

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: P708894

Luminaire Tested: **22APR-X-X-UNV-RL840**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P708894
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22APR-X-X-UNV-RL840
Description: ArcMed Patient Recessed 2x2 Fixture READING Light
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

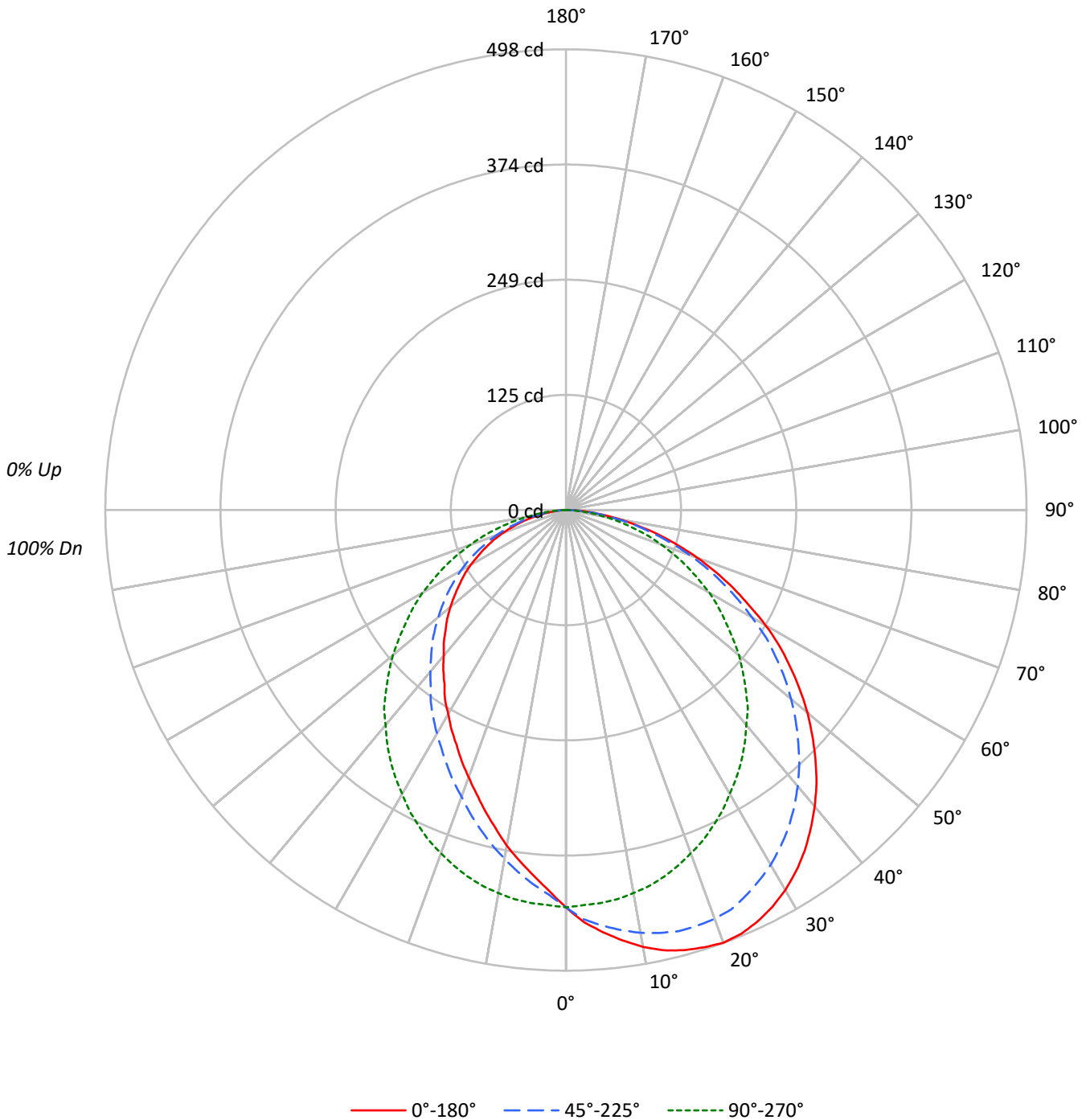
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1198.1 lumens
Efficiency: N/A
Efficacy: 85.6 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.23 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' 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

TEST NUMBER: P708894
CATALOG NUMBER: 22APR-X-X-UNV-RL840

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	64	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	47	74	62	54	47	60	52	47	58	51	46	56	50	46	46	46	46	44
6	70	57	48	41	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	36	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	26	37	31	26	36	31	26	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	1156	1156	1156
5°	1237	1152	1072
10°	1310	1149	1007
15°	1372	1143	939
20°	1425	1131	880
25°	1457	1118	831
30°	1474	1101	791
35°	1478	1087	752
40°	1469	1065	722
45°	1453	1046	701
50°	1428	1023	682
55°	1390	989	659
60°	1342	964	641
65°	1270	920	609
70°	1194	865	569
75°	1090	783	508
80°	947	679	411
85°	784	534	284



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.7	3.4
10°-20°	116.7	9.7
20°-30°	175.9	14.7
30°-40°	210.0	17.5
40°-50°	215.5	18.0
50°-60°	192.8	16.1
60°-70°	144.8	12.1
70°-80°	81.0	6.8
80°-90°	20.6	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°	333.3	27.8
0°-40°	543.4	45.4
0°-60°	951.7	79.4
0°-90°	1198.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1198.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	430	430	430	430	430	
5°	458	451	426	406	397	44
15°	493	471	410	357	337	139
25°	491	460	377	304	280	226
35°	450	419	331	254	229	281
45°	382	355	275	205	184	294
55°	296	277	211	156	140	265
65°	200	187	144	106	96	197
75°	105	98	75	54	49	111
85°	25	23	17	11	9	30
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°	429.5	429.5	429.5	429.5	429.5	429.5	429.5	429.5	429.5
2.5°	445.8	443.8	442.8	435.6	427.5	424.4	416.3	416.3	412.2
5°	458.0	456.0	450.9	439.7	426.5	417.3	406.1	402.0	397.0
7.5°	469.2	465.2	458.0	441.7	424.4	410.2	394.9	387.8	382.7
10°	479.4	475.3	464.1	443.8	420.4	402.0	382.7	373.5	368.5
12.5°	487.5	482.5	468.2	443.8	416.3	391.9	370.5	358.3	352.2
15°	492.6	487.5	471.3	442.8	410.2	382.7	357.3	344.0	336.9
17.5°	495.7	489.6	471.3	439.7	403.1	371.5	344.0	328.8	321.6
20°	497.7	490.6	470.2	434.6	394.9	360.3	329.8	315.5	307.4
22.5°	495.7	487.5	467.2	429.5	386.8	348.1	317.6	301.3	294.2
25°	490.6	483.5	460.1	421.4	376.6	336.9	304.3	287.0	279.9
27.5°	483.5	476.4	451.9	412.2	366.4	324.7	291.1	273.8	267.7
30°	474.3	466.2	442.8	402.0	354.2	311.5	278.9	261.6	254.5
32.5°	463.1	455.0	431.6	391.9	343.0	299.2	266.7	249.4	243.3
35°	449.9	442.8	419.4	377.6	330.8	287.0	254.5	235.1	229.0
37.5°	434.6	427.5	405.1	365.4	317.6	274.8	240.2	223.9	217.8
40°	418.3	411.2	389.8	350.1	303.3	261.6	228.0	211.7	205.6
42.5°	401.0	393.9	373.5	335.9	291.1	248.4	215.8	200.5	195.4
45°	381.7	375.6	355.2	319.6	274.8	233.1	204.6	189.3	184.2
47.5°	361.3	355.2	336.9	303.3	259.5	219.9	192.4	178.1	174.1
50°	341.0	334.9	317.6	285.0	244.3	205.6	180.2	166.9	162.9
52.5°	318.6	313.5	298.2	267.7	227.0	192.4	167.9	156.7	151.7
55°	296.2	291.1	276.9	249.4	210.7	179.1	155.7	144.5	140.5
57.5°	273.8	269.7	256.5	228.0	195.4	164.9	143.5	133.3	130.3
60°	249.4	245.3	232.1	208.7	179.1	150.6	131.3	122.1	119.1
62.5°	222.9	219.9	209.7	188.3	160.8	136.4	119.1	109.9	106.9
65°	199.5	196.4	187.3	169.0	144.5	122.1	105.9	98.7	95.7
67.5°	175.1	173.0	164.9	148.6	127.2	107.9	92.6	86.5	84.5
70°	151.7	149.6	142.5	128.2	109.9	92.6	80.4	74.3	72.3
72.5°	127.2	127.2	120.1	107.9	93.6	77.4	67.2	63.1	60.1
75°	104.8	102.8	97.7	88.6	75.3	63.1	53.9	49.9	48.9
77.5°	81.4	81.4	77.4	69.2	60.1	48.9	42.7	38.7	37.7
80°	61.1	61.1	57.0	50.9	43.8	35.6	30.5	28.5	26.5
82.5°	41.7	41.7	38.7	33.6	29.5	23.4	20.4	18.3	17.3
85°	25.4	24.4	23.4	20.4	17.3	13.2	11.2	10.2	9.2
87.5°	12.2	12.2	11.2	8.1	7.1	5.1	4.1	3.1	3.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)