

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: P708910

Luminaire Tested: **24APR-X-X-UNV-RL840**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P708910
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-RL840
Description: ArcMed Patient Recessed 2x4 Fixture READING Light
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

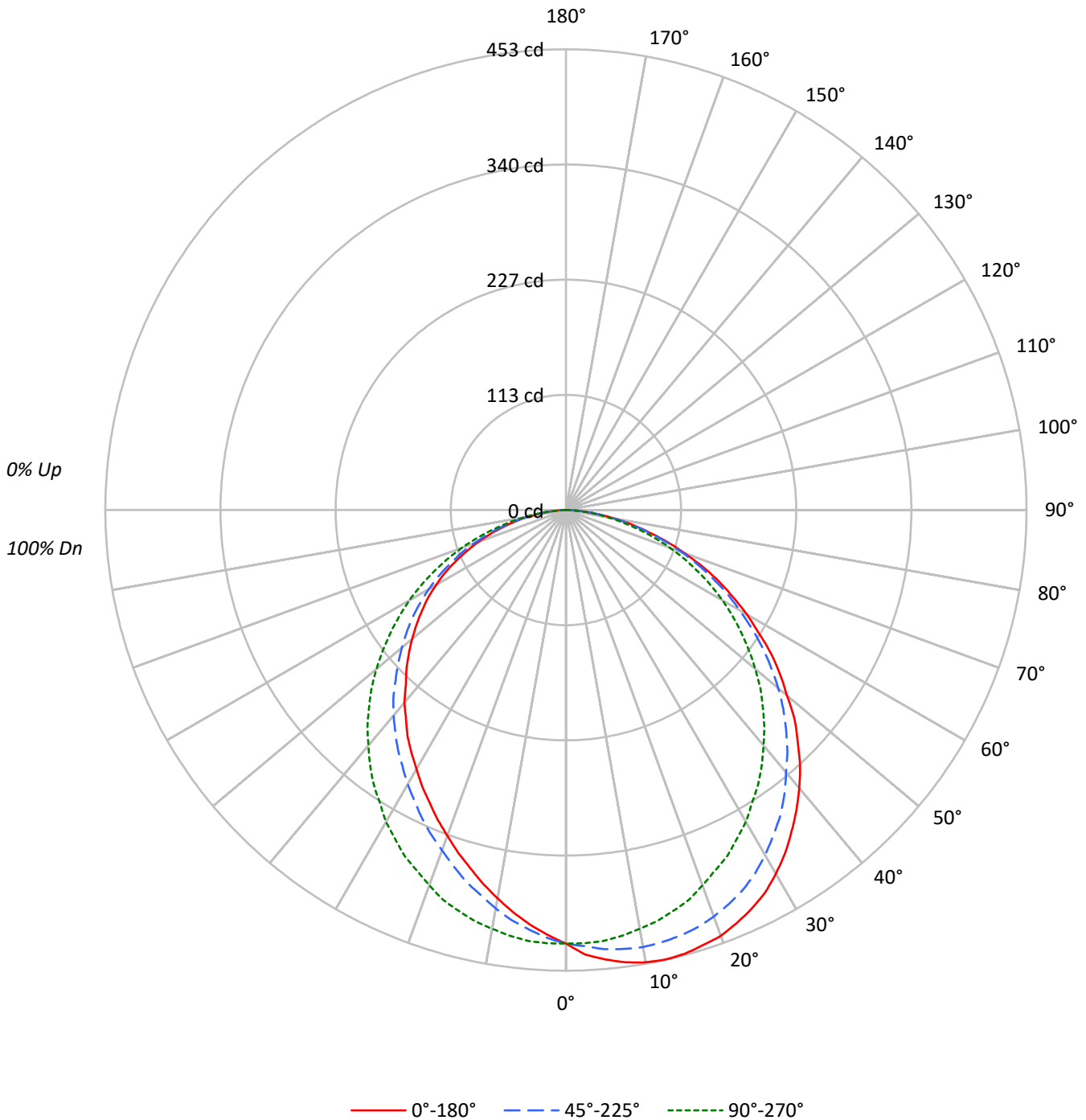
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1172.5 lumens
Efficiency: N/A
Efficacy: 83.7 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				
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°	574	574	574
5°	599	574	552
10°	617	571	530
15°	629	568	507
20°	638	562	488
25°	642	557	471
30°	642	550	457
35°	635	541	446
40°	627	531	434
45°	614	521	422
50°	594	509	413
55°	578	494	406
60°	553	479	397
65°	528	457	382
70°	488	428	360
75°	439	386	328
80°	378	331	284
85°	298	252	204



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.3	3.4
10°-20°	114.8	9.8
20°-30°	172.4	14.7
30°-40°	205.4	17.5
40°-50°	210.3	17.9
50°-60°	187.8	16.0
60°-70°	141.8	12.1
70°-80°	79.3	6.8
80°-90°	20.3	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°	327.6	27.9
0°-40°	533.0	45.5
0°-60°	931.1	79.4
0°-90°	1172.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1172.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	426	426	426	426	426	
5°	444	433	425	414	409	43
15°	452	433	408	378	364	128
25°	432	412	375	335	317	199
35°	387	367	330	288	272	242
45°	322	306	274	237	222	249
55°	246	236	211	184	173	219
65°	166	160	143	126	120	164
75°	84	83	74	67	63	90
85°	19	19	16	15	13	23
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°	426.3	426.3	426.3	426.3	426.3	426.3	426.3	426.3	426.3
2.5°	437.5	432.4	429.3	428.3	426.3	425.3	421.2	419.1	418.1
5°	443.6	438.5	433.4	429.3	425.3	421.2	414.1	410.0	409.0
7.5°	448.6	442.5	435.4	430.3	422.2	416.1	406.9	400.8	398.8
10°	451.7	445.6	436.4	428.3	418.1	409.0	397.8	389.6	387.6
12.5°	452.7	446.6	435.4	426.3	414.1	401.9	387.6	379.5	376.4
15°	451.7	444.6	433.4	423.2	408.0	393.7	378.5	368.3	364.2
17.5°	448.6	442.5	430.3	418.1	401.9	384.6	367.3	357.1	353.0
20°	445.6	438.5	425.3	412.0	392.7	374.4	356.1	344.9	340.8
22.5°	439.5	433.4	419.1	403.9	383.5	365.2	345.9	333.7	329.6
25°	432.4	426.3	412.0	395.7	375.4	354.0	334.7	322.5	317.4
27.5°	424.2	417.1	402.9	386.6	364.2	342.8	322.5	310.3	306.2
30°	413.0	406.9	391.7	375.4	354.0	331.7	311.3	299.1	294.0
32.5°	400.8	395.7	379.5	363.2	340.8	319.4	299.1	286.9	282.8
35°	386.6	380.5	367.3	351.0	329.6	307.2	287.9	274.7	271.6
37.5°	372.3	366.2	353.0	337.8	316.4	294.0	275.7	262.5	258.4
40°	357.1	351.0	336.7	324.5	302.2	281.8	263.5	251.3	247.2
42.5°	340.8	334.7	322.5	309.3	288.9	268.6	251.3	237.0	233.0
45°	322.5	317.4	306.2	294.0	273.7	255.4	237.0	224.8	221.8
47.5°	305.2	300.1	289.9	277.7	259.4	241.1	223.8	212.6	209.6
50°	283.8	281.8	272.6	261.5	243.1	225.9	210.6	200.4	197.4
52.5°	265.5	263.5	254.3	244.2	226.9	211.6	197.4	188.2	185.2
55°	246.2	243.1	236.0	225.9	210.6	196.3	184.1	175.0	172.9
57.5°	224.8	222.8	216.7	208.6	194.3	182.1	169.9	162.8	160.7
60°	205.5	203.5	197.4	191.3	178.0	165.8	155.7	148.5	147.5
62.5°	185.2	184.1	179.1	172.9	160.7	150.6	141.4	135.3	134.3
65°	165.8	163.8	159.7	154.6	143.4	135.3	126.2	121.1	120.0
67.5°	145.5	143.4	140.4	136.3	126.2	119.0	111.9	106.8	105.8
70°	124.1	124.1	121.1	118.0	108.9	103.8	96.6	92.6	91.6
72.5°	104.8	103.8	101.7	98.7	91.6	87.5	81.4	78.3	77.3
75°	84.4	83.4	83.4	80.4	74.3	70.2	67.1	64.1	63.1
77.5°	67.1	66.1	65.1	63.1	58.0	54.9	51.9	49.8	49.8
80°	48.8	48.8	48.8	46.8	42.7	40.7	38.7	36.6	36.6
82.5°	32.6	33.6	32.6	31.5	28.5	27.5	26.5	24.4	24.4
85°	19.3	19.3	19.3	20.3	16.3	15.3	15.3	14.2	13.2
87.5°	8.1	9.2	8.1	8.1	6.1	6.1	5.1	5.1	4.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)