

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: P708912

Luminaire Tested: **24APR-X-X-UNV-RL930**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P708912
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24APR-X-X-UNV-RL930
Description: ArcMed Patient Recessed 2x4 Fixture READING Light
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

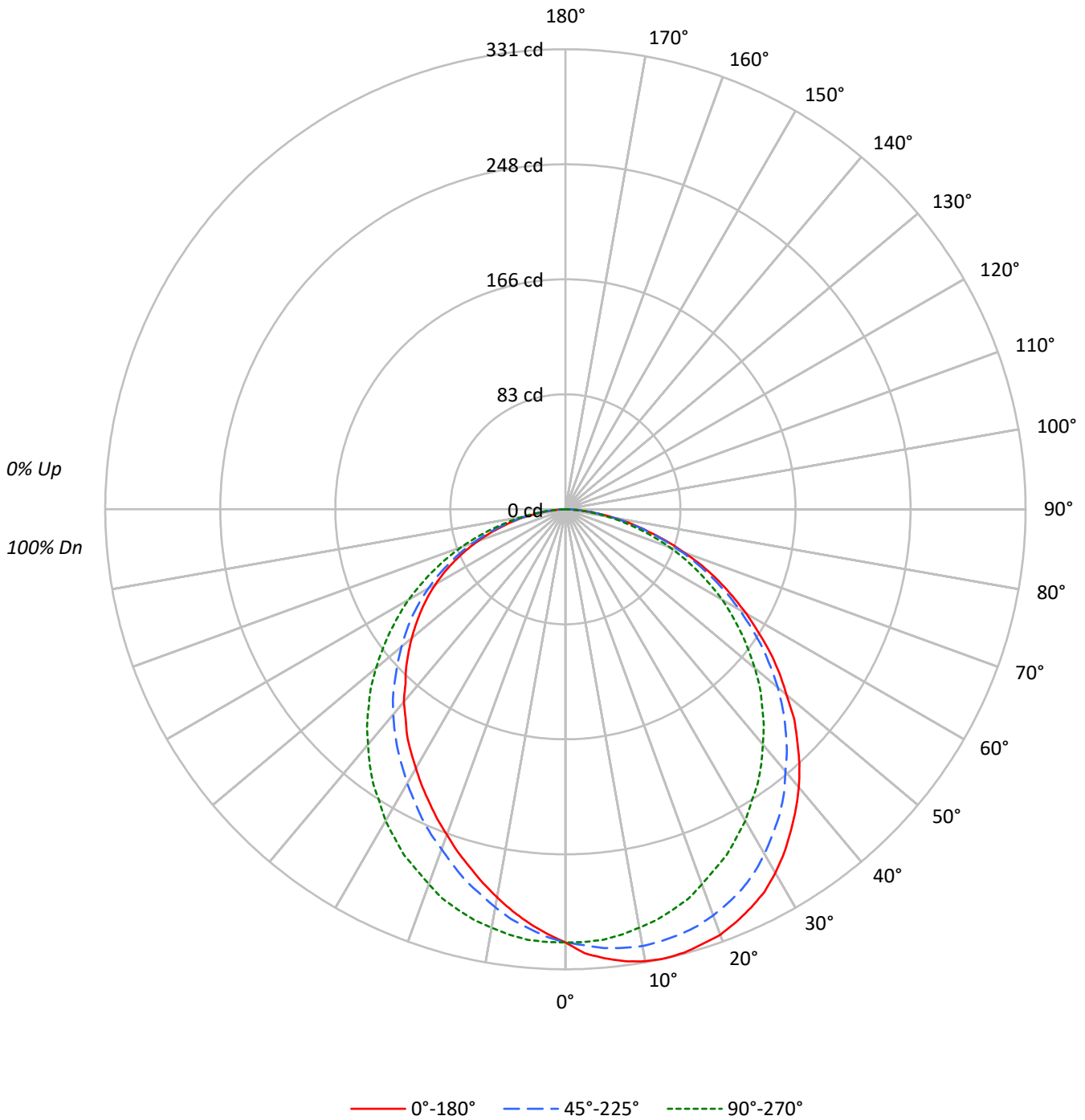
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 857.2 lumens
Efficiency: N/A
Efficacy: 61.2 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.23 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 14
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				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	98	94	91	94	91	89	90	88	86	86	86	86	84
2	99	91	84	78	96	89	83	77	85	80	75	82	78	74	79	75	72	72	72	72	70
3	90	80	72	65	88	78	71	65	75	69	63	72	67	62	70	65	61	61	61	61	59
4	83	71	62	55	80	69	61	55	67	60	54	64	58	53	62	57	53	53	53	53	50
5	76	63	54	48	74	62	54	47	60	52	47	58	51	46	56	50	46	46	46	46	44
6	70	57	48	42	68	56	47	41	54	47	41	52	46	41	51	45	40	40	40	40	38
7	65	52	43	37	63	51	42	37	49	42	36	48	41	36	46	40	36	36	36	36	34
8	61	47	39	33	59	46	38	33	45	38	32	44	37	32	43	37	32	32	32	32	30
9	57	43	35	29	55	43	35	29	41	34	29	40	34	29	39	33	29	29	29	29	27
10	53	40	32	27	52	39	32	27	38	31	27	37	31	26	37	31	26	26	26	26	25

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	419	419	419
5°	438	420	404
10°	451	418	387
15°	460	416	371
20°	466	411	357
25°	469	408	345
30°	469	402	334
35°	464	396	326
40°	459	388	317
45°	449	381	308
50°	434	372	302
55°	422	361	297
60°	404	350	290
65°	386	334	280
70°	357	313	263
75°	321	282	240
80°	277	242	208
85°	218	184	150



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.5	3.4
10°-20°	84.0	9.8
20°-30°	126.1	14.7
30°-40°	150.1	17.5
40°-50°	153.8	17.9
50°-60°	137.3	16.0
60°-70°	103.7	12.1
70°-80°	58.0	6.8
80°-90°	14.8	1.7
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°	239.5	27.9
0°-40°	389.7	45.5
0°-60°	680.7	79.4
0°-90°	857.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	857.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	312	312	312	312	312	
5°	324	317	311	303	299	31
15°	330	317	298	277	266	93
25°	316	301	274	245	232	146
35°	283	268	241	210	199	177
45°	236	224	200	173	162	182
55°	180	173	154	135	126	160
65°	121	117	105	92	88	120
75°	62	61	54	49	46	66
85°	14	14	12	11	10	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°	311.6	311.6	311.6	311.6	311.6	311.6	311.6	311.6	311.6
2.5°	319.8	316.1	313.9	313.1	311.6	310.9	307.9	306.4	305.7
5°	324.3	320.6	316.9	313.9	310.9	307.9	302.7	299.7	299.0
7.5°	328.0	323.5	318.3	314.6	308.7	304.2	297.5	293.0	291.6
10°	330.2	325.8	319.1	313.1	305.7	299.0	290.8	284.9	283.4
12.5°	331.0	326.5	318.3	311.6	302.7	293.8	283.4	277.4	275.2
15°	330.2	325.0	316.9	309.4	298.3	287.8	276.7	269.2	266.3
17.5°	328.0	323.5	314.6	305.7	293.8	281.1	268.5	261.1	258.1
20°	325.8	320.6	310.9	301.2	287.1	273.7	260.3	252.1	249.2
22.5°	321.3	316.9	306.4	295.3	280.4	267.0	252.9	244.0	241.0
25°	316.1	311.6	301.2	289.3	274.5	258.8	244.7	235.8	232.1
27.5°	310.2	305.0	294.5	282.6	266.3	250.7	235.8	226.9	223.9
30°	302.0	297.5	286.4	274.5	258.8	242.5	227.6	218.7	215.0
32.5°	293.0	289.3	277.4	265.5	249.2	233.5	218.7	209.7	206.8
35°	282.6	278.2	268.5	256.6	241.0	224.6	210.5	200.8	198.6
37.5°	272.2	267.8	258.1	246.9	231.3	215.0	201.6	191.9	188.9
40°	261.1	256.6	246.2	237.3	220.9	206.0	192.6	183.7	180.7
42.5°	249.2	244.7	235.8	226.1	211.2	196.4	183.7	173.3	170.3
45°	235.8	232.1	223.9	215.0	200.1	186.7	173.3	164.4	162.1
47.5°	223.1	219.4	212.0	203.1	189.7	176.3	163.6	155.5	153.2
50°	207.5	206.0	199.3	191.2	177.8	165.1	154.0	146.5	144.3
52.5°	194.1	192.6	185.9	178.5	165.9	154.7	144.3	137.6	135.4
55°	180.0	177.8	172.6	165.1	154.0	143.5	134.6	127.9	126.4
57.5°	164.4	162.9	158.4	152.5	142.1	133.1	124.2	119.0	117.5
60°	150.2	148.8	144.3	139.8	130.2	121.2	113.8	108.6	107.8
62.5°	135.4	134.6	130.9	126.4	117.5	110.1	103.4	98.9	98.2
65°	121.2	119.7	116.8	113.1	104.9	98.9	92.2	88.5	87.8
67.5°	106.4	104.9	102.6	99.7	92.2	87.0	81.8	78.1	77.4
70°	90.7	90.7	88.5	86.3	79.6	75.9	70.7	67.7	66.9
72.5°	76.6	75.9	74.4	72.1	66.9	64.0	59.5	57.3	56.5
75°	61.7	61.0	61.0	58.8	54.3	51.3	49.1	46.9	46.1
77.5°	49.1	48.3	47.6	46.1	42.4	40.2	37.9	36.4	36.4
80°	35.7	35.7	35.7	34.2	31.2	29.8	28.3	26.8	26.8
82.5°	23.8	24.5	23.8	23.1	20.8	20.1	19.3	17.9	17.9
85°	14.1	14.1	14.1	14.9	11.9	11.2	11.2	10.4	9.7
87.5°	6.0	6.7	6.0	6.0	4.5	4.5	3.7	3.7	3.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)