

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: P708862

Luminaire Tested: **22APR-38-89L840-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P708862
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22APR-38-89L840-UNV
Description: ArcMed Patient Recessed 2x2 Fixture Ambient and Exam Light
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

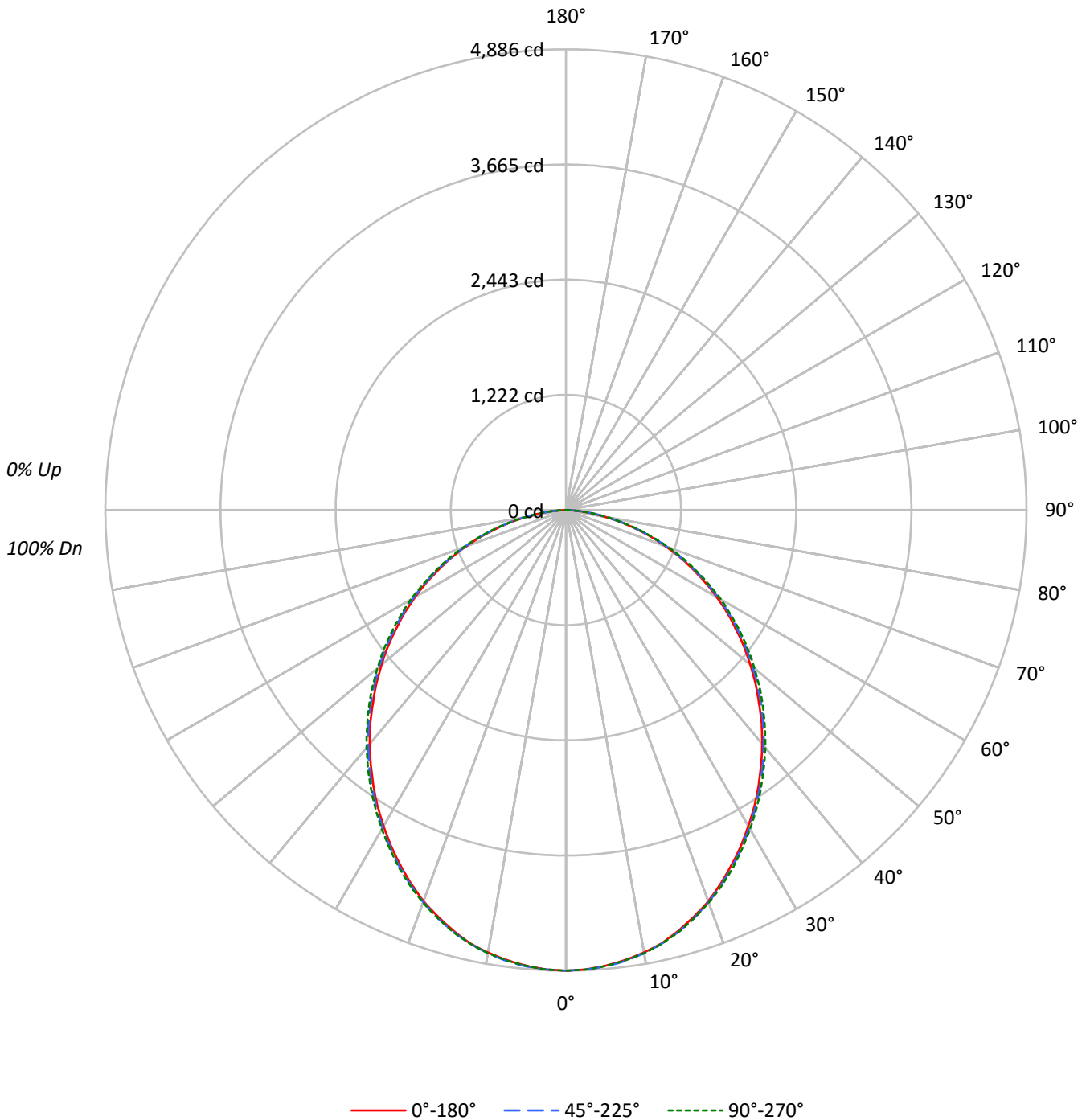
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12708.9 lumens
Efficiency: N/A
Efficacy: 108.9 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





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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°	13149	13149	13149
5°	13106	13122	13111
10°	13024	13043	13041
15°	12864	12898	12904
20°	12643	12670	12687
25°	12339	12396	12435
30°	12024	12090	12135
35°	11702	11783	11843
40°	11373	11462	11555
45°	11020	11155	11252
50°	10690	10818	10929
55°	10323	10462	10591
60°	9947	10079	10221
65°	9455	9611	9721
70°	8848	8969	9097
75°	7958	8106	8212
80°	6719	6893	6955
85°	5027	5249	5218



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	461.0	3.6
10°-20°	1303.9	10.3
20°-30°	1921.9	15.1
30°-40°	2243.0	17.6
40°-50°	2260.5	17.8
50°-60°	1995.1	15.7
60°-70°	1492.1	11.7
70°-80°	826.9	6.5
80°-90°	204.5	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°	3686.8	29.0
0°-40°	5929.8	46.7
0°-60°	10185.4	80.1
0°-90°	12708.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12708.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4886	4886	4886	4886	4886	
5°	4852	4858	4858	4859	4854	460
15°	4618	4626	4630	4634	4632	1301
25°	4156	4165	4175	4183	4188	1914
35°	3562	3570	3587	3601	3605	2228
45°	2896	2914	2931	2952	2957	2237
55°	2200	2214	2230	2250	2257	1970
65°	1485	1492	1509	1522	1527	1471
75°	765	769	780	788	790	813
85°	163	168	170	168	169	199
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4886.4	4886.4	4886.4	4886.4	4886.4
2.5°	4877.2	4882.3	4878.2	4882.3	4878.2
5°	4851.8	4857.9	4857.9	4858.9	4853.8
7.5°	4814.1	4821.2	4824.3	4825.3	4818.2
10°	4766.3	4773.4	4773.4	4777.5	4772.4
12.5°	4705.2	4709.3	4708.2	4714.4	4710.3
15°	4617.7	4625.8	4629.9	4634.0	4631.9
17.5°	4520.0	4530.1	4533.2	4540.3	4535.2
20°	4415.1	4422.3	4424.3	4435.5	4430.4
22.5°	4289.9	4297.1	4304.2	4314.4	4315.4
25°	4155.6	4164.8	4174.9	4183.1	4188.2
27.5°	4017.2	4026.3	4035.5	4045.7	4047.7
30°	3869.6	3880.8	3891.0	3903.2	3905.2
32.5°	3721.0	3725.1	3740.3	3753.6	3759.7
35°	3562.2	3570.4	3586.7	3600.9	3605.0
37.5°	3400.4	3412.6	3429.9	3445.2	3449.3
40°	3237.6	3247.7	3263.0	3283.4	3289.5
42.5°	3072.7	3079.8	3100.2	3117.5	3122.5
45°	2895.6	2913.9	2931.2	2951.6	2956.7
47.5°	2726.6	2740.9	2758.2	2777.5	2785.7
50°	2553.6	2570.9	2584.1	2605.5	2610.6
52.5°	2380.6	2391.8	2410.1	2428.4	2436.6
55°	2200.4	2213.7	2230.0	2250.3	2257.4
57.5°	2027.4	2034.5	2052.9	2070.2	2076.3
60°	1848.3	1855.4	1872.7	1891.0	1899.2
62.5°	1669.2	1675.3	1689.5	1710.9	1710.9
65°	1484.9	1492.1	1509.4	1521.6	1526.7
67.5°	1305.8	1311.9	1324.1	1339.4	1346.5
70°	1124.6	1129.7	1139.9	1155.2	1156.2
72.5°	943.5	948.6	961.8	966.9	974.0
75°	765.4	769.4	779.6	787.8	789.8
77.5°	595.4	601.5	608.6	611.7	614.7
80°	433.6	439.7	444.8	447.8	448.8
82.5°	287.0	293.1	296.2	298.2	297.2
85°	162.8	167.9	170.0	167.9	169.0
87.5°	64.1	67.2	69.2	68.2	66.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)