31.3	29.8	29.0	27.5	25.3	26.8	26.1	25.3
80°	24.6	23.8	22.3	22.3	21.6	19.4	20.1	20.1	20.1
82.5°	17.1	17.1	16.4	15.6	14.1	13.4	14.1	14.1	13.4
85°	11.2	11.2	10.4	9.7	8.9	8.2	8.9	8.9	8.2
87.5°	6.7	6.0	5.2	5.2	4.5	4.5	4.5	4.5	3.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)