

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: P708882

Luminaire Tested: **22APR-38-89L940-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P708882
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22APR-38-89L940-UNV
Description: ArcMed Patient Recessed 2x2 Fixture Ambient and Exam Light
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

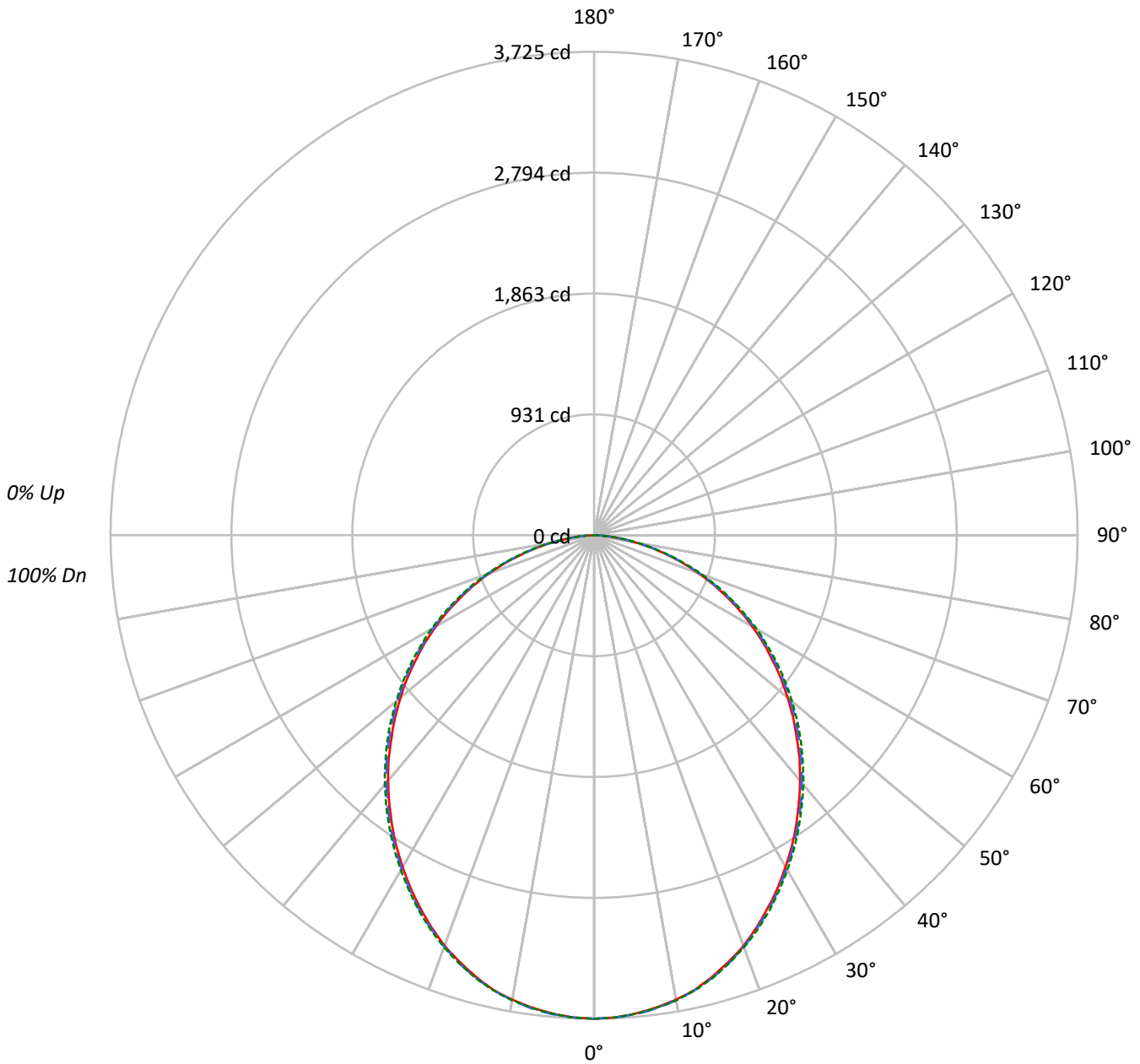
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9689.3 lumens
Efficiency: N/A
Efficacy: 83.0 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.19 / 1.31
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 116.7
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



— 0°-180° - - 45°-225° ···· 90°-270°



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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	95	98	95	92	94	91	89	90	88	86	86	86	86	84
2	99	91	84	79	97	89	83	78	86	81	76	82	78	74	79	76	73	73	73	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	62	62	62	60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	53	53	53	51
5	76	64	55	48	74	63	54	48	61	53	47	59	52	47	57	51	46	46	46	46	44
6	71	57	49	42	69	57	48	42	55	47	42	53	46	41	51	46	41	41	41	41	39
7	66	52	44	37	64	51	43	37	50	42	37	48	42	37	47	41	36	36	36	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	33	33	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	30	30	30	28
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	27	27	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10025	10025	10025
5°	9992	10004	9996
10°	9929	9944	9942
15°	9808	9834	9838
20°	9639	9659	9673
25°	9407	9451	9481
30°	9167	9218	9251
35°	8922	8983	9029
40°	8671	8739	8810
45°	8401	8505	8579
50°	8151	8248	8332
55°	7871	7976	8075
60°	7584	7684	7793
65°	7209	7327	7411
70°	6746	6838	6936
75°	6067	6180	6260
80°	5123	5255	5303
85°	3835	4001	3977



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	351.5	3.6
10°-20°	994.1	10.3
20°-30°	1465.3	15.1
30°-40°	1710.1	17.6
40°-50°	1723.4	17.8
50°-60°	1521.0	15.7
60°-70°	1137.6	11.7
70°-80°	630.4	6.5
80°-90°	155.9	1.6
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°	2810.8	29.0
0°-40°	4520.9	46.7
0°-60°	7765.4	80.1
0°-90°	9689.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9689.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3725	3725	3725	3725	3725	
5°	3699	3704	3704	3704	3700	351
15°	3520	3527	3530	3533	3531	992
25°	3168	3175	3183	3189	3193	1459
35°	2716	2722	2734	2745	2748	1699
45°	2208	2222	2235	2250	2254	1705
55°	1678	1688	1700	1716	1721	1502
65°	1132	1138	1151	1160	1164	1122
75°	584	587	594	601	602	620
85°	124	128	130	128	129	152
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3725.4	3725.4	3725.4	3725.4	3725.4
2.5°	3718.4	3722.3	3719.2	3722.3	3719.2
5°	3699.0	3703.6	3703.6	3704.4	3700.5
7.5°	3670.3	3675.7	3678.0	3678.8	3673.4
10°	3633.8	3639.2	3639.2	3642.3	3638.5
12.5°	3587.2	3590.3	3589.6	3594.2	3591.1
15°	3520.5	3526.7	3529.8	3532.9	3531.4
17.5°	3446.0	3453.8	3456.1	3461.5	3457.7
20°	3366.1	3371.5	3373.1	3381.6	3377.7
22.5°	3270.7	3276.1	3281.5	3289.3	3290.1
25°	3168.2	3175.2	3183.0	3189.2	3193.1
27.5°	3062.7	3069.7	3076.7	3084.4	3086.0
30°	2950.2	2958.7	2966.5	2975.8	2977.3
32.5°	2836.9	2840.0	2851.6	2861.7	2866.4
35°	2715.8	2722.1	2734.5	2745.3	2748.4
37.5°	2592.5	2601.8	2615.0	2626.6	2629.7
40°	2468.3	2476.1	2487.7	2503.2	2507.9
42.5°	2342.6	2348.0	2363.6	2376.8	2380.6
45°	2207.6	2221.6	2234.8	2250.3	2254.2
47.5°	2078.8	2089.6	2102.8	2117.6	2123.8
50°	1946.9	1960.1	1970.2	1986.4	1990.3
52.5°	1815.0	1823.5	1837.5	1851.4	1857.6
55°	1677.6	1687.7	1700.1	1715.6	1721.1
57.5°	1545.7	1551.1	1565.1	1578.3	1582.9
60°	1409.1	1414.6	1427.8	1441.7	1447.9
62.5°	1272.6	1277.2	1288.1	1304.4	1304.4
65°	1132.1	1137.6	1150.7	1160.1	1163.9
67.5°	995.6	1000.2	1009.5	1021.2	1026.6
70°	857.4	861.3	869.1	880.7	881.5
72.5°	719.3	723.2	733.3	737.2	742.6
75°	583.5	586.6	594.4	600.6	602.1
77.5°	453.9	458.6	464.0	466.3	468.7
80°	330.6	335.2	339.1	341.4	342.2
82.5°	218.8	223.5	225.8	227.4	226.6
85°	124.2	128.0	129.6	128.0	128.8
87.5°	48.9	51.2	52.8	52.0	50.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)